Report of the Georgia Tech
Promotion and Tenure ADVANCE Committee (PTAC)

Charged by Georgia Tech’s NSF ADVANCE Program for
Institutional Transformation

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Promotion and Tenure ADVANCE Committee (PTAC)

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ABSTRACT

The Promotion and Tenure ADVANCE Committee (PTAC) was formed in July 2002 as a component of Georgia Tech’s NSF-funded ADVANCE Program for Institutional Transformation. PTAC was charged by the ADVANCE Program to serve as a grassroots faculty group aimed at identifying and addressing a wide range of academic issues related to faculty development and promotion and tenure evaluations. The mission of PTAC was conceived to encompass a broad study of potential forms of bias in faculty development and evaluations, building on previous and concurrent gender bias research in the ADVANCE program. In addition, PTAC was charged to look into any conceivable set of issues related to faculty development, mentoring, and evaluation procedures that could serve to improve the overall climate for faculty achievement and satisfaction at Georgia Tech. The objective was to develop methods and tools to provide guidance for both candidates in the P&T process as well as faculty reviewers on various levels of RPT committees, with emphasis on unit-level committees. Finally, the challenge was presented for developing a methodology to periodically measure faculty perceptions and to assess “Institutional Transformation” as affected by ADVANCE and PTAC efforts.

Novel, useful outcomes of the one-year PTAC study described in this report include:

- Results of a comprehensive canvass of current P&T practices in academic units
- Implementation and analysis of a PTAC survey of academic faculty perceptions, cross-correlated according to rank, years in service, gender, and college affiliation across Georgia Tech, related to:
  - resource allocation and success
  - mentoring and networking
  - perception of evaluative methods and procedures
  - interdisciplinary collaborations
  - entrepreneurship
  - environment/culture of the Institute
- An updated Recommended Best Practices in RPT Processes document
- A first-generation web-based instrument, Awareness of Decisions Affecting Promotion and Tenure (ADEPT), for use by candidates and review committee members to provide guidance and awareness of bias issues, ethics issues, procedural issues and recommended best practices in P&T through case studies and links to other report materials.

This report, along with its related survey and web-based tools, is intended to be a living document, providing the basis for ongoing self-study and evaluation to support continuous improvement of the quality and equity of Georgia Tech’s faculty development and evaluation procedures.
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INTRODUCTION

Beyond the vagaries and nuances of various disciplinary fields and subjects of intellectual endeavor, it is likely that no other set of topics pique common faculty interest more than faculty development, tenure and promotion. These issues are critical to productivity, reputation, and a shared sense of quality and institutional excellence. Serving the best interests of over 15,000 students enrolled at Georgia Tech and over 100,000 faithful alumni, the faculty steers the Ramblin’ Wreck into the future on a daily basis.

Accordingly, when the NSF-funded ADVANCE Program for Institutional Transformation was awarded to Georgia Tech (http://www.advance.gatech.edu), offering the opportunity to conduct a critical self-study of issues related to advancement of women in academia, Provost Jean-Lou Chameau (PI/PD on the NSF ADVANCE Program grant, with co-PIs Mary Frank Fox, Sue Rosser and Mary Lynn Realff) seized the opportunity to expand the study to address effectiveness of a wide range of faculty development and evaluation issues campus-wide, across all academic disciplines. The vision for the Promotion and Tenure ADVANCE Committee (PTAC) was laid out in a June 2002 meeting led by Provost Chameau, and attended by PTAC Chair David L. McDowell, Vice Provost for Undergraduate Studies and Academic Affairs Robert C. McMath, Jr., and ADVANCE Program Director Mary H. Hunt. PTAC’s mission, as a grassroots faculty-driven effort, was conceived to encompass a broad study of potential forms of bias in faculty development and tenure/promotion evaluations, building on ADVANCE program research investigating the foundations of gender bias. In addition, PTAC was charged to look into any conceivable set of issues related to faculty development, mentoring, and evaluation procedures that could serve to improve the overall climate for faculty achievement and satisfaction at Georgia Tech. Finally, PTAC confronted the challenge to develop a methodology to periodically measure faculty perceptions to assess “Institutional Transformation” as an ongoing effort of the ADVANCE Program.

Clearly a broad, ambitious charge, its pursuit was subdivided into a series of manageable tasks:

a. studying forms of bias from literature
b. collecting information regarding procedures and best practices guidelines from colleges and academic units across campus
c. developing and conducting a survey of all academic faculty at Georgia Tech to establish a spring 2003 baseline regarding perceptions on a range of topics, from resource allocation and success to mentoring to the culture of Georgia Tech
d. examining existing Institute guidelines for best practices and revising based on feedback from a-c above
e. developing a web-based Awareness of Decisions in Evaluating Promotion and Tenure (ADEPT) tool for use by both prospective candidates for P&T as well as by unit-level committees, with objectives of:
   • providing a foundation for understanding how to prepare packages,
   • providing proper guidance/mentoring, and enter into deliberations with knowledge of best practices and proper procedures, and
   • equipping faculty on review committees to identify and address any forms of bias, even subtle, that may commonly enter into such activities.
As a matter of providing perspective on the issue of tenure evaluation, we start with the caveat that faculty at Georgia Tech are strategically hired with a projection of success within the system, as evidenced by a tenure rate of approximately 90% over the past decade (source: Tabitha Barnette, Office of Provost/VP Academic Affairs). This hiring strategy and the consistent rise in stature of the Institute are justifiable sources of great pride for her faculty and alumni. In taking Georgia Tech to the next level of achievement and recognition, it is apparent that development of human resources will be key. It therefore seems quite appropriate to bring into focus the entire range of issues related to how faculty develop in their careers, the kind of culture we live in, and how evaluations of our peers are conducted. Since creativity and achievement know no bounds in terms of subject area, gender, ethnicity, or any host of additional factors related to individuals, ensuring that faculty are properly respected and nurtured at Georgia Tech will promote high standards for achievement.

This report summarizes PTAC research, organized in the following sequence:

- Reports on potential for various forms of bias in faculty development and evaluations
- Summary of tenure and promotion practices across the full range of units at Georgia Tech
- Analysis and summary of a survey of faculty perceptions regarding the culture for professional development and evaluation at Georgia Tech
- Recommendations of best practices that factor in existing and suggested best practices reported by units
- Description of a web-based ADEPT instrument for use by faculty P&T candidates, as well as evaluation committees
I. POTENTIAL FORMS OF BIAS IN FACULTY DEVELOPMENT AND IN PROMOTION AND TENURE EVALUATIONS

It is important to be precise regarding the definition and use of the term “bias” in this report. The Merriam-Webster Dictionary (on-line version, July 2003) defines bias as a “bent” or “tendency.” The M-W Dictionary definition we employ here notes that “bias implies an unreasoned and unfair distortion of judgment in favor of or against a person or thing,” the meaning assumed by this report.

On this basis,
- reasoned policies or actions based on open faculty deliberations that entertain diversity of views, or
- consistently derived, explained, publicized and applied institutional standards or actions

are not biased because they represent reasoned, fairly judged, corporate responses. However, it is recognized that some individuals may not agree with policies or actions that do not coincide with their own personal views.

Bias involves unreasoned judgments or actions that reflect preferences or predilections, typically held by individuals and expressed either in overt or subtle ways; such bias can affect mentoring, P&T deliberations and career development.

Common forms of bias include, but are not limited to, unreasoned preferences or predilections related to individual characteristics such as:
- gender
- race/ethnicity
- age
- disability
- religious affiliation/preference
- family situation

Bias might also appear in elements of faculty work:
- allocation of financial, space and equipment resources
- utility and expectations of mentoring processes

synonyms PREDILECTION, PREPOSSESSION, PREJUDICE, BIAS mean an attitude of mind that predisposes one to favor something. PREDILECTION implies a strong liking deriving from one's temperament or experience <a predilection for horror movies>. PREPOSSESSION suggests a fixed conception likely to preclude objective judgment of anything counter to it <a prepossession against technology>. PREJUDICE usually implies an unfavorable prepossession and connotes a feeling rooted in suspicion, fear, or intolerance <a mindless prejudice against the unfamiliar>. BIAS implies an unreasoned and unfair distortion of judgment in favor of or against a person or thing <the common bias against overweight people>. 
• selection of mentors and methods of guidance
• assignment of graduate students
• assignment of committee and other service duties
• assignment of teaching duties

Bias can involve perceptions concerning research and reputation:

• engaging in interdisciplinary or multidisciplinary research
• teaming versus independent investigation
• forums for publishing and presentation
• selecting individuals or areas to be represented on review committees
• engaging in design and synthesis oriented research
• engaging in entrepreneurial activities
• selecting references and dealing with input from references

In sum, these preferences can significantly affect guidance for faculty development, as well as evaluation processes and outcomes.

Bias is largely about power and control. It is not always self-identified and can therefore be rather innocently expressed in evaluation meetings that contribute to significant decisions affecting lives of individuals and quality of institutions. In cases where it is knowingly wielded, it can serve as a manipulative tool to influence outcomes. Exercise of bias, even in subtle ways, can propagate “sameness” and an “institutional profile” or “mold” that is not particularly attractive for an institution aspiring to be among the world’s elite from perspectives of intellectual achievement and diversity of thought. A recent survey conducted by ADVANCE at Georgia Tech shown in Fig. 1 (Georgia Tech Advance Survey of Faculty Needs and Patterns, preliminary 2003 data, subject to verification; Mary Frank Fox, Co-PI) showed a remarkably consistent view across gender of the importance of various factors that affect promotion and salary, apart from some gender variation in categories perceived by both men and women as less important. This is in part due to the common understanding of the culture of Georgia Tech and perceived expectations of faculty that have developed over the years.

One goal of the present study is to learn how to identify forms of bias - unreasoned and unfair distortion of judgment – that each of us may hold as we enter into deliberations, permitting us to guard against their use. Another goal is to diminish the likelihood that bias can be openly and knowingly expressed and used as a tool to influence deliberations. PTAC members summarize 10 areas of bias particularly pertinent to Georgia Tech in the following sections.
Figure 1. Rating of overall faculty and breakdown by gender of perceived importance of various factors in decisions on promotion and salary at Georgia Tech, 2003. Scale: (1) not at all important, (2) slightly important, (3) somewhat important, and (4) very important.

I.1 Gender: Women in Academic Science and Engineering
By Mary Hunt, excerpted/adapted from Georgia Tech ADVANCE proposal

Background/Context:
Efforts to address the participation and performance of women in science and engineering are crucial to the nation for several reasons: the need for a diverse and talented scientific and technological workforce (Rosser, 2000), principles of social equity rooted in democratic ideology (Pearson and Fetcher, 1994) and the ideal that scientific careers “be open to talent” (Merton, 1973: 272). Further, the full participation of women in academic careers in science and engineering is particularly crucial because academia is a central site for research and the training of students in the United States. There are important consequences associated with women faculty in their roles as teachers, advisers, and role models. Compared with men, women faculty in science and engineering, on average, act as primary research advisors for a larger number of female students, have more female students on their research teams, and put more emphasis upon help given to advisees across a span of skills/capacities, both technical and interactional (e.g. making presentations and participating in laboratory meetings) (Fox, 2001a).
Consequently, the relatively low numbers and proportions of women that persist in academic science and engineering, especially at the most senior ranks, are of serious concern for the nation and its institutions of higher education. In 1973, women comprised 4% of full professors across all fields in the NSF classification of science and engineering (this classification comprises physical, mathematical, computer, environmental, life, and engineering, as well as the psychological and social sciences). In 1987, that proportion was 7%; in 1993, 10%; and in 1997, still just 11% (Fox, 1999; CPST, 2000); moreover, these figures are inflated by the numbers of women in psychology with the broad classification. The lower rates of promotion and slower promotion through the ranks of women compared to men in academic science are patterns that hold even with controls are enforced for individual publication productivity and prestige of institutional location (Cole, 1979; Long, Allison, and McGinnis, 1993; Sonnert and Holton, 1995).

Women in science and engineering are a select and qualified group, whose ability, educational credentials, and attainments are as high or higher than male counterparts (Fox, 1996, 1999; Sonnert, 1999). The problem and solutions are not a simple matter of correcting personal deficits or shortcomings. Rather, the issues are more complex, connected to organizational context, the characteristics of the settings in which scientists and engineers work.

Organizational context is important in explaining attainments across occupations. But it is especially important in scientific fields, because in sciences, work revolves around the cooperation of people and groups; requires human and material resources; and relies upon facilities, funds, apparatus and teamwork (Fox, 1991). Accordingly, solutions for the advancement of women in academic science and engineering disciplines involve organizational factors and the features of the settings of work - organizational signals, priorities, reward schemes, alliances, climates, and culture (Fox, 1996, 2000, 2001b). The advancement of women in academic science and engineering is then an organizational issue that can be affected by institutional transformation.

**Gender Bias and Institutional Transformation**

Gender bias is not limited to one sex. Studies have shown that both females and males tend to give a slight disadvantage to women and a slight advantage to men in our professional endeavors even when qualifications are equal. In *Why So Slow: The Advancement of Women*, Virginia Valian identifies these phenomena as **gender schemas**, or sets of implicit, or nonconscious, hypotheses about sex differences that play a central role in shaping men’s and women’s professional lives. They affect our expectation of men and women, our evaluation of their work, and our perception of their performance as professionals. Schemas are not stereotypes. They are not limited to one kind of hypothesis and they are usually unarticulated. Most individuals in the professions and academia profess egalitarian beliefs and do their best to judge fairly. Even so, the majority of men and women, even those who believe they are fair and open minded, revert to schemas that influence their interpretation of others’ performance. Schemas are errors that can inadvertently become part of the formation, maintenance, and application of certain processes. These interpretations are influenced by the unacknowledged beliefs we all have about gender differences. The simple act of awareness about schemas will go a long way toward limiting bias.
Bias comes in many forms. Most gender bias can be identified as either overt or subtle. Society has developed a set of guidelines for dealing with various forms of overt gender bias. Sexual assault is a crime punishable by law. Sexual harassment, as defined by the Equal Employment Opportunity Commission (EEOC, http://www.eeoc.gov/facts/fs-sex.html) states that “unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitutes sexual harassment when submission to or rejection of this conduct explicitly or implicitly affects an individual's employment, unreasonably interferes with an individual's work performance or creates an intimidating, hostile or offensive work environment”. In this instance, EEOC guidelines suggest that the victim directly inform the harasser that the conduct is unwelcome and must stop. The victim should use any employer complaint mechanism or grievance system available.

Subtle forms of gender bias are much more prevalent and are often difficult to define. Small, seemingly minor incidents are often disregarded or “shrugged off” as part of everyday life. This acceptance of small slights as inconsequential can have significant impact on the promotion of women in the professions and academia (Valian, 1998). The long-term consequences of small differences in the evaluation and treatment of men and women reinforce the idea of the “glass ceiling”. These small differences add up to slow progress and include disparities in pay, prestige, and promotion. A few examples of situations that may impact women’s progress over time are: limited access to senior staff because of family commitments, evening or weekend meetings; less use of titles by leadership during important events, males referred to by first and last name, females by first name only; allowing humor discrediting women to go unchallenged because it is intermittent; giving greater credit to a male colleague on work done as a team; discounting female’s work as that of an “assistant”, not a full partner or leader; and not acknowledging a woman’s comments during group meetings or cutting off comments before completed. These are but a few of many instances that create small disparities in daily work situations. Over time these and other actions add up to significant differences in decisions related to promotion and advancement.

There are many ways to identify and guard against gender bias. Three key strategies for improving opportunities for the advancement of women are: promoting awareness of gender schemas and the potential for bias of any kind; making sure those in leadership positions take an active role in reducing bias by modeling appropriate behavior and by making this issue a priority for inclusion in speeches, new programs and incorporation into institutional culture; and emphasizing that no one should accept small inequities in their workplace because the accumulation of small disadvantages can substantially impede progress. Institutional transformation and shifts in organizational “culture” must begin with the acknowledgement of potential roadblocks, such as gender bias. Institutional leaders can ensure a successful work environment that promotes men and women by encouraging awareness and leading by example.
I.2 Race and Ethnicity
By Jeannette Yen

Background/Context:
As the affirmative action case of the University of Michigan (UM) brought before the U.S. Supreme Court in 2003 (New York Times: 2/18/03) indicated, diversity on our university campuses continues to require effort and attention. The briefs in support of affirmative action policies at UM argue that racial and ethnic diversity have become essential features of success in the United States, whether in a university offering an education that challenges students to know others from different backgrounds and perspectives, or a medical school that sees minority doctors as opening new avenues of research, or military leaders who seek well-educated minorities to fill the officer corps (2/23/03). As cited in the New York Times (2/18/03), ‘the scores of briefs amounted to a broad endorsement of affirmative action policies by leading sectors of society at the moment they are most in jeopardy.’

Similar to the concerns of achieving gender equity in academia in a broad sense, the efforts to diversify the faculty in particular continue to be one of the least successful components of campus diversity agenda (Smith et al. 1996). Why is it important to have a diverse faculty? Since 1900, the fraction of high school graduates attending college has increased several-fold; more than half the workforce passes through college. Necessarily, there is a rich diversity of racial and ethnic backgrounds among the present day college student population (Diversity Web; New York Times, 2/24/2003). Many argue that faculty composition ought to reflect diversity of general culture. Diversity in the faculty provides role models, mentors, advisors, ranges of perspectives, and a variety of life experiences. It is often not easy nor entirely comfortable to achieve diversity, but it is precisely the creative tension of diverse peoples and perspectives that allows free and creative thought to thrive.

Issue #1: Recruitment
How do we hire a diverse faculty? Studies report the following suppositions as myths:

• Being a white male may be a hindrance.
• People of color are in high demand and are subject to competitive bidding wars in a tight market for faculty positions.

Why are these myths prevalent? Even among elite programs (research I institutes, Ivy League schools, prestigious scholarships), a low percentage of scholars of color were actively sought after by several programs simultaneously. White men, white women, men of color and women of color had equal access to jobs. Faculty of color were not in great demand nor were they subject to competitive bidding wars. ‘What is imperative is that institutions must not fall back on the myths—they are untrue, they are damaging, and they misname the problem and the potential solutions.’ (Smith et al., 1996). We need to develop pro-active mechanisms for building our pool of under-represented minority scholars.

Issue #2: Affirmative action
Critics of affirmative action in higher education have suggested that proactive efforts to diversify the pool of minority and women faculty members are unnecessary and unfair. Evidence suggests, however, that current efforts to diversity college faculty are, in fact, both fair and badly needed if
higher education is to adequately serve America’s current and future students. Proponents argue that affirmative action policies are still necessary to remedy past and current discrimination.

**Issue #3: Retention**
Some data indicate that retention, an issue intimately related to promotion and tenure, remains as an equity issue for under-represented minorities, since a low percentage of faculty of color were at the rank of full professor (*Diversity Web*).

**Issue #4: Constraints**
Three cultural norms of behavior of faculty culture can be discerned (*Diversity Web, Digest*):

1. **rank-based hierarchy**: Untenured faculty defer authority to tenured in opinion/action/etc.
2. **untenured faculty silence**: Minority have more difficulty than majority in addressing fairness issues. Majority remain silent about departmental doctoral programs and hiring decisions. This behavior is very different from under-represented faculty who remain silent on critical issues such as: unfair salaries, limited space, unfair merit pay distribution. The majority do not remain silent on these issues that directly relate to themselves.
3. **individualism in the reward process**: At the interview stage, universities offer opportunities to be socialized into network in a caring environment w/ strong sense of community. After arrival, minorities are often left on their own. Majority faculty report more satisfaction with socialization experiences and levels of support they received in departments than did under-represented faculty. Majority faculty find it easier to reach out to majority than to under-represented colleagues. Under-represented minorities generally feel isolated and alienated; they experience discrimination, lower salaries, ranks, and tenure rates.

**Issue #5: Suggested solutions:**
Recruitment/retention: Sincere and concerted efforts are needed to recruit and retain traditionally under-represented faculty. The Georgia Institute of Technology, College of Engineering Task Force on Diversity (Brown et al. 2003) made the following recommendations. This task force recognized that the pipeline of prospective under-represented faculty candidates is small, but nevertheless includes some very strong and talented individuals. They recommend that formalized minority faculty recruiting exchange trips occur with peer institutes. Encouragement is recommended to consider carefully the hiring of outstanding doctoral graduates of their own programs. Enhancement of efforts to establish endowed professorships for outstanding minority junior and mid-career faculty is recommended. By providing incentives (such as subsidized or partially subsidized) faculty lines, schools can be better able to recruit outstanding under-represented minority faculty. When appropriate, units should be allowed to expedite the process for faculty hiring. It was recommended that the recruitment of minority faculty be included in annual evaluation of schools and school chairs.

Networking: The effort to reach out to under-represented faculty can be included as part of job description of higher rank academics to combat alienation. Chairs need to enforce/reinforce. Efforts to create small-group settings, encourage teamwork, reward with travel money for team research or teaching can promote networking/teamwork versus individual reward.
Meritorious activities: Care should be taken in involving under-represented faculty because these faculty members also already have the job of being a role model. These faculty members should be given the opportunity to take influential leadership positions. Scholarship can be evaluated considering innovation in ideas, evident in unusual teams, discoveries, and educational programs (Boyer 1990).

Identify disincentives: We can rely on women and minority faculty to identify disincentives and solutions for removing barriers from academia (Nelson, 2003).

Research: Participate in studies of efforts of ethnic groups to advance in academia. To achieve diversity, we can learn from the efforts of many groups, be they Asian (Asian Pacific Americans in Higher Education), women, or under-represented minorities.

Summary:
Responses to recent challenges to affirmative action recognize the need for diversity in our universities. Achieving racial and ethnic diversity in our faculty requires concerted effort in recruitment, retention, promotion and tenure. Familiarization with other cultures and under-represented minorities (ethnic studies programs, networking, awareness) can clarify and reduce expression of bias.

I.3 Disability
By Douglas Allen

Background/Context:
Tenure in American universities was established to protect faculty members' academic freedom, to provide enough security to attract able men and women to the profession, and to protect the curriculum by placing it in the hands of a stable faculty body (AAUP Report, http://www.aaup.org/statements/Redbook/1940stat.html). Courts have established that tenure, once acquired, is a property interest protected by the Constitution when conferred by public institutions. Although cases by faculty members against colleges and universities involve reappointment, promotion, and other issues, the most prominent cases deal with the denial of tenure. The appointment of an individual to a faculty position is not a guarantee of tenure, however. Tenure may be denied for a number of reasons. Where the criteria for tenure is clear, unambiguous, widely disseminated, and fairly and uniformly applied, tenure may be denied on reasonable grounds. Where a faculty member with a disability has experienced institutional bias, or has been denied advancement in rank due to a pattern of discrimination associated with the disability, colleges and universities are at risk\(^2\) (Case of Hegland v. Santa Clara University, 2001).

\(^2\) See Hegland v. Santa Clara University. Assistant Professor Hegland was bitten by a tick in her third year of the probationary period. Over the next year she developed health problems: muscle and joint aches, inability to focus, fatigue, flu-like symptoms, and frozen jaws. The following summer she was diagnosed with Lyme disease. Due to her declining health, she went on disability leave for three years. When Hegland returned to teaching half time in 1997, the dean's office advised her that it was time to submit her application for tenure. Despite a favorable departmental vote and the support of the entire College-level Tenure Committee, Hegland was denied tenure in 1998. In 2000 she filed her complaint alleging retaliation and disability and sex discrimination. Hegland settled her suit with the university in 2001. Though the terms of the settlement are confidential, Hegland was pleased with the outcome. She is currently a tenured professor at Santa Clara University.
The Americans with Disabilities Act is based on the concept that the person not only has a disability but is also "qualified" to participate in some activity (such as employment as a faculty member). Thus, what is forbidden is not discrimination in the literal sense and based on disability per se, but discrimination despite qualification, due to disability (Americans with Disabilities Act of 1990, Jan. 1990). This is an important distinction. While the definition of a disability has been broadly interpreted, and may range from alcoholism to morbid obesity, the test is whether or not the individual is “otherwise qualified”. Thus a person duly hired as a full-time faculty member would presumptively meet this test. Thus, the issue resides in whether or not the person with a disability was restricted or otherwise impaired by the university’s lack of “interactive process” and “reasonable accommodation”.

**Issue #1: Defining Essential Functions**
The specific definition of being "qualified" (or "otherwise qualified") for Section 504 or ADA employment discrimination purposes can be stated as "being able to perform the essential functions of the job, with or without reasonable accommodation." The concept is intended to distinguish between those minor or ancillary functions that could be easily reassigned and those functions that "are" the job in question. Integral to this issue is the concept of "essential functions." An "essential function" is one that, if removed, would truly change the job in question. By hiring a person in a tenure-track position, the university has defined, de facto, the “essential function” of the job. Thus, if impediments to the performance of this essential function arise, that are not addressed by the institution, then bias may exist. To mitigate bias, or the potential of bias, the courts have adopted the concepts of “interactive process” and “reasonable accommodation”

**Issue #2 Interactive Process and Reasonable Accommodation**
The issue here is whether or not the university has engaged in a clear process and made a good faith effort to provide “reasonable accommodation” that would allow the faculty member to perform the essential function of their job in teaching, research, and service.

Interactive Process: Generally, an employer should not reach a conclusion that no accommodation is possible without first discussing the situation with the person with a disability. This "interactive process" is critical because, in many cases, employers may overestimate what will be required or may be unaware of the real nature of the disability. The person with a disability is often well informed on advances in technology, for example, that are relevant to their needs. On the other hand, the employer may be aware of workplace opportunities and limitations that the disabled employee does not know about. A simple conversation, clearly and properly noted, about what the employer needs or can do and what the employee is able to do, or would be able to do, if something were changed, will satisfy this "interactive process" requirement.

Reasonable Accommodation: "Reasonable accommodation" is not precisely defined, but the statute gives a list of examples of what may be reasonable accommodations in certain

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3 For a discussion of “essential function”, see Calef v. The Gillette Co. 1st Cir. March 11, 2003 (Where a terminated employee brought suit under ADA, the court issued a summary judgment in favor of employer. The plaintiff failed to show that he was disabled; plaintiff failed to demonstrate that he was an otherwise qualified employee because, with or without accommodation, he could not perform an essential function of his job.)
cases. These include reassignment to a vacant position, job restructuring, part-time or modified work schedules, and acquisition or modification of assistive devices. The issue is, simply put; can the employer make some sort of change in the work environment that will enable the person with a disability to perform all the "essential functions" of the job? And, if so, are the changes that would allow this "accommodation" of a sort and cost that can be called "reasonable?"

An example of “reasonable accommodation” might be a case of a faculty member who is blind. The faculty member may be perfectly capable of excellent teaching, may have written extensively and published widely in their field, but be unable to grade a written test, or access promotion and tenure criteria on the university web site. If the university has made “reasonable” attempts to provide the faculty member with a sighted teaching assistant and a copy of the RPT guidelines in Braille, the university would meet the test of “reasonable accommodation”. On the other hand, if these accommodations had never been discussed and clearly noted with the unit head or dean, and the faculty member was provided with a device such as an optical scanner that converted written text into sound, but the faculty member did not know how to operate it properly, then the university would not pass the test of reasonable accommodation because of the failure to reach agreement with the faculty member before the accommodation was provided.4

**Issue #3: Architectural Access and Auxiliary Aids**

This is an extension of the test of “reasonable accommodation”. Though the issue of reasonable accommodation is usually a general one that can only be determined through case-by-case discussions, public employers, universities, and private businesses are subject to requirements for architectural access to their facilities. The rules regarding architectural access are detailed, complex, and vary significantly depending upon the type of facility, whether it was built before or after the ADA passed, and what activities are being carried out in the facility (among other things). If the problem faced by a faculty member who is disabled relates to architectural access issues, the employer should take extra care to make sure the separate rules on architectural access have been properly followed. In general, a reasonable accommodation could include a programmatic response such as scheduling classes only in buildings that are fully accessible by the standards of the ADA. On the other hand, this can be a “slippery slope”. Such a reassignment of space may isolate a faculty member from their colleagues and may have implications of “unreasonableness” as it applies to the promotion and tenure process. Again, this would require, on a case-by-case basis, an agreement on the part of the faculty member with the unit head and/or dean as to the nature and type of alternate accommodation. In the end, it behooves the university to actively engage in a process by which all of its facilities are brought into standard compliance with the ADA.

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4 U.S. Supreme Court, School Board of Nassau County v. Arline, 480 U.S. 273 (1987) No. 85-1277. Argued December 3, 1986, Decided March 3, 1987. (In most cases, in order to determine whether a person handicapped by contagious disease is "otherwise qualified" under 504, the district court must conduct an individualized inquiry and make appropriate findings of fact, based on reasonable medical judgments given the state of medical knowledge, about (a) the nature of the risk (e. g., how the disease is transmitted), (b) the duration of the risk, (c) the severity of the risk (what is the potential harm to third parties), and (d) the probabilities the disease will be transmitted and will cause varying degrees of harm. In making these findings, courts normally should defer to the reasonable medical judgments of public health officials. Courts must then determine, in light of these findings, whether any "reasonable accommodation" can be made by the employer under the established standards for that inquiry.)
Issue #4: Undue Hardship and Direct Threat
A proposed accommodation is not reasonable if it will cause an "undue hardship" or a "direct threat." This applies to both the institution and to the individual. An undue hardship is any "significant difficulty or expense," taking into account the nature and cost of the accommodation and the resources and responsibilities of the employer. In other words, what may be a "reasonable accommodation" for Georgia Tech, may be an "undue hardship" for a smaller college that nevertheless falls under ADA compliance guidelines. In some cases, the courts have compared the budget of the athletic department to the proposed accommodation as to whether or not such accommodation created “undue hardship”

Like the test of reasonable accommodation, the test for "undue hardship" is judged case-by-case. A "direct threat" is a real risk to the health or safety of others arising from the disability of the employee. Direct threat issues most commonly arise with employees with contagious diseases or certain mental illnesses. An employer should consider the severity and nature of the threat, the probability it will be realized, and whether it can be prevented by some accommodation, before determining that there is a "direct threat."

Issue #5: Associational Discrimination
The ADA specifically forbids employers, public and private, from discriminating against non-disabled people due to their social or other relationship to a person with a disability. The most common examples of this are persons with disabled children and the partners of individuals with HIV infection.

I.4 Allocation of Resources
By J. Carlos Santamarina

Background/Context:
Resources and research productivity are clearly linked at the macro-scale. For example, the number of Nobel laureates correlates with annual national expenditure, and federal agencies are able to guide research efforts by controlling resource allocation (articles on global resource allocation can be found in Tierney, 1998). However, the impact of resources at the level of each individual faculty member is less obvious, even when the most critical case of hiring packages is considered (e.g. students, release time, low teaching load, summer support, unrestricted account, space and equipment); while the short term effect of hiring packages is understandable, the impact on the long term performance of the individual academician remains unclear and reliable data are lacking.

Issue #1: The Cost of Unsatisfactory Hires
Unsatisfactory hires leave before tenure and promotion (P&T), fail P&T (often after uncomfortable experiences), or become marginally successful faculty who remain bitter for long, unhappy, unproductive careers, negatively impacting the academic environment. Costs associated to such unsatisfactory hires include (modified from Boice, 1992): the cost of recruiting a new faculty (est. $10,000), the cost of a spent hiring package which is useless to others in most cases (est. $100,000), the cost of 5 years of support (est. $500,000), and ultimately the cost of a long unproductive career (huge!). These numbers are likely to be underestimates
for many cases in engineering and the sciences. In conclusion, proper hiring and retention is not only “humane” but cost effective.

**Issue #2: Defining Resources**

*Resources assigned to each individual or generated by each individual.* There are important differences in early support received by various faculty members within departments and across campus, including: reduced teaching load, summer pay, student support, office and laboratory space, equipment, unrestricted account, academic year salary, and reduced contribution to academic year salary. Salary differences among gender and race are documented in Long, 2001. Published evidence and observations indicate that the role of these resources on the successful growth of the faculty member is not obvious. To some extent the size of hiring packages may not necessarily reflect critical research needs but "victory emblems". Furthermore, anecdotal evidence suggests that there is little difference in tenure success rate (and even lesser effect on long-term performance) between those who received substantial grants and prestigious awards (e.g. NSF) very early in their careers and those who did not.

*Campus-wide resources.* Campuses are full of relevant resources that are potentially equally or more important than the "individual resources" for the successful development of the faculty member: teaching support, human knowledge and intellectual capabilities, continuous pool of students, technician support, libraries, sophisticated laboratory and field devices, computational capabilities. Yet, evidence suggests that these shared resources are not adequately utilized, particularly by new and/or junior faculty. At least in the case of Faculty Development Resources, there is a generalized consensus that “those who seek it do not need it and those who need it do not seek it” (Boice, 1992).

*Intangible Resources.* The work environment is a critical resource. It determines the university’s retention rate of successful faculty (camaraderie and a sense of community improve retention). Socially networked faculty members have much better chances of success, and networking leads to enhanced usage of campus-wide resources. Above all, networking supports “collective intelligence” (a metaphor from nature can be found in Franks, 1989).

*Local, State and Federal Resources.* These are sources that often appear unlimited relative to local resources.

*The Individual’s Resource Game.* Resources are often utilized to provide counter offers received by faculty who seek new positions. Men are more prone to seek alternative positions than women, hence, they tend to benefit from the “resource game” (see salary trends in Long, 2001). From cost and positive-environment perspectives, it appears that resources should be utilized to further stabilize and support the loyal and productive members of the faculty.

**Issue #3: Natural “Selection” and P&T - Biases in the Assessment of Resources**

Individualistic “survival of the fittest” behavior is a form of academic Darwinism where the individual’s self preservation abilities prevail. There is another theory of evolution: Kropotkin’s cooperation among the species (Ridley, 1997). These two viewpoints lead to different formats for resource allocation.
It is necessary to clearly state P&T requirements, in this case in the context of individual resource generation (Fish, 2002 – in *Chronicle of Higher Education*). When clearly stated guidelines are available, the tendency towards bias in the perception of P&T cases for women and minorities decreases.

**Issue #4: The Role of Resources on Creative Productivity in Academia**

Studies conducted in several academic environments in both Europe and the USA show that the following resources play a critical role in the creative productivity of academicians (Reitan, 1996). *Time* is the most valuable resource. There is a “threshold” for needed resources. Above the threshold, there is a weak correlation between available budget and number/quality of publications. In some cases, the correlation between resources and productivity becomes negative, i.e., the more resources the lower the productivity. The positive correlation is improved if resources are used to buy time. There is a stronger correlation between the number of research assistants and productivity. The most important factor is the level of satisfaction with available resources.

**Issue #5: Perceived Trends – Limited Questionnaire on Resources**

Elsewhere in this report we list results of a comprehensive survey of Georgia Tech academic faculty regarding perceptions of support. As a microcosm of this Institute for this particular bias report, faculty members in the School of Civil and Environmental Engineering at Georgia Tech received a brief questionnaire by e-mail. Twenty-four answers were returned (~50% response rate). Most answers (22/24) addressed personally assigned resources only. Two out of the 24 respondents emphasized the importance of the general resources that are available. Extensive personal, often anecdotal information was provided in the answers. In general, these additional comments indicate high disparity in hiring packages and in individuals' awareness of campus-wide resources. This is particularly the case among young faculty, unless they are being mentored by senior faculty. A summary of the responses follows.

*What resources made (or could have made) a difference in your career?*

- Personal: time to think, comfortable personal office, good/convenient childcare, wonderful spouse
- Environment: good graduate students, great colleagues, office space for graduate students, competent technical support.
- Young faculty: Most of them highlighted the importance of a good mentor (a full professor with no conflict of interest), who would help identify resources, procedures, and who would guide the young faculty to focus on output to satisfy tenure demands (particularly the experimentalists).
- Mid-career faculty: Mid-career funds (COE and/or School). Availability of funds (even small amounts) to try/explore new things.
- Others: Sabbatical. Assistance in recruiting the best PhD students.

*What resources made no difference in your career?*

- All resources were useful (3-out-of-24 respondents).
- Administrative support staff.
- MS students.
Despite the strong CETL program, teaching resources do not make much difference unless the P&T/career review process and the general attitude toward teaching changes.
- Equipment assigned as part of hiring packages for analytical/numerical faculty.
- Convenient parking.

**What are the most important components in hiring packages?**
- Graduate student support (100% respondents).
- Summer support (most junior faculty)
- Experimentalists: equipment and space (equal importance to summer and student support)
- There is high agreement on the characteristics of hiring packages: (1) long-term commitment, such as 1-or-2 students for 3 years; (2) Flexibility in time to optimally spend funds; (3) Flexibility in allocation, not restricted to equipment.
- Travel support to attend conferences (half of the junior faculty)
- Related observation: COE hiring packages are significantly smaller than in Science

**Are School and Institute wide resources well publicized?**
- Junior faculty: most answered no. They feel that the support system and resources (technology, students, staff, lab space, etc.) are not well defined, easily accessed, or easily utilized. Guidelines to maneuver through the system (and the P&T processes) are fuzzy at best.
- Senior faculty reflected a more positive attitude.
- Procedures used to allocate matching funds are a mystery and seem to change continuously without any notification.
- Individuals, groups and the School need to identify and pursue the vast, Campus-wide resources with a clear strategy, in an open and aggressive manner.

**What is the impact of space availability?**
- Experimentalists: all highlighted the critical importance of space.
- Analytical/numerical researchers: Less than half of them recognized the importance of space to properly accommodate graduate students. One noticed that space is not the major problem at the beginning of one's career, but it gradually becomes a bigger issue as individual research groups expand.
- Needed: high degree of flexibility with regard to space, with more emphasis on "from each according to ability, to each according to need."
- A conveniently located Faculty Club is needed

**What strategy/criteria could improve fairness and the optimal distribution of resources?**
- Prevailing criterion 1: Fairness. Fair, but not equal. Applies to startup resources as well.
- Prevailing criterion 2: Openness (transparency). Openness should breed confidence in the system.
- Keep decisions competitive (e.g. write a small proposal for mid-career money)
- No algorithm, but a good, fair, reasonable chair, who looks into needs and not just responds to the most vocal members of the faculty.
- Allocate to the most promising faculty.
- A clear understanding of the role and responsibilities of different staff within the School.
- Hiring people who can use and upgrade existing equipment (quality technical support)
- Possible: annual redistribution of unused equipment and space.
- Institute wide support to open new areas and add a new dimension to someone's research (making them more successful). But probably Institute wide support does not really impact whether the individual succeeds or not.

Other comments or experiences?
- Success is determined mainly by the individual, and is polished by colleagues, graduate students and then other resources
- Teaching resources should include funds to purchase/upgrade design software (which students will use in professional practice)
- Mid-career equipment supplement (not a free package but a matching if the faculty gets outside funds).
- Allocate student support as a supplement. This should be an opportunity rather than an entitlement.
- Mentoring to help new faculty members to focus on a couple of targeted areas at first, with tangible results as early as possible.
- Individually assigned resources serve to enhance, refresh, expand, re-invigorate graduate programs.
- The highly "entrepreneurial" spirit at Georgia Tech has many positive outcomes. Unfortunately, this mentality also encourages a "me, me, me" attitude among faculty towards students, resources, and research areas/activities.

Summary:
Faculty members tend to overemphasize the relevance of individual resources. In fact, the cumulative relevance of globally available resources (with emphasis on the human resource of colleagues and students) dwarfs individually assigned or generated resources.

Furthermore, individuals often emphasize resources that are not necessarily critical to the development of a long-term academic career. Time is the critical personal resource. Institutions and individuals must seek its proper use.

Universities should attempt to demystify the relevance individually controlled or generated resources, publicize and facilitate access to School and Institute wide resources, promote the value of the human-resource and facilitate on-campus networking.

Requirements in terms of individual resource generation must be clearly stated in the context of P&T to prevent biases. During evaluation, careful consideration should be given to correlated resources-related indicators to prevent inductive conclusions, such as grant size, number of graduated students, and publications.
I.5 Mentoring
By Ronald W. Schafer

Background/Context:
Most faculty members agree that advisement and mentoring is important and necessary in the tenure process. Young faculty can benefit from the knowledge of the local system and the general academic scene that experienced senior faculty have acquired during the course of their longer careers. Most young professors have set high career objectives for themselves, and they want to devote their energies to meeting these objectives. However, understanding the requirements for promotion and tenure and the ways of meeting these requirements are often a problem for new faculty. While career objectives and requirements for promotion and tenure are often closely aligned, this may not always be the case. Many young faculty members succumb to the temptation to focus on the aspects of their job that they enjoy the most and tend to neglect other aspects; e.g. focusing on doing the research, but neglecting to publish it. For such reasons, young professors can benefit from the advice and counsel of senior faculty on how to balance personal goals and the requirements of the tenure system.

Issue #1: Implementing the Advising Process
Effective advising and mentoring should be a concern at all levels of the institution. At the Institute and College-level the emphasis should be on communication. This translates into being sure that the requirements for tenure and promotion are clearly stated and well understood by everyone who is evaluating candidates and by the candidates themselves. It is at the School level the most critical issues arise. Young faculty should be well advised from the start of their careers about the tenure and promotion process, and it is here that appropriate mentors should be available. Who is responsible for ensuring that effective advisement and mentoring occurs? The answer is that the unit head, the senior faculty in the School, the unit RPT committee, and the candidate for tenure and promotion are responsible. The unit head and senior faculty should be proactive in offering advice and mentoring, the RPT committee should give frequent feedback to the candidate on their progress, and the candidate should seek advice and counsel from the very beginning of his or her career. Professor Stanley Fish (2002) put it as follows: “This means, first of all, laying down the tenure procedures and requirements with a clarity that approaches the condition of transparency. These procedures and requirements should not only be published; they should be explained to each junior faculty member at least once a year; and, given that the explanation will be necessarily general and even abstract, its annual repetition must be supplemented by a candid written assessment of the progress the aspiring assistant professor has or has not made.”

Issue #2: Bias and Mentoring
Clearly, advice is good only if it is informed and given with the best interests of the candidate in mind. Bad advice can be very harmful. A policy of no formal advisement is not neutral, because some are naturally more willing and capable of seeking advice. Bias can also enter into the process when some candidates benefit from better advice and support than others. This can be a serious issue for young female faculty in a mostly-male school. Virginia Valian (1999) describes a long-term program at the Johns Hopkins School of Medicine to deal with bias against women on the faculty of medicine. Some findings were that women were put up for promotion later than men, and they received lower salaries. Reasons for this included evaluators failing to identify
qualified women and women not knowing the criteria for promotion. Mentors of males were more likely to relay useful information than mentors of females. Mentors invited males to chair conferences 6 times as often as females. Meetings held in evenings and weekends were a significant bias identified in the study. The importance of this study is that it points out that senior faculty should be very sensitive to the many subtleties in their relationships with both male and female untenured faculty.

**Issue #3: To Mentor or Not to Mentor?**

Not everyone feels that mentoring should be a standard practice in academic departments. They feel that as long as the process is clearly defined, the burden should fall on the tenure candidate to figure out the system. According to Professor Fish (2002): “‘Mentoring,’ I learned, is an intense form of the summer camp buddy-system premised on the bizarre assumption that presumably adult persons who freely choose to go into a profession are under no obligation to find out for themselves how things work.” While this may be an overly-harsh assessment, it does point out that the candidate must ultimately stand on his or her own merits. However, there are many instances where mentoring has paid big dividends. A young female faculty member in ECE (Zhou, 2003) made the following comment about the need for mentoring:

> “I have known several faculty members who have left Georgia Tech describing their environments as harsh or hostile. For women faculty members, it can be additionally ‘chilly’. I think having a mentor (either assigned or self-selected) would probably help in many cases, because many of those who left unhappily felt alone or isolated. As Georgia Tech moves higher in various rankings, faculty members will inevitably feel more pressured. I sincerely hope that people will still take time to mentor junior people and not become too wrapped up in their own activities.”

Regarding what a mentor/mentee relationship should be, she said

> “A mentor is not a boss, but a coach and a collaborator. Mentoring is not about rescuing the junior person, but about offering the right kind of career advice, nudging her into orbit so she does not stumble and give up. A mentee still has to do the hard work and stand on her own feet to earn respect.”

In general, it is my belief that mentoring relationships work best when a senior and junior person come together naturally because of common research or teaching interests. Assigned mentors often do not work. Even so, unit heads and RPT committees should always be alert for the need and opportunity to encourage mentoring relationships between senior and junior faculty.

**Issue #4: Mentor Versus Role Model**

It is helpful to draw a clear distinction between an advisor/mentor and a role model. Role models are people whom we admire and perhaps aspire to be like. A mentor could be a role model, but the mentor/mentee relationship should be much closer, and ultimately should be of more value. It is often said that there are not enough good role models for women faculty members, particularly in engineering. Virginia Valian (1999) points out that the concept of role models may be over emphasized and even counter-productive:

> “As this book (Why So Slow?) has documented, women are unlikely to succeed by merit alone—because they have to overcome the odds that are in men’s favor. The notion that a
successful woman can serve as a role model for others is a hoax, the outcome of which is to make many women feel inferior because they are unable to follow the model. Instead of role models, people need concrete suggestions about how to do their best work and how to maximize the chances that their work will be recognized and rewarded.”

While the value of inspiration should not be minimized in any situation, it is clear that practical advice and counsel can be invaluable to young faculty trying to achieve tenure and promotion.

**Issue #5: Senior Faculty Should Not Get Too Close**
The academic tenure and promotion process values initiative, independence, and creativity. While senior faculty can provide valuable guidance in many ways, they should take care not to overshadow the contributions of the person that they are mentoring.

**Summary:**
In order to ensure the fairness and impartiality of the tenure and promotion process, it is essential that all parties involved have full knowledge of the criteria that are applied and the process whereby tenure and promotion decisions are made. This cannot be achieved by simply publishing a set of rules and guidelines. A proactive approach is required. Candidates should receive yearly assessments of their progress, and they should seek advice at every stage from a person whose wisdom and judgment they respect. Senior faculty should be constantly alert for opportunities to advise and mentor their younger colleagues, and School administrators should be vigilant to ensure that all faculty are getting adequate advising and mentoring.

**I.6 Assignment of Service Duties**
By Dana Randall

**Background/Context:**
There appears to be a dichotomy in the inequity of committee assignments of women and other minorities in academia. On the one hand, these faculty members often assume a higher service responsibility; on the other hand, they tend to be under-represented on more important committees, especially at the senior level. “Women do more service than men (Carnegie Foundation, 1990), although at low decision-making levels (BagiLhole, 1993)” “We explore some underlying factors and implications of each of these (Tharenou, 1994).”

**Issue #1: Women and Excessive Committee Services**
Women and minorities tend to be on larger numbers of time-consuming committees that are not career advancing. “For example, service on university committees such as personnel, budget, and research award committees can provide invaluable, career-enhancing knowledge, experience, and visibility for leadership skills in even the most highly research-focused research careers.” “While committee experience may be helpful and is required by most universities, too much or the ‘wrong’ type of service may be an obstacle, depending on one’s career aspirations (Fouad, 2000).” Some departments may try to diversify representation on committees by adding women and minorities. Moreover, women and minorities may be given a higher responsibility for informal services like entertaining faculty candidates to give the impression of greater diversity within a department.
Women might be more inclined to volunteer for less appealing committee work. As the problem is stated by Tharenou (1994) “Are women's inability to say no, their less secure positions, their being good organizational citizens, or heads/chairs (sic) not protecting women's research output in the same way as they do men's (and men themselves do)? These are unanswered questions (Tharenou, 1994).” The governance and other service activities that women choose are more likely to be based in helping others than in attaining power (Twale & Shannon, 1996).

**Issue #2: Lower Prestige of Service Activities**

In addition to the added burden of excessive committee work interfering with other responsibilities, there is a danger that these individuals will be associated with the weaker members of a department.

Respect and recognition are two key issues that were reported by survey results of the ACSP working committee report on The Recruitment and Retention of Women and Minorities in Planning Education (1990). They stated: “Although 83 percent of respondents feel welcomed and valued in their department, there were many comments regarding a lack of respect and recognition for contributions women and faculty of color are making. There seems to be a lack of recognition of the extra assignments which are often given when you are the only, or one of few, women or people of color in your department, school, campus, etc.”

“Departments normally recruit faculty who can successfully compete for grants. Tenure considerations will include assessments of teaching ability, but this is an elastic requirement for faculty who are successful researchers. Those whose academic profile is less directed to funded research likely assume a disproportionate responsibility for time-consuming committee assignments, service and representational duties (McCourt, FAUW forum, 1999).”

**Issue #3: Committees of Lower Levels of Importance**

Women, especially at the senior level, tend to be underrepresented on highly valued and respected committees. The MIT Report, *A Study on the Status of Women Faculty in Science at MIT* (1999) addresses this issue very specifically: (1) To increase number of women faculty “advise department heads to place senior women faculty on appropriate search committees,” and (2) To improve status of, ensure equity for senior women: Seek out women for influential positions within Department and Institute administrations, including as Heads and as members and Chairs of key committees. Involve tenured women faculty in the selection of administrators, and consult with women faculty to ensure the continued commitment of administrators to women faculty issues.

The MIT report documented differences in salary in the recent past, in amount of nine-month salary paid from grants, in access to space, resources, and inclusion in positions of power and administrative responsibility within departments or within the broader MIT community. Differences resulted in women having less or in their being excluded from important professional opportunities. Interviews with women faculty revealed the tremendous toll that exclusion and marginalization take on their professional and personal lives. Problems appear to increase progressively as women approach the same age as their administrators. The Committee believes that problems flourish in departments where non-democratic practices, including
administrative procedures whose basis is known only to a few, lead inevitably to cronyism and unequal access to the substantial resources of MIT.

Junior women faculty members believe that family-work conflicts may impact their careers differently from those of their male colleagues. In contrast to junior women, many tenured women faculty feel marginalized and excluded from a significant role in their departments.

I.7 Committee Assignments
By Paul Benkeser

Background/Context:
Most university faculty members serve on several committees at any given time. These assignments can include student thesis committees, departmental committees, and college- and university-level committees. These assignments usually require a significant time investment for faculty and yet they typically do not weigh heavily in promotion and tenure considerations. Most faculty members try to keep such assignments to a minimum to free up time for research and teaching. It is also important to note that some assignments (e.g. promotion/tenure and executive committees) provide the committee member with considerable power and influence over the day-to-day operations of the university.

Issue #1: Lack of Bias Awareness
Many faculty recruitment and promotion/tenure committees are ill informed on the effects of gender and racial biases on the decision-making process leading to hiring and promotion evaluations. These committees should regularly reaffirm their commitment to equitable treatment of women and minority faculty. They should discuss at the beginning of each year the effects of gender and racial biases in the decision-making process leading to hiring and promotion evaluations in order to be self-conscious about their potential implications in these important decisions (Findlen et al., 1998).

Issue #2: Proportional Representation on Committees
Efforts need to be made to accord women and minorities proportional representation on committees. Given the small numbers of women and minority faculty at Georgia Tech (like Stanford and MIT), many decision-making bodies do not include members of these groups. While gender and race do not necessarily predispose one to awareness about equity issues, when only a single member of an under-represented group serves on a committee and is concerned about these issues, it can be harder for that person to feel comfortable expressing these concerns related to group identity (Findlen et al., 1998; MIT report, 1999).

Issue #3: Token Gender/Minority Representation
Women and ethnic minorities are often asked to serve as advisors to women and minority students, raising their advising loads considerably; and they are often asked to serve as token representatives of their groups on university committees. These tasks divert time from scholarly productivity and are not rewarded in ways that support the careers of those who serve (Findlen et al., 1998).
Issue #4: Assignment to Influential Committees
Despite improvement in recent years, faculty women at the University of Illinois at Urbana Champaign are much less likely than faculty men to be members of influential committees or to receive awards in the form of endowed chairs and professorships (UIUC report, 1999).

I.8 Research Teaming and Interdisciplinary Collaboration
By Marie Thursby

Issue #1: Multi-authored Research Articles
The dramatic growth in multi-authored papers since 1990 is well documented (Science Watch, 1995; Chronicle of Higher Education, 1995). Peer review of an individual’s coauthored research can be difficult, in large part, because the allocation of work effort and creativity is unobservable. Recent research in management has examined the extent to which free-riding is a problem in coauthored research, how free riding is related to the number of coauthors, rank, and the order of authorship. Not surprisingly, the problem is positively related to the number of coauthors and the rank of authors and negatively related to order of authorship. Findings of this research are consistent with the view that the likelihood of repeat co-authorship declines with free riding (Bennett & Kidwell, 2000).

While procedures for tenure and promotion generally ask that authors of multi-authored papers self-report their role in the research, there are clear incentives for misreporting. This gives rise to the frequent use of mechanisms, such as order of authorship and repeat authorship as signals (hence the interest of the research cited above). The bottom line, however, is that there is potential for bias in external evaluation to the extent that such signals are imperfect.

Issue #2: Multidisciplinary Research
For a variety of reasons, the issues of credit allocation for individuals engaged in team research increase for multidisciplinary projects. Consider, for example, the order of authors as a signal of work effort. As conventions for listing authors vary across disciplines, use of this signal is “quite troublesome.” This is one of the issues identified by the “RPT Best Practices Report” of the ad hoc committee appointed by the Georgia Tech’s Executive Board in 2000.

There is additional potential for bias in multidisciplinary research as research methods and credentials for evaluating research vary markedly across disciplinary fields. This is a problem in evaluating research in subfields within disciplines (Jarley et al., 1998), and the potential across disparate disciplines is more serious.

A forthcoming paper in the American Journal of Evaluation by Irwin Feller discusses the issues, noting that in disciplines where research is “problem oriented” such as engineering, multidisciplinary research may be viewed more positively than in many science disciplines (including social sciences) where research issues tend to be more structured along methodological lines. In the latter disciplines, many departments will not see multidisciplinary research as contributing to the reputation of the department.
Many university promotion and tenure guidelines explicitly state procedures to be used when the candidate’s research is multidisciplinary. The guidelines typically amount to a statement that evaluators from the relevant disciplines can be involved in the process.

Some university administrations state that every effort will be made not to inhibit multidisciplinary research of junior faculty (Ray, 2001). A recent article in The Chronicle of Higher Education discusses problems in agency review of interdisciplinary proposals (Brainard, 2002).

I.9 Publication and Presentation Venues

By Douglas Allen

Background/Context:

In both the United States and abroad, substantial gender disparities exist in the composition of university faculties (Lotte Bailyn et al, 2002). By nature, a university is a complex and diverse institution. At its core, the strength of the university lies in its ability to systematically organize and transmit a corpus of thought and knowledge to the world. As such, it is in the interest of the public that universities strive to maintain high standards of scholarship and research productivity by their faculties. At the same time, an individual faculty member’s contribution to knowledge is directly related to the ability of the university to allow unrestricted intellectual growth and development within the individual pursuit of knowledge. As such, a balance must be struck between the interests of the university as a whole, and the interests of each individual faculty member. The work of the individual professor is of consequence, however, only to the extent that it is understood by others. It is the expectation of every faculty member that they will engage in scholarly research, and that the findings of this research will be published.

Within the diversity of disciplines embodied in the university, however, it is difficult to maintain a single model of scholarly activity. Too often the processes by which standards of excellence are implemented, and the work of an individual faculty member is judged, may carry bias. This is especially significant when considering substantial differences in gender and ethnicity in the composition of faculties across disciplines, when the products of intellectual activity vary (Agrawal et al., 2003).

For the tenure process to operate it must be as clear and as fair as possible. However, where promotion and tenure policies and criteria are written, clear, and available to everyone, the university must nevertheless engage in a process that is consistent and fair across all levels of review. In the majority of cases, the courts have been overwhelmingly reluctant to judge the appropriateness of the criteria used to evaluate a faculty member’s creative work. Rather, the courts have raised issues of fairness in the processes by which the criteria have been applied (Leslie Craine v. Trinity College, 2002).

It is incumbent upon the university to recognize that scholarship is necessarily of differing kinds. No single model of research or scholarly activity should prevail at the expense of broadening and deepening the educational experience of the student, and the expansion of knowledge both within and across fields of knowledge. In all cases, the criteria for assessing the quality of research and scholarly activity should be the extent to which the evidence demonstrates: (1) a contribution to
the advancement of knowledge or creative expression, (2) the enhancement of quality in the
development of a field of knowledge and professional practice, (3) a contribution to teaching
effectiveness, and (4) an acknowledged respect by one's professional peers at a national and
international level.

**Issue #1: Widely Distributed, Clearly Written Criteria**
For the promotion and tenure process to be fair, there must be clearly written criteria, widely
distributed, and well understood by both candidates and reviewing bodies. While the specifics of
the criteria may, of necessity, differ from one unit to the next, they must conform to a wider
governing document that constitutes such criteria at the Institute-level. At Georgia Tech this is
Section 3.2 of the Faculty Handbook (http://www.academic.gatech.edu/handbook/handbook3.html#s3p2). Pursuant to this, clear
criteria must be written for each College and be widely available to faculty and administrators
alike.

**Issue #2: Unfamiliarity with Publication Venues or Variations of Intellectual Products
Across Disciplines**
This issue involves the nature of how evaluation committees and reviewing bodies are formed.
Given the diversity of intellectual activities essential to the vitality of the university, it is
essential that in both the formation of RPT committees and in the larger processes of evaluation,
acknowledged leaders from within the specific discipline provide evaluations of the creative
work of the individual. The solicitation of such evaluations should strive to place the individual
faculty member’s work within the context of its contribution to knowledge within the field.

**Issue #3: Application of Criteria and Judgment Across Disciplines**
Different disciplines, by their nature, must operate in different intellectual paradigms. As such
the public dissemination of knowledge in each discipline or field may operate in entirely
different ways. One field may value the publication of books, another peer reviewed conference
papers. In some fields, the order of names in jointly published work is significant, yet in others it
may be customarily alphabetical. Some fields may disseminate knowledge through musical or
artistic performances, others through inventions leading to patents. Written criteria should be
broad enough to encompass the entire range of intellectual products represented at the university.
RPT committees and other evaluators should adhere to them. Procedures for peer evaluation
within a faculty member’s field, whether internal or external, or both, should be incorporated
into the tenure process. This is of particular concern where gender disparities are normally
present within disciplines and sub disciplines.

**Issue #4: Uniformity and Consistency of Application of Criteria for Scholarly
Contributions**
In most cases, bias involves an abrogation of due process. Regardless of the diversity of criteria,
it is the consistency of their application across all levels of evaluation that most ensures fairness.
I.10 Review Committees and Multi-Layer Structure of Review Process
By Douglas Allen and Willie Belton

Background/Context:
Most universities, including Georgia Tech, attempt to make the RPT process as transparent and as objective as possible. Fundamental fairness is a foundational principle in any RPT review. Nevertheless, evaluation of faculty for advancement in rank and for tenure calls for judgments to be made as to the significance and quality of the candidate’s work. Potential for bias is clearly present within this process. In an attempt to provide broad-based evaluation most universities employ a multi-level committee process. The method used to form each committee such as appointment, elections etc. provide less ground for bias and inequitable treatment of candidates. Outlined below are points at which bias could potentially enter within committee processes.

Issue #1: Review Committees
In the RPT process, there are several types of reviews. These typically include:
- Unit head or Program Director review and evaluations
- School review committees
- College review committees
- External (peer) evaluation
- Peer evaluation of teaching
- Dean evaluations
- Provost’s committee evaluation
- Provost’s evaluation
- President

Potential for bias conceivably exists at every level of evaluation. On the other hand, bias is most likely to appear through the formation of the various committees. Review committees can be either appointed or elected from the tenured faculty. In some cases, more likely to occur in smaller units, the review committee may well consist of the entire tenured faculty. While bias, per se, is not intrinsic to any of these constitutional forms, potential for bias exists in all.

- Appointed committees: The purpose of multiple review bodies and recommendations in the RPT process stems from the fundamental concept of fairness. With an appointed review and evaluation committee, there is the possibility that the person who makes the appointments does so with an eye toward the likely outcome of their decision. Thus, an administrator who has authority to appoint review committees could conceivably bias the outcome through the committees’ composition. On the other hand, an administrator may choose to appoint a review committee for the specific purpose of increasing the diversity of viewpoints, and as such may be less likely than an elected body to contain inherent bias.

- Elected Committees: While elected review committees would seem to provide at least the appearance of fairness, they also contain potential for bias. Historically, women and minorities have been seriously under-represented in tenured faculty positions. Thus, the pool of faculty from which the review committee is elected may not include a single female or minority and as such, these viewpoints may not be represented on the review committee.
Faculty as a whole: Smaller units in many universities and in some cases at Georgia Tech have a committee of the whole as the RPT committee. For the reasons outlined above, these review bodies may be subject to bias across the board.

Regardless of how the review committee is formed, potential for bias is present. As time goes on and the diversity of the faculty increases, the elected bodies would clearly have the advantage of fairness.

It is also important to remember that even a committee composed of all one type of individuals (an all-male committee for example) may not necessarily be biased toward any particular candidate. Rather, the focus should be on the process of how the committees are constituted to ensure that, to the greatest extent possible, potential for bias is eliminated.

**Issue #2: External (Peer) Evaluation**

Most, if not all, major research universities depend upon external reviews of a candidate’s scholarly and creative work in the RPT process. There is good reason for this as it would be impossible in most fields to accurately assess this contribution across disciplinary fields. It would be difficult for a mechanical engineer, for example, to assess the significance of the work of a faculty member in music or city planning. Thus, we depend upon external review amongst a peer group. As with the constitutional questions raised with other review bodies, how these external reviewers are chosen and what they are asked to evaluate would seem to contain the most potential for bias. There are several possible models for selecting external peer reviewers:

- Dean or Program Director/unit head appoints external reviewers.
- Faculty member selects reviewers
- Dean/unit head/Director selects half and faculty selects half
- RPT committee selects reviewers

**Issue #3: Benchmarking Peer Institutions**

We examined the committee formation processes of seven peer institutions. The group includes the University of Michigan, University of Illinois, the California Institute of Technology, the Pennsylvania State University, Carnegie-Mellon University, the Massachusetts Institute of Technology and Purdue University. All information was gathered from published RPT documents found on the website of each institution.

*Unit-level RPT Committee:*
- Not clear whether this committee is appointed or elected
- Generally, no explicit guidelines for formation are given in the faculty handbook
- Not clear whether candidates have any input into committee composition
- Administrators generally have little specific input into committee’s work
- All committee members must be tenured and cannot cast a vote in cases of higher ranking candidates

*College-level Committee:*
- Committee members are generally elected by School or Department faculty
• The number of members is usually limited by the number of Departments or Schools
• Candidates generally have little input into committee make-up
• Deans generally attend proceedings and have only procedural input

**Provost/President-Level Committee:**
• Committee is made up of Presidents, Deans, Vice Presidents and distinguished professors
• Candidates have no input into committee composition
• Faculty handbook generally does not define or specify procedures of this Committee

**Summary:**
The multi-level committee structure attempts to address issues of fairness by including more people and more layers. In effect, this provides a system of checks and balances throughout the process. Though the multi-level committee approach does attempt to rid the process of direct and inappropriate emphasis on individual influence over outcomes, it provides many new avenues for new and subtle forms of bias. The very process used to form committees across all levels can provide fertile ground for bias. For example, across the seven peer institutions it is not clear whether school- or department-level committees are elected or appointed. Depending on the size and make-up of the school or department appointment and election processes are fraught with potential for biased evaluations and/or outcomes.

The multi-level committee process clearly has flaws but appears to perform at least as well as known alternatives. The important factor in the implementation of this approach is that users work diligently to understand and guard against the potential for systematic bias in the very nature and execution of the process.
II. PROMOTION AND TENURE PRACTICES ACROSS GEORGIA TECH

Overview

In the context of this report, procedural issues\(^5\) are those that relate to policies and procedures that are listed in Institute, college and unit guidelines or in the Georgia Tech Faculty Handbook, with the understanding that unit policies/procedures must be consistent with College policies/procedures, which in turn must be consistent with Institute-level policies/procedures. One objective of this section is to quantify the range of procedural practices set forth by various academic units at Georgia Tech, so that individual units can compare practices. A consistent theme of this report is that clear written guidelines should exist at the unit-level regarding expectations of faculty performance and expectations of review committees. This section also notes variation among units of both written and *unwritten* guidelines, regarding the latter to constitute the “common understanding” among faculty in a given unit of how the evaluation process is administered.

Summary of Findings: Canvass of GT Academic Unit RPT Practices

PTAC collected information from each unit related to a wide range of unit RPT practices. In most cases, these data were obtained from interviews of faculty in each unit very close to the RPT process, such as RPT committee chairs or unit heads. These are reported in detail in Appendix A1. PTAC members were expressly requested to get certification from sources that the information provided is factually correct to the best of their knowledge. This kind of information offers a different perspective from the results of the PTAC survey which was administered to the entire set of academic faculty within the Institute, perhaps being more related to actual implementation than faculty perception.

In this section we briefly summarize key findings of this canvassing exercise related to variations of unit-level RPT committee structures and their selection, interaction of the unit head with the RPT committee(s), written performance guidelines, source of information for candidate’s preparation of documentation, means of evaluating scholarly contributions, mentoring, balancing evaluation of teaching/research/service, evaluation of interdisciplinary research, evaluation of co-authored research articles, evaluation of teaching, and whether or not PhD students are offered formal programmatic assistance to pursue faculty careers and tracked via a database after they graduate.

Peer Review Committees

All units (i.e., Schools) within the College of Engineering (CoE) except for Biomedical Engineering appoint a first-level peer review committee consisting of 3-4 members to evaluate intellectual products. Consulting with the RPT committee, the unit head (e.g. School Chair) appoints a first-level peer review committee, which reports in writing to the RPT committee. It is common for the first-level peer review committee to have membership from outside the unit, in

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\(^5\) The Merriam-Webster Dictionary (on-line edition, July 2003) defines the adjective *procedural* as follows: *of or relating to procedure; especially: of or relating to the procedure used by courts or other bodies administering substantive law.*
the candidate’s area of research specialization. Nearly half of the units report using this committee for input on interdisciplinary research contributions as well. Outside Engineering, the College of Computing, several Schools within the Ivan Allen College, and the School of Mathematics within the College of Sciences (CoS) also employ first-level peer review committees that submit an evaluation of research (and in some cases teaching) to the unit-level RPT committee. The College of Architecture, the DuPree College of Management and, to large measure, the College of Sciences forego appointment of a first-level peer review committee; the College of Architecture maintains that external references serve the purpose of evaluating intellectual products. It is the case, however, that virtually all units on campus rely on external references for an assessment of intellectual contributions, and many find it additionally necessary to seek the detailed assessment of a local first-level peer review committee.

**RPT Committee Size and Composition**
The size of the unit-level RPT committees in units that either select or elect the members ranges from three (3) in smaller units to as many as ten (10) in large units such as the School of Electrical and Computer Engineering. In several units, such as College of Computing, all tenured senior faculty members serve on the unit RPT committee. The College of Architecture and the DuPree College of Management have RPT committees elected by the faculty. In various units the unit head appoints the RPT committee, subject to representation of the overall faculty and the areas in which candidates are being considered.

**RPT Committee Interaction with Unit Head**
In over 90% of units, the unit head has no communication with the unit RPT committee during its deliberations, apart from an occasional request for clarification of information regarding the candidate. The unit head receives the RPT committee report as advisory in building his or her report on the case. In one or two units, the unit chair and RPT chair interact regularly during the unit-level RPT evaluation. In one or two cases, the unit head serves on or chairs the unit RPT committee. In our view, interactions of the unit head with the RPT committee or its chair beyond points of clarification may constitute disproportionate involvement of the unit head in the overall process as he/she is required to draft an independent letter regarding the case. In another unit, the unit head seeks opinions of others from outside the process, in confidence, to gain more information in building their perspective on cases, but this is evidently not widely practiced or at least reported.

**External Reviews**
Many units in the College of Sciences rely on external references to provide input on intellectual achievement, augmented by rather extensive use of citation indices in conjunction with impact factor of journals in which faculty publish; however, CoS guidelines spell out that citation indices are to be used only for promotion to full professor because of the time lag inherent in such measures. A few CoS units are very specific on use of citation indices, e.g. citations of candidate’s top 10 papers since 1987. The College of Architecture uses citation indices in evaluation of at least some cases. In contrast, in the College of Engineering only Biomedical Engineering uses citation indices on other than a very limited basis. Moreover, use of citation indices is not emphasized in the College of Computing or in the DuPree College of Management. It would appear from CoS guidelines that for cases of promotion from assistant to associate professor, citation indices would not be useful or appropriate, an “assessment gap” for such cases

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in units that do not constitute first-level peer review committees. Hence, appointment of first-
level peer review committees for early career stage tenure and promotion assessments seems
advisable, particularly given that these decisions most dramatically affect the Institute in the long
run.

Responses were received from a number of units regarding sample requests for letters of
reference from unit heads. Surprisingly, for the most part these letters were vague in specifying
desired information such as assessment of top five intellectual products included in the package,
impact on the field, comparison of the candidate to leaders in the field at a comparable career
stage, and whether they would be inclined to advance this case at their institution. Two good
examples of requests for letters of reference appear in Appendix A2.

Co-Authorship
As mentioned above, many CoE units use the first-level peer review committee to provide input
on intellectual achievement in interdisciplinary cases. In CoS, since such a committee is usually
not formed, College guidelines suggest that the candidate should specify their relative
contribution to co-authored papers and presumably for interdisciplinary research programs; it is
unclear whether there is a vehicle for independent assessment of these relative contributions.

On the issue of interpretation of responsibility, an interesting trend is that CoE units do not
typically stipulate assumptions related to order of authors, in several cases relying on first-level
peer review committees to sort out relative contributions, while at least half of the CoS units
assume that the first author is the principal scientific author, having contributed most
significantly to the paper (Mathematics, Psychology and Physics do not follow this prescription,
necessarily). In one unit the first author is considered as the lead scientist, and the last author is
usually held to be the project director. There appears to be no parallel to this interpretation in
CoE, nor in other colleges which variously employ alphabetical ordering, or consider each case
as individual, according to merit and by sub-field.

Clarity of Standards/Expectations
The CoS maintains a fairly detailed listing of promotion and tenure procedures, on its website
(http://www.cos.gatech.edu/criteria.html). This clarity of guidelines is evidenced by frequent
referencing of these CoS guidelines; ALL of the units within CoS report that written guidelines
exist and candidates are referred to the CoS guidelines for information on preparing
documentation. Almost all CoS units also refer to the website for guidance on performance
expectations. Appendix A3 lists the CoS expectations and guidelines as an example of clarity
and directness. CoE units dominantly reported that no written guidelines exist for performance
expectations, and reference to written guidelines for candidate preparation of documentation
were split evenly between CoE guidelines and Institute guidelines. The College of Architecture
maintains written guidelines on its website (http://www.coa.gatech.edu/fs_resources/handbook),
while the other Colleges typically refer to Institute guidelines. Both CoS and CoA appear to
have taken leadership roles on the posting of clear written guidelines, but there is still room for
improvement.
Mentoring
Regarding the issue of mentoring, only a few units within the Institute reported a formal system in which mentors are assigned. The vast majority of units have no formal mentoring program. About 25% of units report a mentoring program of informal nature, in a few cases involving only the unit head.

Balance of Contributions
Research is unambiguously emphasized by almost all units as a measure of productivity and creativity. Only a few units express equal weighting in consideration of research, teaching and service. This should not be interpreted as meaning that teaching is de-emphasized; on the contrary, most units consider effective teaching as necessary but insufficient criterion in evaluation. Without it, candidates may struggle. Interestingly, quality of research supersedes quantity of research funding in the great majority of units, particularly for earlier stages of career advancement, e.g. promotion from assistant to associate professor.

In terms of evaluation of teaching, the majority of units on campus appear to use the on-line teaching survey to document effectiveness. There are a few units that require the candidate to maintain a teaching portfolio, and one or two units constitute a first-level peer review committee for evaluation of teaching. A number of units refer to plans to implement peer reviews of teaching over the next few years.

Only the College of Architecture appears to offer much insight into priorities or guidelines for evaluation of service in a positive light. There does not appear to be much thought or effort given otherwise to the role of service in faculty development or performance.

Graduate Student Development

- Finally, information was also gathered to determine how many units offer formal programs for PhD students to develop their background and resumes in preparation for academic careers, and to track PhD student in their careers after graduation. The importance of placing doctoral recipients from Georgia Tech in prestigious positions is unambiguous. Presently, however, only a handful of units offer developmental programs for PhD students beyond normal research and teaching-assistance related activities. Fewer than half the units on campus track career progress of PhD graduates in databases. It is strongly recommended that academic units develop databases of PhD graduates and track them through careers in order to evaluate effectiveness of programs with respect to long term success and impact of doctorates.
Tabulated Summary Report of Canvass of Unit Practices at Georgia Tech

Written guidelines in unit:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method of committee assignment by unit</td>
<td>Most selected by unit head, some elected; first-level peer review committees in consultation with unit RPT committee</td>
</tr>
<tr>
<td>Constitution of committee(s)</td>
<td>First-level peer review is used in over half of Georgia Tech units; unit RPT committee varies among colleges in size</td>
</tr>
<tr>
<td>Structure of process at unit-level</td>
<td>Few (if any) written guidelines exist beyond method of appointment and timing of reports</td>
</tr>
<tr>
<td>Expected information from candidate, including format</td>
<td>Colleges/units generally provide or refer to Institute sources</td>
</tr>
<tr>
<td>Faculty performance expectations</td>
<td>Few written guidelines are disseminated</td>
</tr>
<tr>
<td>Quality publication/presentation venues</td>
<td>Provided by a few units on informal basis</td>
</tr>
<tr>
<td>Provisions for feedback to candidate</td>
<td>Typically handled by unit chair at end of process</td>
</tr>
<tr>
<td>Mentoring</td>
<td>Few formal programs exist</td>
</tr>
</tbody>
</table>

Unwritten guidelines (interviews of RPT committee chair, unit head, knowledgeable faculty or staff):

<table>
<thead>
<tr>
<th>Issue</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>How are teaching, service, research balanced in evaluation?</td>
<td>Research dominates; teaching serves as “admission ticket”</td>
</tr>
<tr>
<td>How is teaching evaluated?</td>
<td>CIOS typically, with plans for peer review in many units</td>
</tr>
<tr>
<td>Are citation indices used?</td>
<td>Uncommon except in CoS</td>
</tr>
<tr>
<td>How is the issue of single PI versus multi-PI dealt with?</td>
<td>First-level peer review committees in some units, responsibility of candidate to estimate his/her contribution in others</td>
</tr>
<tr>
<td>Mentoring program/philosophy (formal or informal)</td>
<td>Relatively few units have informal programs, and even fewer formalize mentoring</td>
</tr>
</tbody>
</table>

Career guidance, development and tracking for PhD students:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are PhD students tracked into their careers? Is database maintained?</td>
<td>Uncommon</td>
</tr>
<tr>
<td>Are there written guidelines or other formal programs within unit for PhD students to prepare for academic/research careers?</td>
<td>Uncommon</td>
</tr>
</tbody>
</table>
III. SUMMARY OF PTAC SURVEY

The Promotion and Tenure ADVANCE Committee survey was administered as part of the ADVANCE initiative to examine academic faculty perceptions concerning the promotion and tenure process at Georgia Tech and to explore a range of areas related to faculty development and evaluation. The survey consisted of 34 questions which covered the following areas:

- Resource allocation and success
- Mentoring and networking
- Perceptions of evaluative methods and procedures for research, teaching and service
- Interdisciplinary collaborations
- Entrepreneurship
- Environment and culture of Georgia Tech
- Demographic information

Three hundred and twenty five responses were received, representing 37% of the academic faculty of Georgia Tech. The responses were disaggregated by gender, rank, College, number of years of service, family, and administrative status of the respondent to investigate areas having significant differences. Disaggregation of responses by ethnicity was not carried out due to insufficient cell size in most ethnic categories.

A detailed presentation of survey results appears in Appendix B. The major highlights of the survey results are summarized in the following.

Resource Allocation and Success:

- The highest percentage of the responding faculty indicated that resources were helpful towards their career progress. The respondents also noted that resources committed in the hiring package were very important. However, the highest percentage of responding faculty also indicated that space, as a resource, was not so critical towards their performance except for laboratory/research space and office space for individual faculty members.
- An unexpected finding was the low reported levels of usage of centralized faculty support resources.
- The highest percentage of responding faculty indicated that “support for graduate students” and “quality laboratory equipment” were the two most critical resources for faculty success.
- The highest percentage of faculty respondents rated their research as very equipment intensive. When asked if they believed that service opportunities are equally assigned, the mean rating of responding tenured associate professors was significantly lower than that of untenured associate professor respondents.

Mentoring and Networking:

- The highest percentage of responding faculty perceived mentoring as being important towards achieving successful outcomes in promotion and tenure, with female faculty respondents rating it higher than male faculty respondents.
- The faculty respondents also considered networking, especially with peers in their unit and outside Georgia Tech, to be important towards successful promotion and tenure outcomes.
Perceptions of methods and procedures for evaluating research, teaching and service:

- The highest percentage of responding faculty believed that research records were subjected to a higher level of scrutiny than teaching records, and that teaching records in turn were subject to greater scrutiny than service records.
- The highest percentage of the respondents did not believe that any of the teaching evaluation methods indicated in the survey were very effective methods of evaluating teaching.
- The number and quality of journal articles, the quality of conference papers, and the number of Ph.D. students were considered by survey respondents to be the most effective methods of measuring research productivity.
- An encouraging finding was the high mean rating awarded by the highest percentage of responding faculty when asked whether they understood the tenure and promotion evaluation process at Georgia Tech. This mean rating was also observed to increase with the number of years of service at Georgia Tech.

Interdisciplinary collaborations:

In general, the highest percentage of responding faculty believed that interdisciplinary collaboration was valued moderately in promotion and tenure evaluations. The rating for consistency in evaluation was rated the lowest among this category, followed by the rating of the extent to which it is “prudent” or “wise” for faculty to be engaged in interdisciplinary collaboration.

Entrepreneurship

- Even though the rating for the value of entrepreneurial activities in their home unit was low among respondents, the highest percentage of faculty (73% of the respondents) indicated that they engaged in some form of entrepreneurial activity.
- Among the support and evaluative systems, the highest percentage of responding faculty indicated that except for the promotion and tenure reviews, all the other support/evaluative systems at Georgia Tech served to somewhat encourage entrepreneurial activities.

Environment and culture of Georgia Tech:

- It was encouraging to note that the highest percentage of responding faculty had neither been harassed nor had experienced comments regarding their personal appearance or attire.
- Except for internet course offerings, the highest percentage of the factors indicated in the survey were considered to be “somewhat” or “greatly” contributive towards a positive environment for teaching and research by the responding faculty.
- On being asked to compare the culture of Georgia tech to peer institutions with regard to being progressive, Georgia Tech was rated as about the same as peer institutions by the highest percentage of respondents in all the aspects except “time to reflect and write” and “staff and infrastructure support”. In these two areas, Georgia Tech was rated by a similar percentage of respondents as being slightly behind/ about the same as peer institutions.
Demographics:

The response rate of female faculty was higher than that of the male faculty. Perhaps surprisingly, the response rate of senior faculty was much higher than that of junior faculty. By ethnicity, the response rate of White and Hispanic faculty was much higher than for Black or Asian faculty. On disaggregating by college, the response rate of the faculties from the College of Engineering and the College of Sciences were much higher than that of the faculty from other colleges.

On the whole the survey proved to be a very useful tool to gauge faculty perceptions and the differences by demographics groups in perceptions. Applied on a periodic basis, the results of the survey can be used to measure the effect of policy changes and implementation of recommended best practices on institutional transformation in future years. This initial application of the survey serves as a baseline for comparison.
IV. RECOMMENDED BEST PRACTICES IN RPT PROCESSES

Updated and revised by PTAC, Georgia Institute of Technology

1. INTRODUCTION

As stated in a best practices report issued by the ad hoc committee of the Institute’s Executive Board in 2000, Georgia Tech aspires to be considered among the very best technology-oriented universities in the world. That lofty ambition cannot be achieved unless Georgia Tech's faculty members are accomplished in their disciplines at a high level of recognition. However a faculty candidate chooses to focus his/her energy, the goal should be to achieve national and international recognition that elevates the Institute.

As for any institution with such high aspirations, there is little question that there are significant opportunities for improvement in RPT procedures. Almost universally, untenured faculty members are apprehensive about the process. Fewer than 40% of faculty members at Georgia Tech less than six years claim they understand the process very well, compared to just over 60% of faculty with more than 20 years of service\textsuperscript{6}. Their apprehension may result from an incomplete understanding of the process, uncertainty regarding the expectations of them, a lack of faith in the process, or other related concerns. Few untenured faculty members express satisfaction with the nature of feedback regarding their reviews or the outcomes of the process for other candidates. In many regards, even tenured faculty members who face a promotion decision have similar feelings. The process itself can vary significantly among units, and there may be concerns about the potential for inequities or abuses arising from these differences.

In 2000, the Executive Board of the Institute commissioned the aforementioned ad hoc committee to examine procedures, but not policies, related to reappointment, promotion, and tenure (RPT) decisions. The committee concluded that there are a number of opportunities to enhance the RPT process by changing the way faculty are counseled or the RPT process is conducted at the unit-level. The ad hoc committee identified, and in some cases elaborated upon, a number of these "best practices" from various units. These best practices were presented in a December 2000 report entitled “Recommended (Best) Practices in the Reappointment Promotion and Tenure Process,”\textsuperscript{7} made available to academic units and colleges for consideration.

In August 2002, the Promotion and Tenure ADVANCE Committee (PTAC) was charged by Provost Jean-Lou Chameau to examine all relevant aspects of academic faculty development, support, and perceptions at Georgia Tech, along with the range of practices among units related to tenure and promotion evaluations. In addition, PTAC was charged to provide guidance to faculty candidates in preparation of cases, as well as guidance for unit RPT committees in terms of appointment, composition, and unbiased evaluation of faculty candidates. This updated best practices report builds on the earlier work of the Executive Board’s 2000 ad hoc committee, adding insights gained from:

\textsuperscript{6} PTAC academic faculty survey, 2003
\textsuperscript{7} Available at http://www.facultysenate.gatech.edu/zrtppractices.html
• A comprehensive canvass of unit-level practices in RPT committee structure and method of appointment across campus, including written and unwritten guidelines, as well as information on mentoring and development/tracking of PhD students
• Comprehensive studies of various forms of bias that can enter into faculty development/mentoring as well as RPT committee evaluations
• Survey of academic faculty perceptions of various factors, administered in spring 2003, including:
  o resource allocation and success
  o mentoring and networking
  o perception of evaluative methods and procedures
  o interdisciplinary collaborations
  o entrepreneurship
  o environment/culture of GT
  o demographic information
• Development of a web-based instrument *Awareness of Decisions in Evaluating Promotion and Tenure (ADEPT)* for use by RPT committee members and reviewers at all levels of the promotion and tenure process to explore forms of potential bias, dealing with committee dynamics, and other issues related to faculty development and evaluation.

### 2. OVERVIEW OF THE RPT PROCESS

The following overview of the faculty evaluation process is in large part summarized from the Georgia Tech Faculty Handbook\(^8\), a document that includes the Statutes of the Georgia Institute of Technology and Faculty Governance.

#### A. Policies

Board of Regents' policies require that the President of each institution of the University System, "recommend to the Board of Regents, through the Chancellor, the initial appointment of faculty members and administrative employees of each institution, the salary of each, and all promotions and tenure awards. Thus, it is the Board of Regents who has the authority to promote and grant tenure. All other reviews leading up to the action by the Regents are in the form of a recommendation. All recommendations for appointment, reappointment, promotion, or tenure originate in the individual instructional unit and proceed through several levels of review prior to the President's recommendation to the Regents. The individual faculty member is responsible, with the assistance of the program director or unit head, for the preparation of a dossier for the purpose of documenting their performance in relation to the criteria stated in Section 3.2, of the Faculty Handbook\(^9\).

#### B. Types of Reviews

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\(^8\) Available at [http://www.academic.gatech.edu/handbook/](http://www.academic.gatech.edu/handbook/)

\(^9\) University System of Georgia and Board of Regents, Academic Affairs Handbook, Section 4.04.01.;1. [http://www.usg.edu/admin/accaff/handbook/section4/4.04/4.04.01.phtml](http://www.usg.edu/admin/accaff/handbook/section4/4.04/4.04.01.phtml) and Georgia Tech Faculty Handbook, Section 3.2 Promotion and Tenure of Instructional Faculty at Georgia Tech, Subsection 3.2 [http://www.academic.gatech.edu/handbook/handbook3.html#s3p2](http://www.academic.gatech.edu/handbook/handbook3.html#s3p2)
At Georgia Tech, there are two types of reviews related to reappointment, promotion, and tenure: "administrative reviews" and "full reviews". All decisions on promotion and tenure are "full" reviews. This means that the review occurs at all levels of the program, school, college, and Institute. Normally, the third year review (often referred to as a "critical" review) is also a full review. All others are deemed to be "administrative". Administrative reviews are internal to the college, but can involve a full review if deemed necessary by the dean, or requested by the candidate. In addition to these reviews, the administrative officers of the program, department, or school, and the college are responsible for providing all faculty with a written review of their progress. This shall occur on an annual basis.10

i. Administrative Review

For the first three reappointment cycles, the unit head(s) shall review the credentials and work of the individual faculty member and make a recommendation regarding reappointment. If the recommendation is positive, the dean(s) (where not the unit head) shall review the recommendation and documentation. If the Dean's recommendation is positive, then the president shall review the recommendations and make a decision. The stages in this process are illustrated in Fig. 2.

ii. Full Reviews

Third Year “Critical” Review

In the spring of the third year, a complete review of the faculty member's credentials and intellectual contributions shall be conducted by the appropriate committee at the unit-level (or in the case of a joint appointment, the appropriate joint committee), the unit head(s), the Dean's committee and the Dean (in those units having organizational elements such as schools or departments), and then by the Provost's committee. The stages in this process are illustrated in Fig. 2. Each recommendation will specify one of four outcomes:11

Reappointment: A reappointment recommendation signifies a positive performance of the faculty member toward promotion and/or tenure.

Reappointment with Counsel: A reappointment with counsel recommendation signifies that while the faculty member's performance is regarded as positive overall, improvements in one or more categories of activity are needed to ensure the candidate's successful progress toward promotion and/or tenure.

Reappointment with Warning: A reappointment with warning recommendation indicates that significant problems exist in one or more categories, such that continuation of the existing pattern of activity is likely to result in a failure to achieve either promotion or tenure.

10 Faculty Handbook, Section 3.3.2.2. Georgia Tech Procedures on Reappointment

11 Faculty Handbook, Section 3.3.2.2.(e) (see http://www.academic.gatech.edu/handbook)
Non-Reappointment: Non-Reappointment signifies that the faculty member's performance is such that there is no possibility of the candidate to meet the promotion and/or tenure requirements of the college and the Institute. Non reappointment would extend the contractual obligations of the Institute and the candidate one year beyond the current contract year.

Promotion and/or Tenure Review

The purpose of this review is to provide an independent assessment of the intrinsic merit of the creative work of the individual, its value to the professional and academic communities, and to the public at large. Letters of recommendations from appropriate individuals outside the Institute must be obtained for any decisions related to tenure or promotion. The individuals from whom letters are sought should be clear leaders in the field. Along with the letters, brief biographical sketches of these individuals should be included in the materials submitted for consideration as well as the letters received. The list of individuals from whom letters are to be obtained should be jointly developed by the candidates for promotion and/or tenure and the unit head(s). The final decision regarding who shall be selected to provide recommendations from the list shall rest with the unit head(s) and the faculty committee. It is appropriate to use the same letter for two consecutive years of the process.

External evaluations from outside the Institute shall be solicited by the unit head(s) and supplied to the office of the dean. These letters shall be solicited with the understanding that, insofar as possible, access to them will be limited to persons involved in the promotion/tenure decision. The letter of solicitation sent by the unit head shall be worded to request an evaluation of the quality of contributions to the fields, not of the quality of the individual. A copy of the individual's resume and other relevant materials should accompany the letter of request. The referees should be asked to be specific and to comment on particular aspects of the candidate's creative contributions and provide an assessment of impact on the field, and where possible, to provide a comparison of the candidate’s work to that of others in the field at the same stage of their career. At least four such letters must be included (two from persons named by the candidate and the other two from individuals named by the program director), and up to six such letters (three from persons named by the candidate and three persons named by the program director) may be included. The unit head(s), or the dean should convey the letters with an explanation of why those persons were selected in terms of their general qualifications in the field, as well as their specific contributions to this review. To preserve confidentiality, the letters themselves should be conveyed with the dossier to the RPT committee via the office of the unit head, or the dean, and subsequently to the dean and then to the Provost’s committee. The letters of evaluation shall be retained in the office of the dean.

12 Faculty Handbook, Section 3.3.1.1
The external reviewers shall not render a judgment as to the question of promotion or tenure, but rather on the value of the work itself. All promotion and tenure cases shall include an external review process. Third-year full reviews may or may not include external review at the discretion of the dean, or at the request of the individual faculty member. Evaluations from the external review process are to be collected by the unit head(s) who shall forward them to the dean through the college reappointment, promotion, and tenure committee.

3. THE IMPORTANCE OF AN OPEN AND TRANSPARENT PROCESS

A. Background

The performance of Georgia Tech faculty is expected to be consistent with the Institute's aspirations to be among the very best in the world. The Faculty Handbook summarizes the criteria by which faculty performance will be evaluated in the RPT process. Faculty candidates
in the RPT process are expected to maintain a personal plan for success, a plan that should recognize the particular aesthetics of their discipline, their current appointment level, and their own strengths, interests, and commitments. That being said, faculty morale and performance are enhanced when expectations for faculty performance, guidelines and rationale for setting up committees, and guidelines for operation of these committees are clearly written and widely disseminated. Hence, faculty deserve to hold certain expectations of the evaluation process as well. Stanley Fish put it as follows:13

“This means, first of all, laying down the tenure procedures and requirements with a clarity that approaches the condition of transparency. These procedures and requirements should not only be published; they should be explained to each junior faculty member at least once a year; and, given that the explanation will be necessarily general and even abstract, its annual repetition must be supplemented by a candid written assessment of the progress the aspiring assistant professor has or has not made.”

According to research conducted by Georgia Tech’s Mary Frank Fox 14, there are three principal factors that enhance the equity of evaluation of cases for promotion and tenure:

- **More information on candidates**
  
  Evaluation committees are more likely to make subjective judgments when information is “low.” Social bases for assessment are more likely to enter in when information content of a candidate’s case is low.

- **Clarity of criteria/standards**
  
  When criteria are clear and specified, factors of gender, ethnicity, etc. are less likely to be an issue. Written guidelines are important. Individual departments with written guidelines for doctoral study, for example, produce higher numbers of women doctorates. Guidelines should include expected progress from year to year.

- **Evaluation processes should be open/transparent**
  
  Open processes tend to increase the amount of decision-making based on performance (due process). When processes are less systematic, social contacts, networking, etc. tend to play a more important role. Openness does not mean that the deliberations are in any way public or known to the candidate at intermediate stages, but that information related to the method of appointment of each committee, operating guidelines, timing and progression is available to the candidate at each stage. Moreover, the number of committees at all levels, the rationale for their existence, specification of their charge and method of assignment/composition should be clear in the form of written guidelines.

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B. Clarity of Expectation Guidelines

Clarity of expectations demands that the following three forms of written guidelines be developed:

i. Clarity of Contributions as Expressed in Documentation
Candidates should be advised regarding preparation of documentation with “high” information content, ensuring that they put their “best foot forward” by clearly explaining their role in co-authorship of scholarly articles, their role in collaborative research efforts, entrepreneurial activities, development of new innovative educational programs or research initiatives, involvement in societies and other leadership opportunities, and so on. It is a good practice to consider how one’s resume will be read by those unfamiliar with his/her case, rather than assuming that every evaluator will either have first-hand knowledge or be led by another to understand nuances that inevitably arise when faculty omit additional information to clarify the significance of their work. Moreover, (i) selection of top five intellectual products and (ii) suggested list of references by the candidate are absolutely crucial elements in each case, not only by virtue of their particular content, but perhaps just as importantly by virtue of what these choices convey regarding the sense of the candidate’s understanding of what quality means and whether this resonates with the faculty at large. On this basis, selection of unpublished manuscripts/reports or obscure, incoherent materials for top five intellectual products can generate unnecessary negative “vibes.” Similarly, selection of prior advisors, co-authors, collaborators as references does not necessarily convey a sense of independent acknowledgment of scholarly potential or achievement.

ii. Clarity of Criteria/Standards for Advancement as Expressed by Unit/College

Research confirms that written guidelines reduce bias and support equity. It is strongly recommended that clearly written guidelines be produced regarding the range of expectations for successful advancement at each stage: assistant to associate professor, associate to full professor. Furthermore, a clear sense of common understanding of the unit regarding requirements for successful awarding of tenure should be communicated in writing. The College of Sciences website offers a good example. Every college should publish written standards available to faculty, with the units within that college adhering to these or establishing their own more specific guidelines that are fully consistent with those of the college. Likewise, standards specified by colleges, although likely more specific in detail, should be fully consistent with those expressed by the Institute.

iii. Clarity of Rationale, Expectations and Operating Guidelines for Evaluation Committees

All levels of the faculty tenure/promotion process, from first-level peer review committees to unit RPT committees, to unit head evaluations, to Dean evaluations, to the Provost’s level committee, should be constituted and operated on the basis of clear written guidelines, along with rationale for formation and expectations for conduct of review processes.


16 See http://www.cos.gatech.edu/criteria.html
iv. Consistency in the Application of Criteria

Even when criteria are clear, it is necessary that they be applied consistently from year to year and across all levels of review. This does not imply that reasonable minds should not differ in the evaluation process. Rather, it means that the evaluation and feedback process should be clear and unambiguous for the faculty member. Put another way, if the tenure decision is a surprise to the candidate, then the process of evaluation and feedback has been inconsistent and opaque.

4. MENTORING AND FACULTY DEVELOPMENT

The 2003 PTAC survey considered the perceived importance of faculty mentoring in early career development. Academic faculty in-service at Georgia Tech between 7-12 years reported the highest perception of mentoring as “very helpful”, with just under 40% of respondents in this category. The great majority of respondents at all lengths of service viewed mentoring as being “slightly helpful” or “moderately helpful” in career progression, roughly 50%. A steady 10-20% of respondents in all categories listed such mentoring assistance as “not available.” A canvass of unit practices showed that very few institute any kind of formal mentoring program. This perhaps reflects the view that mentor selection, willingness of the mentee to accept guidance, and other related aspects are important, coupled issues that serve to complicate the mentoring process.

Effective advising and mentoring should be a concern at all levels of the institution. At the Institute- and college-level the emphasis should be on communication. This translates into being sure that the requirements for tenure and promotion are clearly stated and well understood by everyone who is evaluating candidates and by the candidates themselves. It is at the School level where the most critical issues arise. Young faculty should be well advised from the start of their careers about the tenure and promotion process, and it is here that appropriate mentors should be available. Who is responsible for ensuring that effective advisement and mentoring occurs? The answer is that the unit head, the senior faculty in the School, the RPT committee of the school, and the candidate for tenure and promotion are responsible. The unit head and senior faculty should be proactive in offering advice and mentoring, the RPT committee should give frequent feedback to the candidate on their progress, and the candidate should seek advice and counsel from the very beginning of his or her career. It is not necessarily effective for mentors to be appointed by unit heads; there is no “recipe” for prescribing effective mentoring – sometimes, it just happens that an individual faculty member will become an effective mentor to a willing colleague.

Clearly, advice is good only if it is informed and given with the best interests of the candidate in mind. Bad advice can be very harmful. A policy of no formal advisement is not neutral, because some are naturally more willing and capable of seeking advice. Bias can also enter into the process when some candidates benefit from better advice and support than others. Not everyone feels that mentoring should be a standard practice in academic departments. Some feel that as
long as the process is clearly defined, the burden should fall on the tenure candidate to figure out the system. As previously noted, Stanley Fish offers a stark view of mentoring.\textsuperscript{17}

\begin{quote}
\textit{``Mentoring,' I learned, is an intense form of the summer camp buddy-system premised on the bizarre assumption that presumably adult persons who freely choose to go into a profession are under no obligation to find out for themselves how things work.''}
\end{quote}

Yet Fish’s point is valid in that it does point out that the candidate must ultimately stand on his or her own merits.

As outlined in the 2000 RPT best practices report of the ad hoc committee of the Executive Board, a personal development plan is a tool for individual faculty to guide their goal setting and allocation of effort. A personal development plan could be developed independently by the candidate, or in collaboration with colleagues or unit heads. Each untenured faculty member should draft a personal development plan, delineating specific areas in which the candidate plans to make recognizable creative contributions, outlining a research plan, identifying the major conferences and professional meetings targeted for attendance, identifying journals appropriate for the candidate's publications, suggesting a set of courses to be taught, innovative educational materials to be developed, and setting goals regarding student advising, publication, and proposal development. This personal plan should serve as a “roadmap” for the individual to assist in prioritizing activities and setting timelines and benchmarks.

The 2000 ad hoc committee of the Executive Board recommended that each faculty member execute a personal development plan reviewed annually by the unit head and the unit RPT committee, regardless of when the case formally comes up for evaluation for reappointment, tenure or promotion. There is relatively little evidence in our canvass of unit practices in 2003 to suggest that this recommendation has been put into practice, likely due to its rather involved, time-consuming nature. Here we build upon these concepts to present some guidelines for faculty development prior to formal evaluation, but also shed light on tangible, practical goals for unit administrators, colleagues and RPT committees, asserting certain fundamental responsibilities of the candidates themselves.

To prepare his/her case for evaluation, faculty should begin in their first year to draft a "three-page narrative" for reappointment and tenure documentation. Of course, the initial version of this narrative is likely to be somewhat skeletal. This documentation package will be updated each year and will become part of the third-year reappointment documentation, and the promotion and tenure documentation for the faculty member. The three-page narrative should contain information about the faculty member's "five most important intellectual accomplishments" as is currently the practice in most units. In the early years, it should not be expected that the candidate will necessarily list five significant accomplishments – this exercise should assist the faculty member in identifying areas of strength and weakness to be addressed. However, it should be broadened to discuss the goals and objectives in creative contributions to teaching and research that the faculty member has for their academic career at Georgia Tech as well as a brief summary of the candidate's plan for achieving these goals. As in the case of the lists of

\textsuperscript{17}“Somebody Back There Didn’t Like Me,” \textit{Chronicle of Higher Education}, September 13, 2002; http://chronicle.com/jobs/archive/advice/game.html
publications, etc., this document should be updated from year-to-year. Faculty should seek feedback on this three-page narrative and on their selection of top creative contributions from colleagues, mentors and unit heads. According to Section 3.2.5 of the Georgia Tech Faculty Handbook, examples of creative contributions that may be appropriate at this institution include:

- Publications: Research papers in scholarly journals, literary publications, and books.
- Unpublished Writings and Creative Work of Limited Circulation: Technical reports, engineering and architectural designs, grant applications, inventions leading to patents, and presentations at conferences and meetings.
- Creative Educational Contributions: Innovative teaching methods, research in instructional techniques, and textbooks.
- Artistic Creations: Paintings, sculpture, and music.
- External Recognition of Creative Work: Prizes and awards, invited presentations, and consultancies.

At all levels, the candidates' creative accomplishments throughout their entire careers should be considered and special attention given to those that occurred at Georgia Tech. Faculty should construct lists of references early in their careers, well in advance of formal evaluation, to assure that their references will be knowledgeable in their field, will appreciate the intellectual products in the candidate’s vita, and will also be viewed as “arms length” evaluators (see comments in earlier section on Clarity of Contributions as Expressed in Documentation).

Each candidate should discuss development plans at an early stage with a trusted mentor(s) and the unit head. But, just as important, the plan should be constructed and revised in accordance with clear written guidelines for faculty expectations made available by departmental units, Colleges and the Institute. It is the responsibility of the unit to provide appropriate feedback via individual faculty mentoring, whether formal or informal, annual unit head evaluations, and particularly through dissemination of clear written guidelines regarding performance expectations. Close communication on a plan among unit head, mentor and candidate could effectively provide a kind of first-level peer review as part of administrative evaluations prior to formal RPT evaluations.

5. FORMAT FOR RPT DOCUMENTATION

The "recommended" format for the documentation is necessarily flexible, recognizing that faculty in some disciplines, for example, may file patents, while faculty in other disciplines may hold public exhibits or performances. The variability of profile of academic performance from field to field offers no particular difficulty in the evaluation process at higher levels (e.g. Institute) if clear written guidelines for expectations exist for faculty within each unit. To this end, each unit should either publish written guidelines regarding required format or clearly identify an appropriate college or Institute-level source for the format. It is not wise to depart from specified format in view of the many reviewers who have to efficiently cull through this information.
6. RESPONSIBILITIES FOR CANDIDATE’S PREPARATION OF CASE DOCUMENTATION

Reappointment, promotion, and tenure (RPT) decisions are based on criteria spelled out in the Faculty Handbook and summarized in Section II of this report. To be successful, a faculty candidate should:

- assemble a portfolio of accomplishments, relative to the criteria described in the Faculty Handbook, and
- prepare documentation that concisely and accurately describes those accomplishments in a format that allows them to be recognized and evaluated by the various committees and unit heads involved in the RPT process.

RPT candidates must understand that while the process is intended to be as fair as possible, its primary purpose is to protect and enhance Georgia Tech. Thus, if there is an irresolvable ambiguity in the package, the process is likely to make the decision that maximally protects and enhances Georgia Tech. RPT committees and unit heads are likely to be very reluctant to give the benefit of the doubt to candidates whose documentation is ambiguous.

Although there are no guarantees in any evaluation process involving human judgment, some approaches and practices may help faculty candidates navigate the process. Candidates are advised to provide “high” information in their documentation. The case should be presented in a manner that minimizes the possibility of subjective interpretation of contributions. The most common areas of subjective judgments concern:

A. Choice of Top Five Intellectual Products

These choices convey the candidate’s views on scholarship, sense of originality and concepts of intellectual leadership. Unpublished manuscripts/reports, obscure materials, or incoherent topics noted as top five intellectual products can create the perception of a floundering research program.

B. Narrative of Goals, Accomplishments, and Impact on Field

The impact of a well-conceived, concise, clear description of philosophy, goals, and noteworthy achievements is beyond measure; many evaluators will read this section in detail and scan the rest of the vita for supporting records and overall assessment. Hence, incomplete sentences, lack of convincing or well-justified or – supported statements, grammatical errors, or incoherent thread of the presentation can all get the case started on a negative trajectory. Candidates should not hastily compile their narratives, but rather should revise drafts with feedback from trusted mentors, colleagues and unit heads. The candidate’s personal narrative should be limited to three pages with one-inch margins, standard single-spaced, 10 pt minimum font with standard kerning and leading.
C. Listing of Scholarly Publications in Vita

- **Clarification of contribution to co-authored papers** - the 2003 survey of faculty perceptions of the order of listing of authors on co-authored papers revealed a range of faculty views regarding attribution of relative contributions in co-authored papers; effectively, the results of this survey suggest that most faculty view the first listed author as key to the intellectual contribution, with the exception of a faculty member publishing with students or junior colleagues, in which case it is more common for the senior faculty member(s) to be listed last. It may therefore be wise for listings of order of authors that run counter to these commonly held perceptions to provide a brief explanation of the underlying philosophy.

- **Lack of clarity in listing papers in preparation or submitted for review with those that are in press or already published** – papers in preparation should not be listed; papers submitted should be listed in another section, with papers accepted (in press) or already published in yet a separate, distinct section. Contributions to books should be clearly identified as "contributed chapter," "edited/co-edited," or "authored/co-authored."

- **Relative importance of conference proceedings** – the 2003 survey of academic faculty perceptions showed wide variation in the value of the number of conference proceedings as a measure of research productivity among colleges, with only the College of Computing considering them to be “very effective”; of the remainder, only 40% viewed conference proceedings as even “slightly effective”. On the other hand, quality of conference articles (however judged) was deemed much more effective as a means of gauging research productivity.

- **Lack of clarity in listing papers appearing in refereed proceedings versus those appearing in refereed archival journals** – many evaluators, perhaps even at the unit-level, will not be intimate enough with a given field or sub-field to judge the rigor of the review process in refereed proceedings relative to widely recognized archival journals; written unit-level guidelines can clarify this issue by cataloging respected venues for publication by sub-field, as well as by invoking first-level peer review committees comprised from faculty experts in the particular sub-field of relevance to each case. However, the candidate should presume that reviewers will want to clearly distinguish refereed proceedings from refereed archival journals and therefore should clearly distinguish them in the vita.

D. Research Sponsorship

Candidates should take care to clarify involvement and responsibility for funding in large projects, particularly those that are interdisciplinary in nature and involve faculty in other units. Interdisciplinary research is of increasing importance as basic research problems become more complex; this is widely recognized by consistent trends in federal funding towards interdisciplinary research. Each faculty member on any interdisciplinary team should have an identifiable, disciplinary expertise that contributes in highly complementary fashion to the overall effort. The faculty candidate should therefore clarify these contributions and the fraction of project funding by which they are supported. If this information is left out, evaluators may
either assume uniform contribution of all involved faculty on the team, or, more commonly, make assumptions of level of contribution based on their limited knowledge of certain team members or their perception of that particular research area or program. For example, research shows that female faculty members involved in interdisciplinary research teams are typically assumed to have contributed less than male counterparts.

E. Teaching Effectiveness

Inclusion of letters or other commentary from students, other faculty, supporting documentation and letters of references regarding truly innovative advances in teaching, development of pedagogical methodologies, etc. should augment existing CIOS teaching survey results. Since there is an expectation of effective teaching on the part of all academic faculty, any kind of substandard rating, review or lack of substantive supporting information regarding improving performance (e.g. taking advantage of seminars and short courses from CETL to improve of teaching with documented evidence of same) tend to be taken seriously by RPT committees at all levels. Ongoing development of methods/tools for formal evaluation of teaching effectiveness is a matter of concern for the Institute.

F. Balance of Creative Contributions in Research, Teaching and Service

At all appointment levels, creative scholarship is considered essential. As individuals develop in their disciplines, the balance between creative contributions in research and other activities may change, with research playing a less prominent role, for example, and other activities playing a larger role. But all Georgia Tech faculty should aspire to continually contribute to the body of scholarly and creative work in their discipline.

Every faculty member is expected to provide evidence of competent, effective teaching. Research is typically emphasized in performance reviews because it is an aspect of creative intellectual endeavor that most faculty choose to emphasize in building the foundation of their reputation and that of the Institute. But creative innovations in teaching are another vehicle through which faculty can build reputation and elevate the Institute. As in research, however, the standards for innovation in teaching go well beyond typical expectations of classroom performance, i.e., engaging lectures, use of teaching tools, etc. Scholarship in teaching must be evidenced by archival journal articles or other highly regarded, referenced and persuasive instruments that portray exceptional innovation and significant impact on the U.S. and international educational enterprises.

Service activities can become a significant component for supporting the case for promotion of senior faculty, but again the standards are very high – editorships, presidencies of important professional societies, etc. These kinds of service opportunities are not typically available to junior faculty. Good citizenship in terms of committee service within the Institute is an expectation of faculty, not a measure of distinction in its own right with regard to favorable consideration for tenure or promotion. Since women and minority faculty are often drawn into service duties at early stages of their career in an effort to achieve diversity of perspectives, it is important to identify excessive service as a potential pitfall for them in terms of diverting energy from building their reputation through creative intellectual contributions.
G. Research Profile

In a dynamic environment emphasizing computer and internet technologies, interdisciplinary research, and new hybrid research areas and academic programs, we frankly think it unwise to advise on such matters as forums to emphasize in publication, whether breadth or depth of coverage is prudent, and other issues that area highly field dependent. Rather, it is the role of mentoring and written guidelines in each unit to provide this kind of guidance and of review committees to clearly reflect such principles in consonance with published guidelines for their units.

Assessment of quality is often a subjective issue, depending on the “eye of the beholder”; however, review committees can more directly discern impact on a field. Presumably, there is a strong relation between quality and impact within a given field. The candidate’s impact on development of human resources in the process of intellectual innovation, e.g. graduate students, is often of primary importance to the mission of the Institute; placing graduate students in high visibility positions is a clear path to elevation of the Institute’s reputation.

H. External References

Faculty must understand the importance of gaining the attention of the leaders in their chosen fields, because those are the people who will be solicited for letters of recommendation in the RPT process. In addition to publishing excellent papers, participation in major research conferences and colloquia is expected. Refereeing papers and serving on proposal review panels also are good ways to come into contact with leaders. Selection of prior academic advisors, business partners, personal friends or relatives, funding agents either in government or industry, frequent co-authors or collaborators, or faculty or colleagues at other institutions with no clear evidence of authority in the field of the candidate, in general, does not convey a sense of independent assessment of scholarly potential or achievement.

The candidate should give considerable thought to the matter of suggesting references, with full understanding that the RPT committee and unit head will cull through this list and add additional references to discern external perception of potential and impact on the field. Moreover, the case may start out being perceived as “weak” if the suggested list of references is so perceived.

7. RESPONSIBILITIES OF UNIT HEAD AND UNIT-LEVEL RPT COMMITTEES

The promotion and tenure procedures specified in the faculty handbook call for evaluation committees in each unit. For most faculty members, this means at least two levels of faculty review committees, one at the unit-level and one at the college-level. The implementation of the faculty review may further refine the process to invoke two distinct committees—one whose charge is to evaluate only the creative or intellectual contributions, and one whose charge is to provide a comprehensive evaluation and recommendation regarding the specific reappointment, promotion, or tenure (RPT) decisions under consideration. Herein, we refer to the former as the first-level peer review committee and the latter as the unit RPT committee.
Whenever a committee of faculty provides input or a recommendation in the RPT process, the committee should clearly understand its three distinct responsibilities:

- The committee is obligated to treat the candidate with respect, and to strive to reach an accurate and wise conclusion in evaluating the candidate’s credentials;
- Recognizing its obligation to the candidate, the committee is obligated to act in a way that is consistent with the beliefs, goals, and best interests of the unit; and
- The committee is obligated to ensure that its every action, including the presentation of its conclusions, reflects honorably upon the Institute.

A note on timing: failure of unit administration to begin the RPT process early enough in the calendar creates stress for candidates, and can damage their cases if recommendation letters are not received in timely fashion for consideration of unit-level peer review and RPT committees.

A. Unit-Level Review Committees

When reviewing candidates from different sub-disciplines or specializations, committee members are obligated to set aside any biases, and to examine the evidence on its merits. In many cases the unit RPT committee either does not have sufficient representation to evaluate all technical areas within the unit, or must evaluate a faculty member in the unit whose creative contributions cannot be judged objectively and appropriately based on the range of expertise on the unit RPT committee. Moreover, with increasing multidisciplinary or interdisciplinary efforts, it is often the case that experts who should judge the caliber of top five intellectual products selected by the candidate are outside the candidate’s unit, and sometimes outside the university. Yet the objective evaluation of the quality of intellectual achievement is absolutely foundational to each case. For any or all of these reasons, it is recommended practice to constitute a first-level peer review committee tailored for each candidate. The unit head typically appoints this committee in consultation with the unit RPT Committee. Such a committee need not be formed from full professors but rather tenured faculty of all ranks and from various units/colleges that constitute a representative peer group for the candidate.

Some smaller units do not follow this practice of assigning a distinct first-level peer review committee, and assume that the RPT committee as constituted is capable of conducting a technical peer review. While this may be the case, it is likely that an objective perspective requires that intellectual products of faculty having interdisciplinary interactions with other units warrant evaluation performed by an additional peer group constituted from several other units.

This first-level peer review committee should confine its consideration to the quality and impact of the top five intellectual products listed by the candidate, directing its letter to the unit-level RPT committee for advisement. The first-level peer review committee, if constituted, should not vote up or down on the case, nor should it be concerned with teaching, service or issues related to collegiality per se. The peer review committee letter goes into the overall file case and is transmitted to all levels of the process.
B. Ethics and Integrity of the Evaluation Process

As the Executive Board ad hoc committee states in its “best practices report” in 2000, “In all of its procedures and recommendations, the committee must act honorably and with dignity. Not only is this the behavior one expects from a first-rate academic institution, it is the behavior that is imperative in today’s litigious society. Every committee member must clearly understand what is inappropriate for deliberation because it violates either law or administrative rules regarding various forms of discrimination. Every committee member must clearly understand that all evaluative information received by the committee and all deliberations are to be held in confidence and not communicated inappropriately outside of the committee. Faculty members (and others providing inputs to the process) have a reasonable expectation that their input will be treated confidentially, except as otherwise provided for by law, particularly the Georgia Open Records Act.”

The web-based ADEPT instrument deals directly with bias and other issues that relate to the integrity of the evaluation process, and is recommended for use as a calibration and exploration instrument for all reviewers involved in RPT processes.

Reappointment, promotion, and tenure decisions are major events in the professional and personal lives of the candidates considered. Any faculty review committee is obligated to resolve any ambiguity or lack of clarity that it may find in a candidate’s documentation. If there is doubt, for example, regarding the significance of the candidate’s contribution to a publication or a research project, a unit-level committee must obtain specific clarification via communication with the unit head rather than directly with the candidate or making assumptions regarding the candidate’s contributions. First-level peer review committees provide an independent assessment of intellectual products for the unit-level RPT committee that helps to address some of these considerations.

Collegiality: Cumulative reappointment, promotion, and tenure decisions determine the future directions that the unit will take, and to a large extent, the nature of the work environment within the unit. Thus, faculty review committees have an obligation to consider impact of decisions on a stable, supportive work environment. The review committee must carefully consider both the intellectual contributions the candidate is likely to make in the future and the impact the individual’s presence will have on others in the unit. However, if an individual’s personality is factored into an evaluation, it should be done so explicitly, rather than implicitly affecting the assessment of other objective performance measures. In addition, such considerations of “collegiality” should enter into the process broadly on the basis of peer committee reviews, rather than reviews of individual unit heads, in order to decouple potential personal conflicts from best interests of the Institute. There are differing views on the consideration of collegiality as a criterion for tenure and promotion, as reflected in these websites:

- Collegiality: we are a community of scholars

- Academe - Does collegiality count?
  http://www.aaup.org/publications/academe/01nd/01ndcon.html
Dealing with Rumors: It is common for individuals of unit-level RPT committees and sometimes unit heads to bring into consideration information beyond that specified in the written documentation. The significance of tenure decisions as an institutional commitment cannot be overstated in terms of financial and programmatic impact, so the level of responsibility in dealing with quality of information is daunting. While information beyond the candidate’s documentation and first-level peer review committee may provide information the unit-level RPT committee deems as pertinent, it also often rests on a foundation of secondary sources, and occasionally can manipulate, intentionally or not, committee deliberations. This is as much a matter of professional ethics as procedure. As a matter of principle, information that cannot be confirmed by other individuals on the committee, based on independent sources of the information, should be considered as rumor and should not be woven into the tapestry of a discussion that affects job performance and career advancement.

Advocacy: Several units employ an advocacy system in which a unit RPT committee member in the area of major creative contributions of the candidate is selected as an advocate, charged with presenting the case for a given faculty member. Following discussion of the case, the advocate typically resumes his/her role as a voting member of the committee. Such an approach has positive and negative aspects with regard to potential for bias. It should not be interpreted as unconditional support for a case – “successful until proven unsuccessful.” Advocacy should not be considered as license to stretch reason or factual content of the case to argue for a positive outcome. Instead, it should seek to present a balanced and objective view of the strengths and weaknesses of the case. Hence, advocacy is essentially synonymous with intense preparation of and intimacy with the case. The advocate should develop a detailed understanding of the documentation, letters of reference, annual letters of review, etc., and present these in organized fashion. An advocacy system should not encourage division of effort of the RPT committee, leading to less effort by reviewers on cases on which they do not advocate. Advocates should not seek to pursue or clarify second-hand information or rumors beyond the written documentation, and any disclosure of personal knowledge or related ancillary information should be verifiable by additional member(s) of the RPT committee in order to be considered.

‘Two-Body Problems’: Increasingly faculty recruiting involves interviewing both members of a couple, typically within different units of the Institute. Although not always a simple matter, information related to the performance of the companion should not affect the deliberation of tenure and/or promotion of the other. Ideally, RPT committees should carefully review supporting documentation to project the likelihood of success of each member of a couple at the recruiting stage. The longevity and gravity of impact on programs is too large in a given tenure decision to compromise deeply in one component of a so-called “two-body problem”.

Communications of RPT Deliberations: Finally, to ensure the integrity and confidentiality of the evaluation process, as well as the independence of all pertinent channels of review, the RPT committee members should not discuss deliberations or recommendations before, during, and after the evaluation process with parties outside the committee. The chair of the RPT committee should call and conduct the meetings, without involvement of the unit head. As reviews make their way upward through the levels of the process, both the written text and vote should be
considered as the form of advisement, and interactions with the unit-level RPT committee chair should be limited to clarification of information contained in the unit-level RPT review report.

C. Committee Letters

Unit RPT committees prepare a letter that is included with the candidate's materials that is considered by the unit head and at subsequent committee levels, i.e., the Dean- and Provost-levels. To assist these higher levels in interpreting contributions in multiple disciplines, it is expected that both the first-level peer review committee and the unit RPT committee letters should clarify the candidate's performance according to expectations for each discipline or sub-discipline. The committee letter should state, for example:

- If refereed conference proceedings or refereed journals are the "norm" for archival publication.
- If a particular journal is among the top journals in the discipline or sub-discipline.
- If the level of research funding is above or below average for the discipline.
- If the number of conferences attended or performances given and their venue is above or below the standard for that field.
- If some award is a premier award in the field for a faculty member at a given career stage.

In other words, the first-level peer review and unit RPT committee letters should go beyond general comments and compliments to provide estimates of normative measures of performance to assist in interpretation and comparative discussions further along in the process. It is essential for these unit-level committees, however constituted, to engage in a discussion that explores the variation of “norms” held by the individuals on these committees. Particularly in larger units, there can be significant variability in views regarding successful profiles of candidates according to sub-field within the discipline. It might be advisable to engage in a broader faculty discussion (beyond review committees) of these norms and standards, particularly in the process of drafting clear written guidelines for performance expectations. Moreover, views on bias should be explored on an individual basis by each committee member and unit heads using the web-based ADEPT instrument (PTAC, 2003) and then discussed in committee meetings used to review procedures, best practices, guidelines, and to calibrate expectations and “norms”.

Nothing is more confusing than an evaluation report from a committee in which the vote seems strangely disconnected from the tone of the letter. This can go either way; for example, an effusively positive description of the faculty member’s intellectual products, contribution to the unit and the profession in general, followed by a split vote leads one to question whether thought was given to the text of the letter. Likewise, a series of negative comments in a letter, combined with either a unanimously positive vote or only 20% dissenting vote, can convey that the individual(s) who cast the dissenting vote may have had too large a role in drafting the letter. Ultimately, consistency of the tone of the letter with the committee vote conveys an important message regarding the integrity and quality of the process undertaken by the committee for review.
Of course, it is recommended practice for all RPT committee members in an evaluation process to read the committee’s evaluation letter and provide feedback for further discussion and editing and prior to signing.

D. Request for External Letters of Reference

The purpose of external review is to provide an independent assessment of the intrinsic merit of the creative work of the individual, its value to the professional and academic communities, and to the public at large. Great care should be taken in selecting external reviewers, and in preparing the letter of solicitation sent to them. The solicitation may state that, insofar as possible, access to the recommendation letters will be limited to persons involved in the promotion/tenure decision.

The 2003 PTAC canvass of unit practices demonstrated significant variation of information being requested by unit heads of references for promotion and tenure cases. In addition to requesting a general impression of the candidate, best practices suggest that letters requesting references should specifically target the following information:

- Candid assessment of the creativity, impact, productivity, and promise of the candidate’s creative contributions, based on top five intellectual products included in the package, along with any knowledge of other contributions.
- Comments on particular aspects of the candidate's creative contributions in research and scholarship and an assessment of impact on the field.
- Comparison of the candidate to the leaders, by name, in their field of creative contribution at a similar career stage.
- Brief vita of the referee.

A copy of the individual's vita, three-page narrative, publications and other relevant materials should accompany the letter of request.

For most units, five or six external reference letters should be expected. The unit head should provide a brief explanation of why the particular external references were selected, presumably in consultation with the unit RPT committee, and provide some biographical material for each reference for use by both unit- and higher-level review committees.

External references should not have an obvious close tie to the candidate, such as thesis advisor, funding agents either in government or industry, co-PIs on recent research projects, frequent co-authors, Georgia Tech colleagues or close colleagues in prior university or business associations, business partners, or former students. Candidates should have an opportunity to recommend external reviewers, and also to request that specific individuals not be solicited. It is, of course, the prerogative of the unit-level review committees, in collaboration with the unit head, to determine who will be solicited. The set of reviews should typically include individuals beyond the list suggested by the candidate. External reviewers may informally be contacted by the unit head or chair of the faculty committee (not the candidate) to determine their willingness to provide reviews within the time available. Unsolicited recommendation letters should not be included in the RPT documentation package. If a solicited letter arrives after the unit RPT committee has completed its work, the letter can be included in the package, but with a note that
it was not received in time to be considered. Once a letter has been solicited and received, it is inappropriate to exclude it on the basis of a negative tone or for any other reason. The RPT committee may choose to frame its own perspective on viability of letters or comments received in its evaluation letter.

If letters from a previous year’s promotion and/or tenure evaluation are considered for use, the unit head should contact the reference to obtain permission to use the same letter, owing to fluidity of opinion and timeliness of the evaluation.

External review letters are not required as part of the critical-review process, and should be requested only in rare circumstances.

E. Interpretation of Letters of Reference

Given the relative “sameness” of many letters of reference, it is important that the references be asked by unit heads to provide substantive feedback that reflects contemplation on the case at hand. In academia it is often the case that certain individuals serve as references on many cases and become deadly efficient at writing politically correct blurbs with little real information content. In this atmosphere, RPT committee members and other evaluators operate by “reading between the lines”, i.e., attempting to find nuances of statements or omissions which can be taken to cast any doubt whatsoever on a case. To address this, guidelines on clarity of information requested of references in the previous section should be followed. The request for letter of reference should not leave a “vacuum” to be filled by vacant phrases and faint praise.

Naturally, refusal to write a letter of reference in the first place may convey a bluntly negative opinion, so faculty candidates and committees should take care in constructing their lists to ensure that competent responses can be obtained (sufficient lead time, positive record of responsiveness, etc.).

The weight given to external references varies considerably from unit to unit. In the College of Architecture, for example, the RPT committee depends almost exclusively on external reviews because there are no first-level peer review committees below the college-level. A first-level peer review committee composed of local (e.g. Georgia Tech and regional) authorities in the sub-discipline could provide an objective assessment of the top five intellectual products, moderating the degree of reliance on external reviews to some degree.

Another issue is how to treat negative letters of reference. On occasion, a single negative letter of reference may be received along with a number of positive references, in the midst of an otherwise favorable committee discussion and vote. Even in such cases, the negative letter must still be included in the package – it is the duty of the RPT committee to convey this letter along with the committee’s reason for de-emphasizing its impact on their decision. In general, all letters of reference entertained and received by the stated due date should be included in the package; it is always the responsibility of the committee to synthesize its own views and deliberations into the candidate’s evaluation letter, factoring in the letters of reference.
F. Feedback to Candidates

As stated above, annual performance reviews conducted by unit heads are a very important mechanism by which faculty advancement cases are documented. It is essential that such reviews provide substantive guidance for faculty development, along with feedback from peers and mentors. Inconsistency of either unit head letters in P&T cases or unit-level RPT committee letters with the trail of annual performance reviews conducted by the unit head may raise “red flags” regarding the credibility of annual evaluations and feedback provided to the candidate.

When the unit RPT committee renders a negative decision on tenure and/or promotion, the associated letter should contain sufficiently clear guidance regarding how the candidate might redirect his/her efforts to achieve a successful outcome in future evaluations. It is the responsibility of the unit head to transmit this feedback to the candidate at the appropriate time when the process has concluded at all levels. The unit head should review with the candidate the recommendations from each committee and administrator, and counsel the candidate appropriately. If desired, the candidate should be able to obtain feedback in sufficiently useful and detailed fashion from all higher levels as well, particularly from any level that may have weighed in negatively in the case.

It also may be useful for the unit head, perhaps together with the chair of the unit RPT committee, to meet with all untenured faculty members in the late spring to review the RPT results for the year, and provide a forum for questions and discussion of the process. Of course, discussion of specific individual cases would not be appropriate.

8. DEAN'S AND PROVOST’S COMMITTEES

First and foremost, all levels of the faculty tenure/promotion process, from peer review sub-committees to unit RPT Committees, to unit head evaluations, to Dean’s committee evaluations, to Dean’s evaluations, to the Provost’s level committee, should be constituted and operated on the basis of clear written guidelines, along with the rationale for the committee’s composition and methodology for selecting members. These guidelines should be openly published, for example, on the college and institute websites. These higher-level committees should also communicate results of deliberations to unit heads in a manner sufficient to provide useful and constructive feedback to candidates at the conclusion of the process.

After the unit RPT committee votes on a Critical Review, Tenure, or Promotion package, and after the School Chair independently votes on the package, the package is forwarded to the Dean’s Office. It is common practice for the Dean of a college with several academic units to form an advisory committee that meets to entertain additional discussion and perspective concerning each case. The purpose of this committee is to advise the Dean in a setting in which college-wide perspectives can be shared. Some colleges engage unit heads among the membership of the Dean’s committee. In such cases it is recommended that in addition to unit
heads, who already have a vote in the process prior to this stage, a representative set of academic faculty without administrative appointment also serve on the Dean’s committee.¹⁸

In the College of Sciences, for example, the Dean’s committee members are given the opportunity to review all the packages under consideration for several weeks prior to the meeting (communicated by M. El-Sayed and A. Smith). Two members of the committee are assigned to each case. A primary reviewer (someone from outside the candidate’s School) summarizes the case and makes a recommendation to the committee. The secondary reviewer (the committee member from the candidate’s School) then adds comments and also makes a recommendation. There is then a discussion by all committee members. The Dean and Associate Deans sit in on the discussion, but do not participate in the decision-making. The vote of this committee is recorded in the package.

Following the Dean’s committee deliberations, the Dean then independently makes a recommendation, taking into account the votes of the first-level peer review committee (if constituted), the unit RPT committee, the unit head, and the Dean’s advisory committee.

The package is then forwarded to the Provost’s office for consideration by the Provost’s Committee. According to Robert McMath, Vice Provost for Undergraduate Studies and Academic Affairs and Chair of the Provost’s Committee, after a tenure or promotion evaluation, the files go through the College committee and receive either positive or negative recommendations (unless the candidate withdraws his/her file after talking to the Dean), after which they are sent to the Provost’s Committee. The Provost’s Committee is composed of the six Deans, the Provost, the Vice Provost for Undergraduate Studies and Academic Affairs and eight senior members of the faculty representing the different colleges. Each college has a voting representative on the committee. The College of Sciences and College of Engineering have two representatives each, while the other four colleges have one senior faculty representative each. The Vice Provost for Undergraduate Studies and Academic Affairs and the Vice Provost for Research and Dean of Graduate Studies may participate in the discussion, but do not vote. Similarly, the college deans participate in the discussion but do not vote on the candidates from their colleges nor do representatives from a specific unit vote on faculty members from that unit. The candidate has no input regarding the composition of the Provost’s Committee.

The term of committee membership is for three years. The Provost’s Committee:

- Determines if the process has been followed correctly in each case.
- Determines if the three important functions – research, teaching and service - have been documented and balanced in each case; the three do not have to be equally weighted, but each candidate must have a balanced contribution to the three functions and show evidence of creative scholarly contribution as judged by peers.

¹⁸ A model employed by some universities includes an additional college-level committee appointed by the Dean for each tenure case. The committee is comprised of four members from related units within the college and one from the candidate unit. The report of this committee is sent to the Dean (or the Dean’s committee) as input into the decision.
• Examines cases involving leave of absences to make sure that the rules are interpreted and applied justly.

The Provost sits in and listens to discussions at the annual Provost’s Committee meeting. The files, along with the recommendations from various committees and administrators, are then forwarded to the Provost, who (i) considers all the information submitted and sends all the documentation along with his/her recommendations on each candidate to the President, and (ii) notifies the college Deans of the recommendations concerning faculty within their colleges. The Provost and the President discuss special or complex cases. The President then forwards his/her recommendations and the documents to the Board of Regents, which makes the final decision, and also notifies each faculty member by letter. All changes in status, such as promotion and tenure, are awarded by the Board of Regents. The President notifies each faculty candidate of the Board's decisions.

9. GUIDELINES FOR OFFERING TENURE UPON INITIAL HIRE

Georgia Tech is among the nation’s elite universities in terms of faculty quality and productivity. At the same time, attracting established, truly exceptional individuals to faculty positions at Georgia Tech in a competitive recruiting environment may require offering tenure at rank upon initial appointment, without a probationary period. Indeed, this practice has recently become more common at Georgia Tech. In view of the accelerated time-frame in which these decisions need to be made, detailed peer level reviews are sometimes compromised. Hasty assessment and/or missed steps/levels of input into the evaluation process increase the risk of making a substantial investment in personnel who might not succeed at Georgia Tech. Additionally, compressing the initial evaluation increases the possibility that Georgia Tech faculty who are subject to the regular process of evaluation might perceive inequitable differences between their treatment and that of new hires.

Since only enhancement of excellence of the Institute justifies consideration of tenure upon initial hire, the following best practices are recommended:

• It should be clearly established by those who propose pursuing the candidate, based on quality preliminary data or information, that the individual under consideration is truly exceptional compared to peers in a given field of significance to the Institute
• Input should be obtained from a first-level peer review committee, in addition to the unit-level RPT committee, unless the latter has qualification to judge creative contributions of the candidate
• All levels of the normal process should be followed, albeit in accelerated fashion, to the extent practical given time constraints; steps should be taken to ensure that time constraints do not compromise thoroughness of the review or integrity of the process
• Any “two-body problem” (e.g. spouse or partner) should not affect deliberations on the merit of any specific individual case

As this issue is intimately linked with the issue of recruitment of high quality faculty, this is an obvious area of future study to establish policies and procedures.
10. OTHER RECOMMENDATIONS BASED ON OBSERVED BEST PRACTICES AT THE UNIT- AND COLLEGE-LEVELS

Clarity of Expectations

- Research is unambiguously emphasized by almost all units as a measure of productivity and creativity. Clarity at the unit-level in expectations for levels of intellectual products, even if expressed in terms of ranges of papers, funding, students advised, etc. for successful cases in recent years, would be very helpful to candidates.
- Colleges should provide information about P&T on websites and in documents for all faculty members. This information should go beyond administrative forms and formats for documentation to include expectations of faculty performance. The CoS maintains a fairly detailed listing of RPT procedures and an explicit statement of performance expectations.\(^{19}\) The College of Architecture also posts written guidelines on-line.\(^{20}\) These should serve as models for clear written publication of procedural issues and expectations of faculty performance at the college level for others to emulate and further improve. In general, even more specificity and clarity of written guidelines for the evaluation process and faculty performance expectations is desirable.

Mentoring

- Only a few units within the Institute reported a formal system in which mentors are assigned. Units should foster some form of mentoring for junior faculty, even informal.

Evaluation of Intellectual Products

- Appointment of a first-level peer review committee that reports to the unit RPT committee to assess intellectual products of candidate, with 3-4 members selected by the unit head in consultation with the unit RPT committee. This first-level peer review committee may have membership from outside the unit, in the candidate’s area(s) of creative contributions. This committee provides detailed assessment of intellectual products for candidates at all career stages, and offers capability to assess even highly interdisciplinary and/or collaborative cases. For units that rely on external references and citations to provide input on intellectual achievement, a first-level peer review committee can provide valuable assessment of intellectual products for cases of tenure and promotion from assistant to associate professor, in view of the limited applicability of external measures such as citation indices for early career decisions.
- All committees should recognize that a rather broad range exists among units at Georgia Tech in interpretations given to the order of listing authors in co-authored articles, with the most significant differences existing between the College of Sciences and the rest of the Institute.

\(^{19}\) See http://www.cos.gatech.edu/criteria.html
\(^{20}\) See http://www.coa.gatech.edu/fs_resources/handbook
Independence of Evaluation Process

- The unit head should have no communication with the unit RPT committee during its deliberations, unless the committee requests clarification of information regarding the candidate. The unit head should not serve on the RPT committee as a regular or ex-officio member.

Role of Service

- Units and colleges should give more thought to the role of service in faculty development or performance as a function of career stage and consider guidelines for faculty development in this regard.

Graduate Student Development

- To further enhance the Institute’s reputation, units should offer programs for PhD students to develop their background and vitae in preparation for academic careers. Units should also track PhD students in their careers after graduation.
V.  ADEPT TOOL WITH PROMOTION AND TENURE CASE STUDIES

ADEPT (Awareness of Decisions in Evaluating Promotion and Tenure) is a web-based instrument collecting and building on PTAC research. The ADEPT instrument presents several interrelated components: the PTAC report and 2003 survey, case studies with questions, including an interactive mode, activities for individual users, a bibliography on bias in evaluation, and related ADVANCE research.

One of the primary goals of the ADEPT instrument is to assist users in identifying forms of bias in evaluation processes in order to achieve fair and objective evaluations. ADEPT is designed to be used both by candidates for promotion and tenure and by members of unit-level committees evaluating promotion and tenure cases in U.S. colleges and universities.

ADEPT presents two sets of activities, those designed to enhance a candidate’s abilities to prepare his/her record for evaluation, and those designed to help members of unit-level promotion and tenure committees understand the subtleties of bias in the evaluation process. The candidate portion of ADEPT will include guidance in building a strong dossier, while the committee member activity involves the user in fictional evaluation meetings featuring mock P&T case studies.

These ADEPT activities are linked to an annotated bibliography of research focusing on a broad range of forms of bias related to gender, ethnicity, choice of publication venues, engagement in interdisciplinary research, assignment of service activities, allocation of resources, mentoring, disability, and more.

ADEPT contains the 2003 PTAC report and connects its findings, particularly those concerning forms of bias and best practices, with case studies of fictional candidates and unit-level promotion and tenure meetings. In addition, references are provided regarding a 2003 survey of Georgia Tech’s academic faculty aimed at capturing a snapshot of perceptions about promotion and tenure processes, faculty development, and Institute culture.

Understanding that the equitable advancement of faculty requires the clear communication of standards and best practices to candidates and evaluators, many Georgia Tech faculty, especially members of PTAC and the ADVANCE team, have contributed to the ADEPT project during the past year. In collaboration with PTAC, Carol Colatrella and David McDowell wrote case studies and related materials presented at the 2nd Annual ADVANCE conference hosted by Georgia Tech in April 2003.

During 2002-2003, in consultation with PTAC, the ADEPT design team began building the computing architecture, graphics, animations, and activities for the project; this team includes Carol Colatrella, Janet Murray, software engineer Laura Ferguson, and Information, Design, and Technology (IDT) graduate students Meghna Krishnan and Maryann Westfall. Students from on Mary Frank Fox’s ADVANCE survey research team (Kendall Deas, Carolyn Fonseca, Christi Lurie, Oanh Lu, Jessica Ports, Ben Shackleford) helped to develop and organize the bibliography based on PTAC research that is included in ADEPT.
The initial version of the *ADEPT* tool, including the PTAC report, case studies, and the activity for committee members and the bibliography, is available on limited release to user groups to obtain feedback. During Fall 2003, a team of graduate students in an IDT project studio will work with Janet Murray and Carol Colatrella to continue to develop the *ADEPT* instrument. Plans call for initial limited release to RPT Committees, with subsequent full release.

Appendix C presents *ADEPT* implementation details and presents P&T case studies developed as part of the *ADEPT* project.
VI. CONCLUSION

The mission of PTAC included studying forms of bias in faculty development and evaluations, building on previous and concurrent research on gender bias, which was also funded by the ADVANCE program. In addition, PTAC was charged to examine issues relevant to faculty development, mentoring, and evaluation procedures and to consider how to improve the overall climate for faculty achievement and satisfaction at Georgia Tech.

The one-year PTAC study of various dimensions of faculty development and promotion and tenure evaluation processes at Georgia Tech has resulted in:

- Cataloging of current P&T practices in academic units
- Development of a PTAC survey, with analysis of 2003 survey results with regard to academic faculty perceptions, cross-correlated according to rank, years in service, gender, and college affiliation across Georgia Tech and considering:
  - resource allocation and success
  - mentoring and networking
  - perception of evaluative methods and procedures
  - interdisciplinary collaborations
  - entrepreneurship
  - environment/culture of the Institute
- Drafting of an updated Recommended Best Practices in RPT Processes document
- Development of a first generation web-based instrument, Awareness of Decisions Affecting Promotion and Tenure (ADEPT), for use by candidates and review committee members to provide guidance and awareness of bias issues, ethics issues, procedural issues and recommended best practices in P&T through case studies and links to other report materials.

This report serves a primary need of the Institute regarding faculty development and evaluation: the need for an open, comprehensive source of written information about the ways faculty prioritize their time and efforts in teaching, research and service, the ways in which they receive guidance from other faculty and administrators, and the ways in which P&T evaluation committees are constituted and how they conduct their business. Echoing recommendations of this report, there is a pressing need for all academic units to disseminate guidelines for expectations of faculty, evaluation committees, and advisors/mentors.

This report represents perhaps the most extensive self-examination of P&T processes conducted to date by a first-tier U.S. research university. As with any major undertaking, certain results require ongoing or future implementation. The PTAC survey instrument will serve as the basis for periodic Institute self-assessment of progress on reaching goals for institutional transformation as set forth by the NSF-funded ADVANCE Program for Institutional Transformation (http://www.advance.gatech.edu/). It will be administered every few years, providing a basis for quantitative assessment of changes in faculty perception that will likely occur in response to this report, the web-based ADEPT tool, and other ADVANCE Program initiatives. The ADEPT tool is targeted for first-generation, limited release to unit-level RPT
committees in mid- to late-fall 2003, to obtain additional feedback on interactive content, with full release scheduled for late spring 2004.

In the course of such intensive self-examination, it is inevitable that questions were raised about the efficacy of the existing evaluation process. Although for the most part PTAC views the existing multi-level committee structure at Georgia Tech presented in Fig. 2 and its timing of decisions as effective, limited discussion was devoted in the latter stages of the study to possible modifications of processes or timing of decisions. In this regard, a suggestion that perhaps warrants further consideration is to offer untenured Assistant Professors a choice to be evaluated within the currently accepted timeline for tenure and promotion to Associate Professor, or to couple the tenure decision with promotion to Full Professor after a longer period of service, probably 9-10 years. PTAC has not considered specific implementation details or ramifications of this suggestion, but it would appear to address certain gender differences noted in the literature, namely that women appear to be less productive than men early in their careers and more productive later. Another suggestion, also not examined within the present study, is to consider appointing an anti-bias faculty representative in each unit or to form anti-bias committees within colleges to review cases from the perspective of potential for bias. These are issues for further feasibility and utility studies.

Another set of issues recommended for further study related to recruiting and assessment of faculty for the purposes of deciding whether to offer tenure upon initial hire. While Section IX of the Recommended Best Practices in RPT Processes (Chapter IV) issued in this report has attempted to provide guidelines that ensure some measure of consistency with the usual RPT evaluation process, the problem so intermingles recruiting and competitiveness issues that it warrants more detailed study in another venue.
ACKNOWLEDGMENTS

First and foremost, PTAC is grateful for the foresight of the Georgia Tech ADVANCE Program Investigators (PI: J.-L. Chameau, CoPIs: M.F. Fox, S.V. Rosser and M.L. Realff) in charging a comprehensive study of promotion and tenure processes recognizing multiple dimensions of evaluation. Promotion and tenure evaluations involve people--candidates and RPT committee members--and are, therefore, critical and complex. Accordingly, we are grateful for the flexibility granted to pursue studies of existing practices across campus; to have had the opportunity to analyze the literature on how bias can affect various aspects of faculty development and application; to have at our disposal resources to develop and administer a survey to quantify faculty perceptions of culture, support, and evaluation at Georgia Tech, and for the allotment of resources to support a team to develop the web-based ADEPT tool for use by candidates and RPT committee members. In many respects, the Georgia Tech ADVANCE Program has served as a model in its financial support of PTAC members, consultants, graduate students, and administrative offices within the Institute to pursue PTAC study objectives. The serious, tangible nature of the ADVANCE commitment to PTAC has led to very strong, steady collaborative efforts on many fronts.

While the efforts on this report were widely distributed, there are several individuals beyond PTAC membership whose contributions were so extensive as to warrant special mention. Carol Colatrella of the School of Literature, Communication and Culture spent untold hours writing case studies for ADEPT and editing various drafts of this report, offering many useful suggestions for organization. Mary Frank Fox of the School of History, Technology and Society offered enormously insightful and always timely assistance in drafting the PTAC survey questions to complement her existing survey work in the ADVANCE program and provided assistance in configuring questions to achieve useful quantitative responses. Joseph Hoey, Director of the Office of Assessment, assisted in drafting the survey as well, in addition to overseeing the initial analysis of PTAC survey data, with Priya Gill, that appear in this report. Linda Cabot of the Office of Information Technology contributed with secure web-based implementation and administration of the survey, assisted by Rob McBroom. Behind the scenes, the ADEPT team of writers, interactive web experts, and programmers (Carol Colatrella, Meghna Krishnan, Maryann Westfall, and Janet Murray of LCC as well as external consultant Laura Ferguson) devoted a monumental effort to design of the first-generation ADEPT tool. ADVANCE Director Mary Hunt provided considerable assistance in communications and coordination of PTAC with other elements of the ADVANCE program, such as ADVANCE Professors, and with Georgia Tech more broadly. Beth Gourbiere, ADVANCE Project Director, coordinated PTAC meeting details, including meal arrangements, announcements, technical resources, etc. and helped tremendously with PTAC involvement in the 2nd Annual ADVANCE Conference in April 2003.

On Behalf of the Promotion and Tenure ADVANCE Committee,
David L. McDowell, PTAC Chair
Atlanta
October 2003
REFERENCES

I.1 Gender: Women in Academic Science and Engineering


Llewellyn, Donna; Usselman, Marion; and Brown, April, 2001, “Institutional Self Assessments as Change Agents: Georgia Tech’s Two-year Experience.” *Proceedings of the 2001 American Society for Engineering Education Annual Conference and Exposition*, session 2592.


Other web resources on gender issues can be found at [http://www.advance.gatech.edu/resources.html](http://www.advance.gatech.edu/resources.html)

### I.2 Race and Ethnicity


Web Sites:

APAHE (Asian Pacific Americans in Higher Education)

“Defining Diversity in Academia,” Academic Affairs, Louisiana State University
http://aaweb.lsu.edu/pseminar/seminar/defining_diversity_in_academia.html

Diversity Web
http://www.diversityweb.org/index.cfm
http://www.diversityweb.org/Leadersguide/fsi/fsrpt.html
http://www.diversityweb.org/Digest/W99/research.html

The Nelson Diversity Surveys (of faculty in science departments)
http://cheminfo.chem.ou.edu/faculty/djn/diversity/top50.html

I.3 Disability

American Association of University Professors, “1940 Statement of Principles on Academic Freedom and Tenure with 1970 Interpretive Comments”,
http://www.aaup.org/statements/Redbook/1940stat.htm


General References: Books


Web Sites containing useful resources:
http://www.ericfacility.net/databases/ERIC_Digests/ed396607.html
http://www.provost.uiuc.edu/campusconduct/disability.html (policy statements)
http://www.dsa.ou.edu/ods/policies.htm (policy statements)
http://www.jhuua.org/Sub/sitemap.asp (Johns Hopkins policies, procedures, and definitions)
http://www.public.iastate.edu/~aao/eod/DisabilityDiscrimination.shtml (useful links)
http://drc.arizona.edu/ada/ada.shtml (definitions of reasonable accommodation)
http://www.northwestern.edu/hr/eeo/ (Policies and Procedures)
http://humanresources.syr.edu/support/nondiscr.html (In addition to policies and procedures, this Syracuse University site contains a reasonable accommodation request form)
Other Resources

The National Council on Disability:  http://www.ncd.gov/ (useful reports and links to a large data base of disability related issues)

The National Organization on Disability:  http://www.nod.org/ (an advocacy group. The web site contains links to a large number of disability related organizations)

Georgia Tech’s Center for Assistive Technology and Environmental Access: http://www.catea.org/ (Housed in the College of Architecture, CATEA offers the Tech community, the State of Georgia, and the public at large a wide array of resources. Its two primary missions are A) Development, evaluation, and utilization of assistive technology (technologies or devices designed to allow or improve performance of activities of daily living or work); and B) Design and development of accessible environments (environments, private and public, accessible to all people, including those with disabilities)

I.4 Allocation of Resources


Reitan, B., Creativity and Innovation in Research Groups, BVN, Norway, 1986. 135 pages.


I.5 Mentoring


Guotong Zhou, Georgia Tech College of Engineering, Statement for SUCCEED Faculty Mentoring Award, 2000.

I.6 Assignment of Service Duties


“The Recruitment and Retention of Faculty Women and Faculty of Color in Planning Education: Survey Results.” Report from the ACSP working Committee on the Recruitment and Retention of Women and Minorities in Planning Education to the ACSP Executive Committee, April 1990. http://www.acsp.org/Documents/Recruitment_and_Retention_Faculty_Women_Color.html

FAUW Forum (Faculty Association of the University of Waterloo), March 1999. (President's message by Fred McCourt)


I.7 Committee Assignments


I.8 Research Teaming and Interdisciplinary Collaboration


I.9 Publication and Presentation Venues


See Leslie Craine v. Trinity College (SC 16557) Supreme Court of Connecticut, March 12, 2002. (The appellate court upheld a verdict in favor of Leslie Craine, Professor of Chemistry at Trinity College. The basis of the decision involved “negligence in the representation of criteria necessary for the award of tenure. As in most such cases, the issue involved due process issues
rather than challenges to the criteria themselves. In Professor Craine’s case, she had authored a textbook that was accepted as a “scholarly work” at her third year review, which was discounted as scholarship at her sixth year tenure review. The jury awarded Dr. Craine, 12.7 million dollars in damages.) see also Fisher v. Vassar College, U.S. Court of Appeals, 2nd Circuit, Nos. 1179, 1303, 2275: August 1994.


Robert M. Diamond and Bronwyn E. Adam, (eds), The Disciplines Speak (volumes I and II), American Association for Higher Education 1995.


I.10 Review Committees and Multi-Layer Structure of Review Process

Peer Institution information is taken from faculty handbooks at the following websites: (www.umich.edu), (www.illinois.edu), (www.caltech.edu), (www.cmu.edu), (www.psu.edu), (www.mit.edu), (www.purdue.edu)

Best Practices Guidelines


Appendix A. Campus-Wide Canvass of Unit Practices in Promotion and Tenure

A1. Unit Reports

**Unit: School of Aerospace Engineering, College of Engineering**  
Author: J. Carlos Santamarina  
Source: Robert Loewy, School Chair

**Constitution of committee(s):**

*First-level peer review committees:*
About three faculty. Includes external faculty.

*School level RPT Committee:*
Faculty selected by School Chair.

**Method of committee(s) assignment:**

*First-level peer review committees:*
Selected by RPT committee. Their task is to assess the quality of intellectual contributions of the candidate.

*School level RPT Committee:*
Selected by chair. No instructions are provided. Committee chair is the same for 3-4 years

*Method(s) of ensuring peer technical review:*
RPT committee prepares package. It includes the candidates CV, First-level committee letter and outside letters from individuals at arms length. School Chair adds his letter (in preparing it, he calls in confidence outside, respectful people - their comments are NOT referenced in the letter)

**Written Guidelines**

*Performance expectations:*
None written – The annual meeting with the chairman includes a detailed quantitatively evaluation relative to a series of metrics, and a qualitative assessment relative to what is expected of a "complete" faculty member. These evaluations are repeated in writing and given to each faculty member, and placed in the individual's record.

*Specification of quality publication/presentation venues:*
None written (see discussion above)

*Expected information from candidate, including format:*
Same as Institute Guidelines

*Method(s) of evaluating teaching and service:*
Based on student evaluation (checked for any correlation when professor assigns high grades).
Provisions for feedback to candidate during the process:
None written (see discussion above).

Mentoring program/philosophy (formal or informal):
Mentor is selected by Chair. A form is filled when the young faculty and the mentor meet. At least one meeting per semester is expected.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: Instructions only address the scheduling of activities and deliverables

Mode of committee(s) interaction with unit administrative head/chair:
None during the process. Candidate does not revise package after submission to RPT com. Except for the addition of an accepted paper. Candidate receives no feedback after CV submission.

Unwritten Guidelines

Mentoring program/philosophy (formal or informal):
see above

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts (issue of single PI versus multi-PI):
Good to show collaboration. Avoid a long record with a single collaborator. A mix a both individual and interdisciplinary efforts is recommended.

Mode of committee(s) interaction with unit administrative head/chair:
Limited and case dependent.

How are teaching, service, research balanced in the evaluation?
Excellence in teaching: admission ticket. Funding: demonstrate ability to build a research program; include several funding agencies; size of grant relatively unimportant. Refereed Journal Papers: 2 per year. PhDs: 2 or 3 in pipeline, one graduating in 4th or 5th year. Service is relatively unimportant

How is teaching evaluated?
Teaching survey results.

Are citation indices used?
Limited

How is the contribution on co-authored papers evaluated? What meaning is attributed to order of listing, if any?
Assessed by first-level committee.
Are issues such as space or availability of graduate students considered?
Some white/male students may not properly values a female advisor, and eventually leave her after a year – high impact.

Other obstacles or considerations for lack of progress?
It is recommended to allow flexibility in the timing. Some good research needs more time for fruition.

PhD Student Advising and Development

Are PhD students tracked into their careers? Is a unit-level database maintained?
No.

On what bases are faculty evaluated for interaction with PhD students? Is placement of PhD students considered? N/A

Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers?
No. Students are expected to present 1-2 brown-bag seminars prior to graduation.

Unit: School of Applied Physiology, College of Sciences
Author: Jeannette Yen
Source: Mindy Millard-Stafford, Full Professor

Constitution of committee(s)

First-level peer review committees:
None.

School level RPT Committee:
Committee comprised of 3 Full professors including chair (only 2 members other than Chair). Usually one external senior level faculty outside department (Biology, BME). At this time, this School only has 2 Full Professors (other than the Chair). The committee agreed that another faculty member should be included. Only tenured faculty vote.

Method of committee(s) assignment

First-level peer review committees:
None.

School level RPT Committee:
Chair includes both Full Professors. In addition, an external faculty member has been selected based on the particular candidate and their area of expertise. For example, if the candidate is an engineer and research relevant to engineering, a faculty member in biomed engineer was selected.
Method(s) of ensuring peer technical review:
Candidate provides a short list of external reviewers (3-4) but Chair solicits another 3-4 of his own. For promotion to Full, international reviewers are sought. Goal is to obtain about 8 letters.

Written Guidelines

Performance expectations: As specified in CoS guidelines. Candidate meets with unit P & T Chair regarding suggestions for packet contents and information needed. (The 6 page Biosketch is reviewed by committee and suggestions provided to candidate prior to formal submission for voting). Annual report from candidate of grant activity, summarizing accomplishments in past years and defining goals for next year.

Specification of quality publication/presentation venues: Not specified. Chair can advise.

Expected information from candidate, including format: Same as from Institute Guidelines. Follow CoS document. Prepare CV according to Tech guidelines. Not strictly enforced format.

Method(s) of evaluating teaching and service:
Transition from an emphasis on teaching and service (Institute-wide required undergraduate course in HPS) to greater importance on research. Director of Teaching Effectiveness (DOTE) evaluation is based primarily on compiled teaching survey results.

Provisions for feedback to candidate during the process: Critical review occurs in 3rd year. Annual meetings between candidate and Chair. No written narrative from Chair (except for reappointment status). Candidate meets with unit P & T Chair regarding suggestions for packet contents and information needed. (The 6 page Biosketch is reviewed by committee and suggestions provided to candidate prior to formal submission for voting).

Mentoring program/philosophy (formal or informal): No written guidelines exist.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: In multi-authored papers, %contribution is specified on CV.

Mode of committee(s) interaction with unit administrative head/chair: RPT committee reviews external letters and CV of candidate, and assesses candidate’s progress. Chair reviews RPT committee’s assessment. Annual meetings with Chair.

Unwritten Guidelines

Mentoring program/philosophy (formal or informal): Informal ties sought by candidate.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts (issue of single PI versus multi-PI): Chair’s ties with Emory (pre-existing grant) promote interdisciplinary efforts and collaboration. Professors (2-3) involved in collaboration within Tech (w/ Psychology, BME) and outside of Tech (e.g. Emory).
A focus on interdisciplinary research is described on the School of Applied Physiology’s homepage, as follows:
At the undergraduate level the School instructs all Georgia Tech students in their health and wellness requirement and offers a Certificate in Health Science addressing students' desire for basic medical education. At the graduate level AP is the home School for a Focused Master’s Program in Prosthetics and Orthotics. Together with units in the College of Engineering our faculty offer cutting-edge instruction coupled with sound clinical training and a foundation in movement science. A graduate program offering a Ph.D. is currently under development. The School is unique to the Georgia Tech community but founded in interdisciplinary teaching and research fundamental to the mission of the Institute.

Mode of committee(s) interaction with unit administrative head/chair:
Yearly meetings. Discussion of outside reviewers at time of submission of tenure package.

How are teaching, service, research balanced in the evaluation? This department is growing. They have started a new master’s program this fall 2002. They recently have changed their name. A stronger emphasis now is placed on research. Past efforts focused on teaching, because of institute-wide required undergraduate course in HPS.

How is teaching evaluated? Surveys requested and reviewed. CETL review can be requested. DOTE has been a new mechanism used in past 2 years.

Are citation indices used? Yes, to judge quality of journal relative to field. Impact factors are difficult to discern, due to specialized nature of field.

How is the contribution on co-authored papers evaluated? % contribution stated in CV

What meaning is attributed to order of listing, if any? First name is primary author.

Are issues such as space or availability of graduate students considered? More attention would be helpful.

Other obstacles or considerations for lack of progress? This unit is providing an important service by teaching the institute-wide required HPS course, requiring a strong emphasis on teaching. Teaching of this undergraduate course involves ~5 sections per semester (over 1,000 students total). Offering of a 25-30 student laboratory was very popular and effective (HPS 1061 course), but this course was discontinued due to lack of resources (supplies, SAC teaching faculty under construction but primarily funds to provide qualified instructors). Provisions and more resources to improve interactive nature of course are needed to encourage teaching of smaller hands-on course.

This department has been so small that the RPT committee must go outside for an additional senior faculty member and faculty often go outside department for students. It has been 10 years since last tenure decision. Because of small size, informal procedures have been followed. This group is growing: new MS program, two new hires in past three years, search for two new faculty members underway. As this group grows, they can benefit from the experiences of other
larger departments. A more formal mentoring program with clearer metrics provided to faculty can help to maintain their efforts towards highest productivity in this field.

**PhD Student Advising and Development**

*Are PhD students tracked into their careers? Is a unit-level database maintained?*
N/A: No Ph.D. program. MS program started fall 2002.

*On what bases are faculty evaluated for interaction with PhD students? Is placement of PhD students considered?* N/A.

*Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers?* N/A.

**Unit: College of Architecture**

Author: *Douglas Allen*

Sources: College of Architecture, Faculty Governance Document, and College of Architecture Standards and Procedures for Reappointment, Promotion, and Tenure. Douglas Allen, Associate Dean for Academic Affairs.

**Constitution of committee(s):**

*Introduction:* The College of Architecture consists of five degree granting units. These are: Architecture, Building Construction, City and Regional Planning, Industrial Design, and a Doctoral Program. The Doctoral Program spans across all four of the other degree granting programs represented in the College. The College also contains the Department of Music, which does not offer degrees. The College has no committee review at the unit-level. Rather, first-level peer review occurs through outside referees (external review) who are asked to evaluate the candidate’s contribution to knowledge in their field and to place their work nationally among other scholars of similar rank.

*First-level(external) peer review committees:* Because of the combination of relatively small size and wide intellectual and disciplinary diversity among its faculty, the College of Architecture uses an external review process as first-level peer review. The purpose of this review is to provide an independent assessment of the intrinsic merit of the creative work of the individual, its value to the professional and academic communities, and to the public at large. The external referees do not render a judgment as to the question of promotion or tenure, but rather on the value of the work itself. All promotion and tenure cases, and third year critical review cases include an external review process. Six external referees are chosen; three by the candidate and three by the program director subject to approval by the dean.

*School level RPT Committee:* There is no school (program) level committee review in the College of Architecture.
College-level RPT Committee: The College of Architecture elects a seven person committee from its tenured faculty. All tenure and tenure-earning faculty vote in this election. This committee consists of seven faculty members. Each degree granting program with at least two tenured faculty members other than the Program Director has one position. The remaining two positions are filled by at-large elections. No program director or associate or assistant program director, assistant or associate dean shall be eligible to serve on the RP&T Committee. Where necessary to achieve the minimum membership required, more than two tenured members may be elected at-large. Prior to the annual election process, the College Advisory Committee determines the number of at-large members to be elected during the process. The duties and responsibilities of this committee are:

- Review faculty promotion and tenure and recommend actions to the dean;
- Review and, if appropriate, recommend changes in the college criteria, policies, and procedures concerning college promotion and tenure matters to the dean and the tenured faculty; and
- Other processes and guidelines as may be necessary or desirable.

The associate dean for academic affairs assists the RP&T Committee in carrying out its duties. The committee chairperson is the faculty representative of the college on the Institute (Provost’s) RP&T Committee.

Method of committee(s) assignment:

First-level (external) peer review committees: The external review committee is constituted by the program directors of the degree granting units in consultation with the dean and the candidate. The external review committee is approved by the office of the dean. At least four referees must be included (two from persons named by the candidate and the other two from individuals named by the program director), and up to six such letters (three from persons named by the candidate and three persons named by the program director) may be included. The office of the dean solicits external reviews and forwards them to the program director, and to the college reappointment, promotion, and tenure committee.

Method(s) of ensuring peer technical review: The letter of solicitation sent by the dean to the external referees is worded to request an evaluation of the quality of the candidate’s contributions to knowledge in their field, and does not seek evaluation of teaching or service. A copy of the individual's resume and other relevant materials (a minimum of three and a maximum of six samples of the candidate’s work) accompanies the letter of request. The referees are asked to be specific and to comment on particular aspects of the candidate's research and scholarship and to provide an assessment of its impact on the field, and where possible, to provide a comparison of the work to that of others in the field at the same stage of their career. The office of the dean conveys the external letters to the program director and to the RPT committee with an explanation of why those persons were selected in terms of their general qualifications in the field, and their specific contributions to the review. To preserve confidentiality, the letters themselves are conveyed with the dossier to the Program Directors and the CoA RPT committee via the office of the dean and subsequently to the vice provost’s (Institute) committee. The letters of evaluation are retained in the office of the dean. There are written guidelines concerning each policy and procedure outlined above [1].
**Written Guidelines**

Source: *College of Architecture Standards and Procedures for Reappointment, Promotion, and Tenure.*

**Performance expectations:** performance of each faculty member is evaluated in three areas of activity

**A. Teaching:** To be considered for promotion and/or tenure in the College of Architecture, a candidate's promotion materials must include a documentation of the evidence of effective teaching. Such evidence must include student evaluations in the standard Institute format. This alone, however, is insufficient to demonstrate excellence as an educator. The concept of an educator implies a broad perspective toward higher education that encompasses more than effective classroom teaching. It involves such things as leadership in developing new educational programs, innovative ways of teaching, and the ability to attract graduate students, particularly at the post-graduate level. Excellence in teaching must extend beyond the classroom and should include evidence of broad pedagogical influence. Such evidence may include:

1. authorship of textbooks;
2. publication of instructional material;
3. publication of professional articles, conference presentations and proceedings on pedagogy;
4. extensive work in curriculum revision of teaching methods for the program, school, department, or college.
5. citations in publications on pedagogy.
6. award recognition for teaching or advising.
7. award recognition or publication of student work under direct tutorial supervision of a faculty member.
8. recognition of excellent teaching by peers at comparable institutions.

Effective AY 03-04, the college will institute a process of peer evaluation of teaching [2].

**B. Scholarship, Research, and Creative Activities:** In the College of Architecture scholarship and research, may reach across the entire range of activities represented by the various disciplines within the College. No one category of activity is held superior to any other. The College recognizes that scholarship is necessarily of differing kinds. No single model of research or scholarly activity should prevail at the expense of broadening and deepening the educational experience of the student. Scholarly activity in the college should be aimed at the full scope of academic work as identified in Scholarship Reconsidered [3]. In all cases, the criteria for assessing the quality of research, scholarship, or artistic activity is the extent to which the evidence demonstrates: (1) a contribution to the advancement of knowledge or creative expression, (2) the enhancement of quality in the development of professional practice, (3) a contribution to teaching effectiveness, and (4) an acknowledged respect by one's professional peers at a national level, and international level. Documentation of evidence must be presented as a requisite for advancement in rank. Examples of such evidence include:
1. refereed publications;
2. design awards;
3. successful execution of funded research projects;
4. literary publications, books and book chapters;
5. participation in juried or invitational shows, exhibitions, or competitions;
6. invited lectures, shows, performances, and presentations;
7. papers published in refereed proceedings of conferences and symposia;
8. papers presented at conferences and symposia;
9. citations of the work in other publications;
10. other articles and publications;
11. patents;
12. development and publication of computer software;
13. publication of book or exhibition reviews in scholarly journals;
14. editorships of scholarly journals.

In general terms, quality is of greater importance than quantity. In cases where the work is a joint effort with others, there must be clear evidence that the individual under consideration has assumed a significant role in the conduct of the work. For advancement in rank, and for the granting of tenure, faculty must show a continuous pattern of creative activity while at Georgia Tech.

C. Service: It is the expectation of the college, and the Institute that faculty members shall contribute significantly to the Institute, their professions, disciplines, and to the public at large. Service may be of several types:

1. Service to the Institute: Faculty members play a vital role in the functioning of the Institute at all levels by participating effectively in faculty governance and in the formulation of program, department, college, and Institute policies, or by carrying out administrative duties and responsibilities. Service within the Institute is an obligation of all faculty members, and is requisite for advancement in rank, and for tenure. Service may be constituted by membership on program, department, college, or Institute committees, through development of policies and procedures, through representation of the college and the Institute on regional national and international education and/or professional boards, by active participation in faculty and or student associations, by participation in continuing education, student services, recruitment, or other similar activities.

2. Service to Professions and Disciplines: In addition, faculty members are expected to make service contributions to technical, professional, and scholarly societies appropriate to their academic discipline. Faculty members may also provide service, related to their professional expertise, to the public and to other agencies. Service to one’s profession includes the holding of offices, serving on committees, organizing conferences or meetings, serving on boards of directors or other related activities.

3. Public Service: In addition, faculty members are expected to make service contributions to local, state, federal, and international government agencies and non-
profit or quasi-public organizations appropriate to their technical, professional, and scholarly activities.

4. Continuing Professional Education: There is a rapidly escalating need for postgraduate continuing education opportunities for members of the allied architectural, planning, design, and development professions to broaden and to deepen their knowledge and understanding both in general terms and in specialized sub-disciplines within each field. Faculty participation in continuing education activities constitutes a service to the public, to the professions and disciplines, and to the Institute and should serve as a crucible where theory and practice interact.

Specification of quality publication/presentation venues: None

Expected information from candidate, including format: Same as from Institute Guidelines [4]. The format for the dossier is the same as the format for each faculty member’s annual report. This was done to eliminate redundancies and slight variations in formats between the two. The format is located in downloadable form on the CoA intranet.

Method(s) of evaluating teaching and service: See Above

Provisions for feedback to candidate during the process: Through face to face meetings and written annual reviews, tenure earning faculty are debriefed every year on their progress toward tenure by program directors. In addition, the associate dean advises the candidate as to schedule, format, documentation, and ensures that each faculty is fully aware of the standards, policies, and procedures in place for advancement. A draft of the dossier is reviewed by the program director, the associate dean for academic affairs, and the dean prior to the tenure year. The dean fully debriefs all faculty on promotion, tenure, and post-tenure decisions.

Mentoring program/philosophy: Beginning fall 03, the associate dean for academic affairs will hold a counseling session for incoming tenure-track faculty. Each spring, the dean, the associate dean for academic affairs, and the chair of the CoA RPT committee hold a two-hour open discussion for all faculty seeking promotion and or tenure.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: Within the College of Architecture, the written policy is that no one category of activity is held superior to any other. The College recognizes that scholarship is necessarily of differing kinds. It is the expectation that each candidate will be explicit concerning their role in any and all collaborative research, design, article, book, or other scholarly activity.

Mode of committee(s) interaction with unit administrative head/chair: The role of each administrator, Program director, associate dean, and the dean is specified in section IV. Procedures for Reappointment, Promotion, and Tenure Review. In general, each decision is treated as an independent evaluation and recommendation, occurring in a step-wise manner.
Unwritten Guidelines

Source: Douglas Allen, Associate Dean for Academic Affairs.

Mentoring program/philosophy (formal or informal): the associate dean for academic affairs often advises faculty as to strategies for career advancement. This occurs both formally (see above) and informally. It is also the expectation that senior faculty act as mentors to junior faculty, though no formal procedures for such exist at this time.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: This is considered a strength within the College of Architecture, although there are no explicit guidelines for such. Each fall, when the RPT Committee is seated, the associate dean for academic affairs charges the committee, reminding them of their obligations to follow the Standards and Procedures as adopted by the faculty.

Mode of committee(s) interaction with unit administrative head/chair: Once the case is in progress, there is no intermediate communication between the program director, committee chair, and dean, prior to the Institute (Provost’s Committee) evaluation. This is the written policy of the College of Architecture. Each evaluation is treated as a separate entity.

How are teaching, service, research balanced in the evaluation? The unwritten understanding is that poor teaching will prevent advancement, and is cause for possible termination, but good teaching alone will not suffice. Same for service. The emphasis is on scholarly activities: research, design awards, articles, books, one-person shows, publications, etc.

How is teaching evaluated? Teaching survey results, and peer evaluation (formally effective in fall 2003) Citations of course work and publications on pedagogy are formal stated criteria in the Standards and Procedures. Student awards (primarily in national and international design competitions) are considered positively.

Are citation indices used? This is one of the listed criteria in the Standards and Procedures.

How is the contribution on co-authored papers evaluated? What meaning is attributed to order of listing, if any? External (first-level) committee evaluations are used as a guide to the individual’s contribution to their field. Referees are asked to evaluate the specific contributions to the candidate’s field and to place them within the community of scholars of similar rank, nationally and internationally. Interpretation of order of listing of authors does vary within disciplinary areas and is a potential cause for concern. Normally this is worked out within the RPT Committee discussions. The extent to which that this works well, and without bias, is due to the constitution of the committee by election, requiring representation from each discipline (degree granting unit) within the college. To date, this has not been a major problem, although there is potential for bias due to differences across disciplines.

Are issues such as space or availability of graduate students considered? Only within the doctoral program is this an issue. While important in the professional programs, it is not the expectation of those faculty that they will advise PhD students. (See below)
Other obstacles or considerations for lack of progress? No

PhD Student Advising and Development


Introduction: Within architecture and the built environment, Doctoral level studies are relatively recent and tend to be interdisciplinary by nature. At Georgia Tech, this has been institutionalized as such through the Doctoral Program in the College of Architecture, which spans across the range of the other four professional disciplines represented in the College: Architecture, City and Regional Planning, Building Construction, and Industrial Design. All faculty with primary appointments in the Doctoral program hold funded appointments in one of the other four degree granting programs.

At a national level, Architectural research remains a fragile enterprise. There are but a dozen active Ph.D. programs in architecture in the U.S. and resources to attract and support high quality doctoral students and faculty are not readily secured. To a great extent, particularly in programs with a strong design studio orientation, the professional M.Arch. rather than the Ph.D. remains the terminal degree; by contrast, the Ph.D. is clearly the terminal degree in City Planning and increasingly so in Building Construction and Building Technology. The funding stream for built environment research is miniscule, less than 2% of federal research dollars, with no dedicated funding programs, with typical awards ranging from $25,000 to $100,000 and rarely more than a year in duration. Despite this, the College of Architecture at Georgia Tech ranks second in the nation, behind only MIT, in its total funded research. While most of this is accounted for through the six research centers housed in the College, the expectation of faculty in all academic programs, and especially in the Doctoral Program is that they will develop a research program and secure sources of funding.

Some aspects of doctoral level research in Architecture and the built environment, such as art and architectural history and criticism, have historically not attracted substantial funding, while others do. It is within this context that faculty with primary appointments in the Doctoral Program are evaluated.

Are PhD students tracked into their careers? Is a unit-level database maintained? Yes. The Doctoral Program graduates an average of 3.6 students per year after an average of 6.3 years in the program. With an FTE faculty of 5.5, tracking students has been relatively easy to accomplish. In addition, the Doctoral Program has tracked 42 of its graduates, over the past ten years. Of these, 81% currently hold faculty positions.

On what bases are faculty evaluated for interaction with PhD students? Is placement of PhD students considered? Program faculty carry heavy teaching loads, particularly with respect to student advisement and student committees. With 51 students and 5.5 Ph.D. FTE, it is necessary and critical that CoA faculty whose primary appointments are not within the Doctoral Program participate in the teaching and advising process. While this fluid arrangement could present problems with higher numbers of students and complexities of joint appointments, this is
currently considered a strength of the Doctoral program’s structure. These contributions are clearly recognized in the RPT Process. Inter and intra-disciplinary work is expected due to the nature of the faculty appointments and interdisciplinary work is highly valued within the College.

**Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers?**

PhD students are routinely used in instructional capacities within the CFY (Common Freshman Year) which is administered by the associate dean for undergraduate studies. There are no written guidelines.

[1] In this document, these are referred to as the “Standards and Procedures”. These may be obtained at: [http://www.coa.gatech.edu/fs_resources/handbook/fac_govern_2.htm](http://www.coa.gatech.edu/fs_resources/handbook/fac_govern_2.htm), and at [http://www.coa.gatech.edu/fs_resources/handbook/rpt_4.htm#reappointment](http://www.coa.gatech.edu/fs_resources/handbook/rpt_4.htm#reappointment)


**Unit: School of Biology, College of Sciences**

**Author:** Jeannette Yen

**Sources:** Terry Snell, Chair of RPT committee; Roger Wartell, Chair of School of Biology

**Constitution of committee(s)**

*First-level peer review committees:*

None.

*School level RPT Committee:*

Three Full Professors on RPT committee.

**Method of committee(s) assignment**

*First-level peer review committees:* None

*School level RPT Committee:*

The chair selects a committee of three from the full professors. Effort is made to include individuals from different areas of biology in particular ensuring there is expertise relevant to upcoming tenure decisions. For other committee work, Chair usually does not appoint first year faculty to any committees. Committee assignments are voluntary, but expected. There is a Faculty Advisory Committee to handle Chair-faculty disputes elected by faculty.
Method(s) of ensuring peer technical review:
Outside letters from experts in the field are essential for assessing the significance of the study. Citations and impact factors are used (ISI website).

Written Guidelines

Performance expectations: Research is essential (grants, publications). Submission and success in obtaining grants are emphasized along with preparation and success in publishing research in recognized journals. Excellence in teaching is needed. Voluntary efforts on service promote collegiality and are expected. Guidelines from Faculty Handbook and on CoS website. Biology’s written guidelines provide timeline.

The three elements differ in the manner of evaluation due to the different measures available for each and their relative importance in a decision. Evaluation of research scholarship utilizes a number of relatively objective measures;

a) number of publications,

b) quality of publications based on ranking of journals and citation of articles,

c) comments by outside references without close contacts to the candidate on value of the research

d) grant support, consistency in being renewed.

e) invitations as a speaker to other institutions and conferences.

It is unlikely a favorable tenure decision will occur without a good record in research scholarship even if the other two elements are strong.

Specification of quality publication/presentation venues: A minimum of two publications/year, journals and citations with high impact factors.

Expected information from candidate, including format:
CoS guidelines (see http://www.cos.gatech.edu/criteria.html).
CV in Dean’s format.

School of Biology Guidelines for Promotion and Tenure:

Method(s) of evaluating teaching and service:
Teaching is assessed based on a combination of

a) course-instructor surveys, particularly on effective instructor category.

b) peer review of teaching (DOTE review), on the nature of exams and quality of presentation and syllabi.

c) Contribution to breadth of undergraduate and graduate program

d) Good and productive mentoring of graduate students; having them graduate, absence of complaints.

e) course grade distribution- if one gets great survey results but consistently gives nearly all A’s in classes with virtually no C’s or worse then the favorable surveys are devaluated and sometimes disregarded by me.

f) CETL participation and or teaching awards
Excellent teaching can bolster a positive decision for an individual with a good but not outstanding research program. If teaching is ignored or done poorly, the Chair would not recommend tenure even if research is outstanding.

Service is assessed based on contributions to the School through participation on committees, involvement with college and institutional committees and activities, and contributions to outreach activities in education and the community. To document service, there is a list of committees and membership that is circulated to all faculty. Faculty report positions held in professional societies, editorial boards, review panels. To a lesser extent service to professional societies may also be counted if it is significant. This component should be evident, and since it is an easy button to press it nearly always is. Outstanding service can also influence a decision but on its own will never be sufficient for a positive recommendation. Seniors exit interviews also have been useful in teaching evaluations.

Provisions for feedback to candidate during the process: Chair meets with each faculty once per year. Each faculty should receive a written evaluation every year. Usually there are no meetings between the candidate and the RPT committee. Candidate submits updated CV each year, in the CoS Dean’s format. The Chair reviews their files carefully and meets with the candidate to discuss their progress. The 3rd year review is the most comprehensive, when the employment contract is renewed, terminated, or warnings in terms of time limits are issued. The School committee is comprised of full professors selected by School Chair.

Mentoring program/philosophy (formal or informal): No written guidelines exist.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: None written.

Mode of committee(s) interaction with unit administrative head/Chair: None written.

Unwritten Guidelines

Mentoring program/philosophy (formal or informal): Informal mentoring program set up by candidate and the Chair. The Chair generally assigns a senior faculty member in the school as a mentor to new junior faculty members after discussing this with both the mentor and mentee. No formal philosophy. There is a general desire to formalize the current program.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts (issue of single PI versus multi-PI):
Both solo and team efforts are encouraged. Value placed on sole authorship in part because may be difficult to have a clear definition of contribution as team.

The new IGERT program (http://www.biology.gatech.edu/igert.html) promotes interdisciplinary interactions between Biology, Chemistry, Engineering. Encouragement for interdisciplinary efforts outside department and within the department may be more important than single investigator efforts. The % contributions on multi-authored papers are reported in the CV.
The BIOLOGY homepage indicates supportive environment for interdisciplinary approaches, as follows: The School is located in the Cherry Emerson Building, adjacent to the Institute for Bioengineering and Biosciences, and the new Environmental Science and Technology building. Together this complex forms the center of bioscience research at Georgia Tech and houses interdisciplinary research teams of biologists, chemists, earth scientists, bioengineers, and environmental engineers. The School of Biology faculty members actively collaborate with faculty in other Schools and Departments on campus. This gives students and researchers in the School a more diverse scientific exposure than they might have elsewhere. Such collaborators are included in the School of Biomedical Engineering, the School of Chemistry and Biochemistry, the School of Civil and Environmental Engineering, as well as other units on campus.

Evaluation of joint appointments: No difference in the P&T guidelines for joint appointment faculty. The dominant-time School writes the recommendation including a representative from the other school in the deliberation.

Mode of committee(s) interaction with unit administrative head/chair: One-on-one meeting each year between candidate and Chair. Third year review is considered the important. The School RPT committee plus the Chair provide written evaluations in the third year review. Fall meeting to initiate P&T process, spring meeting for third year reviews.

How are teaching, service, research balanced in the evaluation? Research is emphasized during pre-tenure years. Teaching must be good. Service is voluntary but expected.

How is teaching evaluated? DOTE, student evaluations, exit interviews with seniors.

Are citation indices used? Yes, as well as journal impact factors

How is the contribution on co-authored papers evaluated? CV includes % contribution by candidate on multi-authored papers. What meaning is attributed to order of listing, if any? Unspecified. First author is assumed to be the lead scientist, last author the project director.

Are issues such as space or availability of graduate students considered? Yes. Most graduate students come in knowing which professor they want as an advisor. Laboratory rotations are encouraged but not required. Decision by graduate student as to advisor is made no later than the end of first year. The School policy is to provide support for no more than two students/faculty member/yr on a School teaching assistantship. First year faculty have start-up funds which they can allocate to graduate research assistants if they choose. Space is assigned by Chair and associated with that laboratory (there are written guidelines for allocating space). Space allocation for faculty relocated to the new ES&T building is according to the same guidelines by the chair.

Other obstacles or considerations for lack of progress? Biology is undergoing a growth phase, where the informal interactions between a small group of faculty may need to be replaced by a more formalized interactions in the form of mentorship programs, active Faculty Advisory
Committee working with closely with the Chair, formal feedback between Chair and candidate as personal statements and written evaluations and recommendations.

**PhD Student Advising and Development**

*Are PhD students tracked into their careers? Is a unit-level database maintained?*
Yes.

*On what bases are faculty evaluated for interaction with PhD students? Is placement of PhD students considered?* The Graduate Committee reviews progress of all graduate students on a yearly basis. Contact professors if student is off-track. Placement is primarily the responsibility of the major advisor.

*Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers?*

As part of the new IGERT program, there is a new course called *Tools of Science* to improve student’s written and oral communication, discuss ethics, and explore future opportunities in teaching, research, industry, and government. Most learn from interactions with major professors and other faculty. Required one-year teaching assistantship.

**Unit: School of Biomedical Engineering, College of Engineering**

*Author: Paul Benkeser*
*Source: Michael Thomas, Acting Chair and Allen Tannenbaum, RPT Committee Chair.*

**Constitution of Committee**

*School level RPT Committee:*

Full professors with departmental tenure lines from both Emory University and GT serve on the department’s RPT Committee. Currently the Committee consists of five members, three of which have GT tenure lines. The roster of this Committee is distributed to the faculty at the start of the academic year.

**Method of Committee Assignments**

The Chair selects the RPT Committee and appoints the Committee Chair.

There are no written guidelines in BME on the methods for RPT Committee appointment and operation.

**Written Guidelines**

*Sources:* Michael Thomas, Acting Chair and Paul Benkeser, Associate Chair.

There are no written guidelines.
**Performance expectations:** None specified other than Institute (University System) guidelines that are not specific. However in cases for both promotion and tenure, there are three factors to be considered, teaching, research and service. Research is a given in almost all cases. A substantial and consistent record of publications in top journals as well as a well demonstrated record of sponsored funds. Teaching…to include course development, student advising, classroom teaching are all components of this category. Expectations vary depending on individual circumstances applicable to each case and few generalizations can be drawn.

**Specification of quality publication/presentation venues:** None specified

**Expected information from candidate, including format:** Specified by the College of Engineering (COE). See [http://www.coe.gatech.edu/facultystaff/resources/](http://www.coe.gatech.edu/facultystaff/resources/)

**Method(s) of ensuring peer technical review:** See COE documentation ([http://www.coe.gatech.edu/facultystaff/resources/](http://www.coe.gatech.edu/facultystaff/resources/))

**Method(s) of evaluating teaching and service:** See COE documentation

**Provisions for feedback to candidate during the process:** See COE documentation

**Mentoring program/philosophy (formal or informal):**

1. All assistant level and new faculty will be assigned a tenured (at least one rank higher) faculty mentor by the Department chair.

2. Changes in assignment will be consider after 6 months of the original assignment and must be approved by the Department chair.

3. Assistance for developing teaching skills will be provided by multiple sources. The Center for Enhancement of Teaching and Learning (CETL) will provide assistance for more traditional classroom instruction. All junior-level faculty will be required to participate in CETL’s Teaching Fellows Program. Designated Department faculty will serve as resources for PBL facilitation and graduate student research advisement.

4. The protégé should arrange for informal protégé/mentor meetings *at least* once per semester (monthly /as needed meetings are recommended) to discuss progress, concerns, and general questions about faculty life.

5. The mentor should help the protégé prepare and maintain a formal Georgia Tech RPT package for submission to the BME RPT committee on a yearly basis. This package will include all required documents for 3rd year critical review and tenure decision except for outside letters/materials, but including a letter from the mentor. The mentor should base his/her letter on the past year’s meetings and observations, including strength, weaknesses, and recommendations. The RPT committee will review the file and issue a letter to the junior faculty member in a timely fashion. The RPT committee letter should contain a summary of the
candidate’s strengths and weaknesses and identify areas for improvement. All letters produced from this process should be confidential and not seen by anyone except protégé, mentor, RPT committee, and Department chair.

6. The chair of the RPT committee should issue reminders of Institute/College-level workshops and seminars on the tenure process and related concerns (grant writing, teaching, channels for suggestions, etc.) to all protégé/mentor teams.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: See COE documentation

Mode of committee(s) interaction with unit administrative head/chair: None

Unwritten Guidelines
Source: Michael Thomas, Acting Chair

Mentoring program/philosophy (formal or informal): None

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts (issue of single PI versus multi-PI): There are written guidelines that can be obtained from Bob McMath.

Mode of committee(s) interaction with unit administrative head/chair: The RPT committee reviews documentation provided by the candidate, selects along with the chair a list of outside references and solicits letters of recommendations from them. They receive advice from the candidate about who would be appropriate to review the work.

How are teaching, service, research balanced in the evaluation? The issues are normally subjective. All of the methods of measuring the contributions are subjective. Georgia Tech is a research institution and likely no one would be promoted to Associate Professor without substantial promise demonstrated of a research career. Promotion to Professor tends to take longer for those who don't have strong research contributions but has been done based on excellent teaching and outstanding service.

How is teaching evaluated? Institute student evaluations, peer review (soon to be implemented), and evaluation of graduate student supervision which is also a teaching function.

Are citation indices used? Yes but not uniformly.

How is the contribution on co-authored papers evaluated? What meaning is attributed to order of listing, if any?: Varies according to the norms of the discipline or sub-discipline.

Are issues such as space or availability of graduate students considered? Space and availability of graduate students has not been a significant issue in BME. Other obstacles or considerations for lack of progress? No
PhD Student Advising and Development
Sources: Michael Thomas, Acting Chair and Pat Fowler, Graduate Academic Advisor.

Are PhD students tracked into their careers? Is a unit-level database maintained? No

On what bases are faculty evaluated for interaction with PhD students? Is placement of PhD students considered? If someone has a student who gets a faculty position at one of the top schools, it is noted.

Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers? None currently, but a program is being planned.

Unit: School of Chemical and Biomolecular Engineering, College of Engineering
Author: J. Carlos Santamarina
Source: Ronald Rousseau, School Chair

Constitution of committee(s):

First-level peer review committees:
About three-four faculty.

School level RPT Committee:
Senior faculty. Committee chair rotates every ~5 years. Members: 5-10 years

Method of committee(s) assignment

First-level peer review committees:
Names are suggested by candidate plus the RPT Committee. The Chair chooses among the choices provided. Letter to committee members includes instructions.

School level RPT Committee:
Appointed by chair. Committee is provided a charge and verbal instructions. It is assumed that participants are familiar with the process.

Method(s) of ensuring peer technical review:
Chair requests external letters. Chair may add names to the list recommended by the RPT committee.
The letter from the First-level Peer Review Committee and from external reviewers (about 4 to 5) are shared with the RPT Committee. The RPT committee provides its recommendation to the School Chair who adds his own letter to the package.

Written Guidelines

Performance expectations:
None written, but untenured faculty members meet regularly with school chair (monthly for assistant professors, semi-annually for others) where performance expectations are reviewed. Individuals also are refereed to the Faculty Handbook.

*Specification of quality publication/presentation venues:* 
None written, but these are communicated in the meetings cited above.

*Expected information from candidate, including format:* 
None written. Same as Institute Guidelines.

*Method(s) of evaluating teaching and service:* 
Based on student evaluations, which come from surveys and exit interviews. Both the chair and associate chair conduct informal audits of teaching.

*Provisions for feedback to candidate during the process:* 
None written

*Mentoring program/philosophy (formal or informal):* 
Active but no written guidelines (see below).

*Instructions/guidelines/understanding for evaluation of interdisciplinary efforts:* 
None written.

*Mode of committee(s) interaction with unit administrative head/chair:* 
Instructions are communicated to chairs of committees regarding the format of committee input.

**Unwritten Guidelines**

*Mentoring program/philosophy (formal or informal):* 
- Untenured Assistant Professors: monthly meeting with chair, free format. No record is made.
- Associate Professors and Untenured Full Professors: semi-annual meeting.
- Mentor assignment: Assistant Professor suggests names and the Chair acts as broker. The mentor is not an evaluator.

*Instructions/guidelines/understanding for evaluation of interdisciplinary efforts (issue of single PI versus multi-PI):* 
No formal procedure. No problems appreciating it. Candidate must be able to identify contribution.

*Mode of committee(s) interaction with unit administrative head/chair:* 
Chair does not participate in any deliberation. No communication with chair. Candidate can update resume until First-level.

*How are teaching, service, research balanced in the evaluation?* 
- Good research: impact, output, helps educate, recognized.
• Publications: number and impact
• PhD: 1 completed
• Teaching: good
Note: A wider range of factors affect promotion from Assoc to Full.

*How is teaching evaluated?*
Student evaluation. Exit interviews, observing. No formal peer evaluation.

*Are citation indices used?*
No. They may be misleading. Emphasis on journal quality.

*How is the contribution on co-authored papers evaluated? What meaning is attributed to order of listing, if any?*
Assessed by first-level committee.

*Are issues such as space or availability of graduate students considered?*
Can be a problem. Lack of students reflects on the candidate. Space limitations could be considered.

*Other obstacles or considerations for lack of progress?*

**PhD Student Advising and Development**

*Are PhD students tracked into their careers? Is a unit-level database maintained?*
No

*On what bases are faculty evaluated for interaction with PhD students? Is placement of PhD students considered?*
Informally.

*Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers?*
Encourage them to get into CETL. Help teaching classes.

**Unit: School of Chemistry and Biochemistry, College of Sciences**

Author: Mostafa El-Sayed
Source: School Chair

Committee structure: The executive committee, which is elected by the full Faculty, acts also as the RPT committee. The department chair is a member of the committee. The department chair brings to the committee the names of the members that are up for tenure, promotion, and past tenure cases for discussion and vote. The list of names of outside reviewers to be contacted is developed from a list suggested by the faculty under consideration as well as the faculty representing the candidate’s area of research. The chair sends out these letters.
Balance of evaluation, teaching/research/service: Research is the most important factor in the tenure decisions. The outside letters are most crucial. The publications and outside funding are very important. A seminar given by the candidate to the faculty on his/her work is evaluated by the faculty in attendance. The recognition the member receives before tenure, as shown by the talks he/she is invited to give at national meetings and at different universities, is extremely important.

Documentation: The candidate supplies what is required by CoS guidelines/directives.

Composition: The executive committee is composed of a member from each area of chemistry. In addition, a member from the group to which the candidate belongs is invited during the meeting at which his/her case is presented.

External reviews: The selection of the outside reviewers is critical in the evaluation process, as is the kind of letter sent to them.

Teaching assessment: Professor Tom Moran (chairman of the undergraduate advising committee) is our DoTE (see the CoS directive). He sits on the lectures of the professors and talks to the students then writes a two-page report to the chairman. This letter becomes part of the package for the voting faculty to see and is sent to the Dean. This, together with the results of the students’ evaluation and the type of courses the faculty teaches, all are used as basis to measure the faculty teaching effectiveness. Also, the size of his/her research group and the success of attracting good graduate students counts heavily in measuring his/her contribution to teaching.

Service expectations: Not much service is expected of untenured faculty. Untenured faculty members are asked to serve on the seminar and graduate admission committees.

Feedback to candidate: The chair discusses the outcome of the decision of the committee with the member but only after the decision is made and the package is ready to be sent to the Dean.

Interdisciplinary research is highly recommended and emphasized, but is not required. There is a reasonable amount of outside collaboration.

Interaction of unit chair with RPT committee: Since the chair is a member of the committee, the committee is in constant interaction with him. In fact he is the one that schedules the meetings and presents the cases for the committee to discuss.
Unit: School of Civil and Environmental Engineering, College of Engineering
Author: J. Carlos Santamarina
Source: Roberto Leon, Professor

Constitution of committee(s):

First-level peer review committees:
About four faculty. Includes external faculty if the group/group leader deems it appropriate.

School level RPT Committee:
CEE faculty (mostly senior), including representatives from each affinity group. Typical membership: 2 years.

Method of committee(s) assignment

First-level peer review committees:
Selected by chair and head of affinity group. Members are told to evaluate the originality and importance of the candidate's 5 main contributions. This instruction is generally embedded in the email from the chair or group leader naming the members of the committee.

School level RPT Committee:
Selected by chair. Representatives from each of the six affinity groups. Mostly full professors. No specific instructions are provided. It is assumed that everyone is familiar with the process.

Method(s) of ensuring peer technical review:
School Chair requests external letters (about 10: ~5 from a list suggested by candidate and ~5 selected by affinity group). Chair adds letter (based on all documents and candidate interview if needed)

Written Guidelines

Note: Overall, very little is available in written form. Such instructions would enhance the process.

Performance expectations:
None written, except that feedback is provided to the candidate during his/her annual review.

Specification of quality publication/presentation venues:
None written; it is expected that senior faculty in the affinity group will provide guidance in these areas.

Expected information from candidate, including format:
Same as Institute Guidelines

Method(s) of evaluating teaching and service:
Based on student evaluation (Peer evaluation would be very controversial).
Provisions for feedback to candidate during the process: None written

Mentoring program/philosophy (formal or informal): Mostly ad hoc.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: It is assumed that everyone is familiar with the process. Instructions only address the scheduling of activities and deliverables

Mode of committee(s) interaction with unit administrative head/chair: None written. Chair meets with RPT committee at the beginning of the process and is available for consultation if needed. Generally RPT committee chair updates school chair on any problems as they occur.

Unwritten Guidelines

Mentoring program/philosophy (formal or informal): see above

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts (issue of single PI versus multi-PI): No formal procedure. The percentage of funds received/utilized by candidate is noted. The candidate may be requested to indicate percentage of participation.

Mode of committee(s) interaction with unit administrative head/chair: Chair does not participate in any deliberation. Sporadic verbal feedback from RPT committee chair to school chair. Candidate receives no formal feedback after CV submission.

How are teaching, service, research balanced in the evaluation? Refereed Journal Papers: 12-15 for P&T. Similar number is expected in conference proceedings. PhDs: one graduated and about 2 in pipeline. Excellence in teaching. Excellent external letters. Service is relatively unimportant. Funding is of little relevance.

How is teaching evaluated? Teaching survey results.

Are citation indices used? Limited. Only in one of the affinity groups because some of the more visible journals in civil engineering are not indexed.

How is the contribution on co-authored papers evaluated? What meaning is attributed to order of listing, if any? Assessed by first-level committee.
The evaluation system appears to work, in part due to the extensive number of checks and balances.

*Are issues such as space or availability of graduate students considered?*  
Such difficulties are addressed by the candidate in the dossier, and by the chair in the letter.

*Other obstacles or considerations for lack of progress?*

**PhD Student Advising and Development**

*Are PhD students tracked into their careers? Is a unit-level database maintained?*  
Yes. See documentation in CEE webpage for graduates in the last 10 years.

*On what bases are faculty evaluated for interaction with PhD students? Is placement of PhD students considered?*  
Informally.

*Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers?*  
No.

**Unit: College of Computing**

Author: Dana Randall  
Source: Richard Fujimoto, Chair of the RPT Committee

**First-level peer review committees:**  
At least three, typically four, tenured faculty members. The chair is known to the candidate and the other (anonymous) members include at least one person from another subdiscipline.

**College-level RPT Committee:**  
The entire senior faculty is involved in the second level review process. All of the tenured faculty are involved in decisions regarding tenure or promotion to Associate Professor; All Full Professors are involved in decisions regarding promotion to Full Professor. At the initial meeting the first-level committee presents each candidate's case to the faculty prior to receiving external letters. At a follow up meeting the case is updated, including the external letters. This meeting culminates with a vote among all of the senior faculty.

**Method of committee assignment**

**First-level review committees:**  
Several factors are involved in choosing this committee. The candidate provides some input as to preferences, especially for the chair of the committee. The committee typically consists of people from the candidate's area, but also includes representation from outside the area. There is
also effort to include people involved with previous review of the candidate or with some special knowledge of some activity such as curriculum development as well as the candidate's mentor.

\textit{Method(s) of ensuring peer technical review:}

The first-level peer review committee carefully evaluates the quality of all intellectual contributions of the candidate.

There are no written guidelines or summaries at the College of Computing for the above-listed methods of implementation of committee appointment and operation.

\textbf{Written guidelines:} None (beyond the faculty handbook).

\textbf{Unwritten guidelines:} Nonspecific.

The College recognizes the enormous diversity in individuals coming up for tenure due to the disparate nature of the discipline and the enormity of the College.

\begin{itemize}
  \item \textbf{Policies:}
    \begin{itemize}
      \item The chair discusses procedures, expectations, recommendations in choosing letter writers, etc. with each candidate, as does the RPT chair.
      \item Each individual is judged on his or her own merits. There is no formula for promotion and/or tenure.
      \item The extensive faculty input at the College-level in each case helps avoid potential bias.
    \end{itemize}
  \item \textbf{Dissemination of information:}
    \begin{itemize}
      \item There are informal annual meetings with junior faculty and a couple of senior faculty reviewing what is expected of them. There are several other forums that promote this type of informal mentoring throughout the tenure-track process.
      \item Before candidates come up for tenure, packets of recently tenured faculty are made available. (Not a formal procedure.)
      \item There is annual feedback from the RPT review process that includes review from the entire senior faculty.
      \item Junior faculty are given annual evaluations from both the college-level RPT committee as well as the dean commenting on progress. The third-year review gives junior faculty more comprehensive feedback.
    \end{itemize}
  \item \textbf{Specifics of unwritten guidelines: ("highlights")}
    \begin{itemize}
      \item Interdisciplinary activity is encouraged. It is typically judged by including a diverse committee with representation from both units and by carefully choosing outside letter writers.
      \item Teaching is evaluated primarily by teaching evaluations and curriculum development, as well as student advising.
      \item Citation indices are not used (as far as can be determined).
      \item Co-authored papers are considered by merit. In some areas of Computing authors are alphabetized and in others the first author is given primary credit for the work. These issues are discussed.
    \end{itemize}
\end{itemize}
**PhD Student Advising and Development**
Source: H. Venkateswaran (Venkat), PhD student coordinator

*Are PhD students tracked?*
Extensive databases are maintained regarding students performance at Georgia Tech. Initial efforts have been made to start tracking them after they graduate.

*On what bases are faculty evaluated for interaction/placement of PhD students?*
These issues are considered in the annual reviews and RPT process.

*Are there guidelines or formal programs to prepare PhD Students for academic/research careers?*

1. Every student takes CS 7001 which introduces them to research and gives them an opportunity to do "mini-projects" with 3 professors during the semester.

2. The comprehensive exam has a research component to evaluate the track of the research program. The dissertation is similarly evaluated.

3. After the students petition to graduate, they attend an informal workshop over several weeks organized by Venkat. They are given materials such as sample vitae, given application advice, and given guidelines regarding careers in academic vs. industry. Guest lecturers include representation from GTRI and from industry.

**Unit: DuPree College of Management**
Author: Marie Thursby
Sources: Reappointment, Promotion, and Tenure, Dupree College of Management, Georgia Institute of Technology

**Constitution of committee(s)**

*First-level peer review committees:* Not applicable

*College-level RPT Committee:* In the College of Management, there are five members who serve on the RPT committee. Committee members are elected for one-year terms, and can run for reelection an indefinite number of times. Only faculty members of associate and higher designations with tenure are eligible to be members of this committee and no more than one associate professor may serve. There is no limit on the number of members from a single area that may serve.

**Method of committee(s) assignment:**

*First-level peer review committees:* Not applicable
College-level RPT Committee: Committee members are elected for one-year terms, and can run for reelection an indefinite number of times. However, individuals who are considered for promotion and tenure in a given year cannot serve, nor can those who are in a conflict of interest situation with someone else who will be considered for promotion or tenure in a given year. That is, However, a member undergoing periodic peer review may serve.

Written Guidelines
Source: Reappointment, Promotion, and Tenure, Dupree College of Management, Georgia Institute of Technology

Performance expectations:
All tenure-track and tenured faculty are expected to maintain high performance in teaching, research scholarship and creative activities and service. Candidates should maintain a teaching portfolio that documents their teaching performance. Evidence of teaching effectiveness is a necessary, but not sufficient condition for promotion and tenure.

In the DuPree College of Management, excellence in research is the core component of the promotion and tenure dossier and decision. There must be a blend of teaching, research, and service (appropriate to one’s academic level), but deficiencies in research cannot be overcome by excellence in service and/or teaching. The assessment of research must be based on evidence of creativity and productivity (i.e., both quality and quantity).

Documentation of service and level of participation to the Institute, to Profession, to Community and continuing education are included in the dossier for consideration.

Specification of quality publication/presentation venues: A ranking of journals in each area is given on the College intranet.

Expected information from candidate, including format: Same as from Institute Guidelines

Method(s) of evaluating teaching and service: Same as the Institute Guidelines

Provisions for feedback to candidate during the process: If a faculty member furnishes the RPT committee with written comments regarding an individual whose case is being considered by the Committee, the candidate must have the right to see the written comments and to provide a response.

Mentoring program/philosophy (formal or informal): The College Dean is responsible for providing all faculty with a written review of their professional progress annually.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: None written.

Mode of committee(s) interaction with unit administrative head/chair: The Committee provides a report to the faculty who vote at a meeting. The Dean may be present at the faculty meeting and has a copy of the committee report and the faculty vote.
Unwritten Guidelines

Mentoring program/philosophy (formal or informal): Associate Dean for faculty attends classes and provides feedback. Dean meets one-on-one with junior faculty regarding expectations, challenges and research.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts (issue of single PI versus multi-PI):

Mode of committee(s) interaction with unit administrative head/chair: Not specified.

How are teaching, service, research balanced in the evaluation? Not specified.

How is teaching evaluated? Not specified.

Are citation indices used? No

How is the contribution on co-authored papers evaluated? What meaning is attributed to order of listing, if any? Alphabetical order is the norm in published articles.

Are issues such as space or availability of graduate students considered? Not specified.

Other obstacles or considerations for lack of progress? Not specified.

Unit: Earth and Atmospheric Sciences, College of Sciences
Author: Jeannette Yen
Source: Judith Curry, Professor and Chair of Earth and Atmospheric Sciences

Constitution of committee(s):

First-level peer review committees: None

School level RPT Committee:
There is one 5-member RPT committee that reviews all candidates up for tenure. The RPT committee is comprised of 4 Full Professors and 1 Senior Research Scientist.

Method of committee(s) assignment

First-level peer review committees: N/A
School level RPT Committee:
The chair selects all members of committee.

Method(s) of ensuring peer technical review:
Outside letters from experts in the field are used for assessing the significance of the research. Citations and impact factors are used. Evaluation of impact of research based on the total number of citations since 1987 for the candidate’s top 10 cited papers as the metric.

Written Guidelines
Source: Judith Curry, Professor and Chair of Earth and Atmospheric Sciences

Performance expectations: Research is essential (grants, publications). Submission and success in obtaining grants is emphasized along with preparation and success in publishing research in recognized journals. Teaching load is two courses/prof/year. Teaching evaluations by meetings of Chair with the students. Efforts on service promote collegiality and are assigned. Guidelines from Faculty Handbook and on CoS website. The EAS Faculty Resources website is excellent, and includes a section on Collegiality addressing sexual harassment, civil rights, email etiquette, bully in the workplace and research climate.
http://www.eas.gatech.edu/resources/faculty_resources.html

Specification of quality publication/presentation venues: None written. Two publications/year, journals and citations with high impact factors.

Expected information from candidate, including format:
College of Science Guidelines for Promotion and Tenure:
http://www.cos.gatech.edu/criteria.htm

Faculty Handbook: website for Promotion and Tenure Guidelines:
http://www.academic.gatech.edu/handbook/handbook3.html#s3p2

Best Practices for Promotion and Tenure at Georgia Tech:
http://www.facultysenate.gatech.edu/zrtppractices.html

CV in CoS Dean’s format

Method(s) of evaluating teaching and service:
Course load is two courses/prof/year.

Right now, plans are to implement a written in-class midterm review customized to course, asking direct questions such as ‘are you learning something in the class’.

Reviews will be used to make courses better. Online final course-instructor surveys are used, however it is necessary to discern if high evaluations are due to good course content or easy grades. The DOTE program is being reviewed, and a new DOTE has been assigned.
The Chair meets with the undergraduates once per semester (small group of 40 makes this possible) to listen to their comments. The Chair also meets with graduate students once per semester. In addition to listening to comments, each group is surveyed (written survey) twice per year on various topics, but course and teaching effectiveness are addressed in these surveys.

Young faculty are appointed and rotated between different committees each year. This enables them to become familiar with the duties of the school and also to provide exposure of the young faculty to different groups of senior faculty.

Provisions for feedback to candidate during the process: Chair meets with untenured faculty individually three times per year. All tenured professors meet to discuss candidate and to vote with a written ballot, including the vote of the RPT committee. This is different from other units where only the RPT committee vote. Untenured faculty get written feedback at the time of the annual review, and also receive copies of any letters written by the RPT committee and chair for reappointment, etc.

Mentoring program/philosophy (formal or informal): The Chair organizes 2 meetings/year with all untenured faculty to discuss specific topics. The faculty did not want a mentoring program and senior faculty may not be that useful in this role. The Chair directly mentors her faculty with these group sessions, and in individual meetings with the untenured faculty. Networking ideas for teaching and interdisciplinary research is encouraged and discussed at these meetings. A faculty resources page on the EAS web site has been established to help the untenured faculty. Next year EAS will implement the lunch program (analogous to psychology), whereby EAS pays for each untenured faculty to take a tenured faculty to lunch several times during the first year.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: Encouragement given for interdisciplinary efforts within department and outside the department. % contribution on multi-authored paper noted on CV but highest credit given when a student is one of the authors, as this is concrete evidence of research done at Tech.

The EAS homepage indicates supportive environment for interdisciplinary approaches, as follows: “The School of Earth and Atmospheric Sciences (EAS) is an interdisciplinary program in which the atmosphere, the solid earth, the oceans and the biosphere are studied and analyzed as parts of the coupled earth system. EAS prepares students for professional careers in environmental science and meteorology, and research careers in climate dynamics, atmospheric chemistry and air quality, oceanography, aqueous geochemistry and biogeochemistry, geophysics and geohydrology. In addition to working in the new 261,000 sq ft Environmental Science and Technology Building, the School’s faculty and students direct and participate in field experiments that span the globe from Atlanta, China, Nepal, Bangladesh, the Arctic Ocean, the South Pole and the remote islands of the South Pacific Ocean.”

Evaluation of joint appointments: Same guidelines

Mode of committee(s) interaction with unit administrative head/chair: One-on-one meeting three times each year between candidate and Chair. Written evaluations from both the RPT committee and chair are provided at the 3rd year review.
Unwritten Guidelines
Source: Judith Curry, Professor and Chair of Earth and Atmospheric Sciences

Mentoring program/philosophy (formal or informal): Chair is proactive as a mentor to her faculty, organizing group and individual meetings on a regular basis. She has lunch with each faculty to open channels of communication and solve problems.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts (issue of single PI versus multi-PI): The focus of a research effort needs to be clear. However, much research in EAS is inherently interdisciplinary. Student contributions are highly regarded.

Mode of committee(s) interaction with unit administrative head/chair: Organized and encouraged by Chair. Good direct contact with each faculty.

How are teaching, service, research balanced in the evaluation? Service and teaching are viewed as necessary components of the evaluation. Development of teaching skills is encouraged. Research is however the most essential component of the evaluation.

How is teaching evaluated? Chair meets with undergrad and grad students twice per year. Peer review of teaching is being implemented.

Are citation indices used? Yes, as well as journal impact factors. Evaluation of impact of research based on the total number of citations since 1987 for the candidate’s top 10 cited papers as the metric.

How is the contribution on co-authored papers evaluated? What meaning is attributed to order of listing, if any? If the first author is someone from the faculty’s research group (the faculty member, student, or postdoc), then the faculty member received full credit for the publication.

Are issues such as space or availability of graduate students considered? New faculty are provided some start up help with supporting graduate students. Space is provided for these graduate students.

Other obstacles or considerations for lack of progress? The move to the new ES&T building brings all the faculty together. This will facilitate interdisciplinary interactions. The new Chair is in the process of revising the undergraduate and graduate curriculum to improve the attractiveness of program both for recruitment and retention. The advertisement for the 3 open faculty positions is worded to attract the best in any field in EAS. They are searching for excellence, not a clone, someone with a highly interdisciplinary approach, able to interact within and outside of School, with novel approaches to old problems and connections to others in the School. Under consideration are three female candidates for the new faculty positions. These candidates are considered the best in their field and they were proactively sought-out by Chair and asked to apply for the open positions. The makeup of the faculty is 14% women, strengthened by appointment of a female Chair. National average of 12% is achieved, unlike many other units. 40% of the graduate students are women. Strong effort by Chair to be sure
research climate in lab promote student productivity. Chair maintains open lines of communication with all graduate students to enable them to find their appropriate research topic and appropriate advisor; these choices can be made independently. Concerted efforts are made to help student find best research+advisor combination; qualifying exams do not hinge on approval by advisor but on subject comprehension and capability. The Chair stresses the need to have a positive non-stressful working atmosphere for students.

**PhD Student Advising and Development**
Source: *Judith Curry, Professor and Chair of Earth and Atmospheric Sciences*

*Are PhD students tracked into their careers? NO*
*Is a unit-level database maintained? Working on establishing one*

*On what bases are faculty evaluated for interaction with PhD students? Is placement of PhD students considered?* Graduate student advising is evaluated in terms of the success of graduates in obtaining employment, exit interviews with graduating students, and chair meeting with grad students having some sort of problems.

*Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers?* Primarily the responsibility of major advisor. Most students learn from interactions with major professors and other faculty. A Tools of the Trade seminar series is being developed to address making presentations, writing grant proposals, teaching, professional ethics, etc. Web based resources are on the EAS student resource page.
These references are linked from the website of the EAS webpage:

- How to mentor graduate students
  [http://www.rackham.umich.edu/StudentInfo/Publications/FacultyMentoring/contents.html](http://www.rackham.umich.edu/StudentInfo/Publications/FacultyMentoring/contents.html)

- Graduate student mentoring: how to be more than an advisor
  [http://www.gradsch.psu.edu/gradinit/mentoring.html](http://www.gradsch.psu.edu/gradinit/mentoring.html)

**Unit: School of Economics, Ivan Allen College**
Author: *Willie Belton*
Source: *Patrick McCarthy, Chair*

12 Tenure Track Faculty Members
3 Full Professors (3 Tenured)
3 Associate Professors (2 Tenured)
6 Assistant Professor (Untenured)

(1) **What information (written or unwritten) about the tenure and promotion process and its deliberations is provided candidates by the unit?**

The School Chair provides information on the tenure and promotion process during the initial interview stage before a faculty member is hired. General research expectations are provided,
commensurate with a first tier research university. There is generally no information provided about service or teaching expectations.

Candidates for tenure and/or promotion are asked by the School Chair and the Chairperson of the tenure and promotion committee to prepare a P&T package. An explicit format for the dossier is provided to the candidate. The candidate is asked to provide a list of references and the P&T committee develops a list of references. The RPT committee chair discusses the aggregate list of reference with the candidate and a final list is selected. Finally, the candidate is provided a list of materials that must be included in the P&T package, along with deadlines for submitting materials.

(2) How is the tenure and promotion committee in your unit constituted?

The School Chair has discussions with each member that is eligible to serve as chair of the RPT committee. Tenured faculty members and the School Chair arrive at a consensus as to the best committee chair selection.

The RPT committee is constituted of all tenured faculty members. In the case of candidates for promotion, faculty members who are at the same rank and above that of the candidate are members of the committee.

(3) Does the unit tenure and promotion committee proceed with their deliberations in consultation with the school Chair? Or with any other it committees dealing with candidate assessment?

The Chair of the RPT committee places a letter of evaluation in the P&T package of the candidate. This letter provides documentation of the deliberations and decision of the P&T committee. The P&T chairperson prepares the letter, however, all content of the letter is discussed among P&T committee members.

The School Chair provides an independent letter of evaluation of the candidate. The School Chair observes but does not participate in P&T committee deliberations.

**Unit: School of Electrical and Computer Engineering, College of Engineering**

Author: Ronald Schafer

Sources for all ECE data: Professors Alvin Connelly and Andrew Peterson, former and present Associate Chair for Faculty Development in ECE.

**Constitution of Committees**

First-level peer review committee:
Internal Research committee of 3 faculty in the candidate’s field. Infrequently includes a member from outside ECE. Principal duties are to review and evaluate research contributions for third-year critical review and promotion/tenure cases.
School level RPT Committee:

The Reappointment, Promotion, and Tenure (RPT) Committee (aka Peer Review Committee) in ECE is comprised of the Associate Chair for Faculty Development (currently, Professor Andrew Peterson); the Associate Chair for Undergraduate Affairs (currently, Professor William Sayle); and an elected representative from each of the ten Technical Interest Groups (TIGs) of the School of ECE.

- The Associate Chair for Faculty Development (ACFD) has responsibility for administering the RPT process, and he or she chairs the ECE RPT Committee, but does not vote on RPT Committee decisions. The ACFD is charged by the School of ECE to ensure that each faculty member is well informed of how the RPT process operates and assists each faculty member in preparing documentation at each stage of the process. The ACFD is also responsible for providing feedback to the faculty candidates on their progress.

- The Associate Chair for Undergraduate Affairs (ACUA) is a voting member of the RPT Committee. His or her role is to provide general and specific views of teaching performance and contributions to the academic program for candidates being considered by the RPT Committee.

- The School of ECE has ten Technical Interest Groups. These semi-formal groups divide responsibility for the academic program and serve as a basis for research collaborations, joint proposals, hiring decisions, and other School activities requiring a coordinated sub-disciplinary approach. While a faculty member may affiliate with and be active in more than one TIG, the general rule is that they have a “home base” in a single TIG. This is particularly important for untenured faculty. Each TIG elects a member of the RPT Committee, and that person serves as a “Champion” for a faculty member from their TIG who is being evaluated by the RPT Committee. TIG representatives to the RPT Committee are generally senior faculty who are “fully promoted”.

The structure of the RPT Committee in ECE guarantees continuity from year-to-year. The Associate Chairs for Faculty Development and Undergraduate Affairs typically do not change very frequently. Since the elected TIG representatives are generally senior faculty, they often serve several years in a row, particularly when the TIG includes many untenured faculty who are ineligible to serve. A typical turn-over of the RPT Committee is two or three members each year.

Method of committee assignment

First-level peer review committee: Internal Research committee of 3 faculty in the candidate’s field appointed by School Chair, with recommendations provided by the faculty candidate.

School level RPT Committee: See above discussion.

Method(s) of ensuring peer technical review: Internal Research committee of 3 faculty in the candidate’s field. Committee provides a memo that goes with documentation package.
Written Guidelines

Performance expectations: The School of ECE does not publish performance expectations.

Specification of quality publication/presentation venues: No written specification is given.

Expected information from candidate, including format: Candidates provide a list of potential references to School Chair, who requests letters of reference. ECE uses the basic CoE format for documentation.

Method(s) of evaluating teaching and service: GT teaching evaluation summaries are required in documentation packages.

Provisions for feedback to candidate during the process: Every untenured faculty is reviewed every year by the Peer Review Committee. This helps the candidate keep his/her dossier up-to-date and provides an opportunity for both oral and written feedback each year on progress toward tenure.

Mentoring program/philosophy (formal or informal): No written guidelines.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: No formal guidelines.

Mode of committee(s) interaction with unit administrative head/chair: No written guidelines. RPT Committee prepares evaluation and summary letter to School Chair for each promotion/tenure/critical reappointment candidate.

Unwritten Guidelines

Performance expectations: The School of ECE does not publish performance expectations. However, the Associate Chair for Faculty Development meets annually with untenured faculty to discuss the process and answer any questions that faculty may have about standards, etc. Summary of departmental statistics over 12 years showing success rate is made available to candidates.

Specification of quality publication/presentation venues: ECE is a broad area, and each TIG would have its own favored publications, which candidates are expected to know. TIG Champions would typically emphasize the quality of publications from a sub-discipline view point in presenting the credentials of a candidate in meetings of the RPT Committee.

Method(s) of ensuring peer technical review: Internal Research committee of 3 faculty in the candidate’s field. Committee provides a memo that goes with documentation package.

Method(s) of evaluating teaching and service: GT teaching evaluation summaries are required in documentation packages. A histogram of teaching ratings for the entire School of ECE is made available to all ECE faculty members. As mentioned above, the Associate Chair for
Undergraduate Affairs is a voting member of the Peer Review Committee. This individual makes teaching assignments in the School and often has first hand knowledge of issues related to teaching and teaching effectiveness. Basic philosophy is to focus on correcting problem areas as they arise.

Provisions for feedback to candidate during the process: Every untenured faculty is reviewed every year by the Peer Review Committee. This helps the candidate keep his/her dossier up-to-date and provides an opportunity for oral and written feedback each year on progress toward tenure.

Mentoring program/philosophy (formal or informal): Informal except in cases where School Chair intervenes to appoint a mentor when candidates are experiencing difficulty. Senior members in each TIG assume responsibility to advise junior faculty in their area.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: On multi-investigator grants, candidates show percentage attributable to their work. In situations where candidate’s work spans more than one TIG, “co-champions” may be appointed for presentation of candidates case to the entire Peer Review Committee.

Mode of committee(s) interaction with unit administrative head/chair: Care is taken to coordinate feedback to candidates so that Chair and Committee are telling the candidate the same thing. Chair does annual evaluation of all academic faculty within ECE and provides opportunity for individual meetings at the request of faculty.

How are teaching, service, research balanced in the evaluation? Consensus is that strong research achievement is necessary and often sufficient. However, poor teaching can raise flags. Effort is made to head off teaching problems before the tenure decision. “Good or bad citizenship” is noted and factored into decision.

Are citation indices used? Not always, but “Champion” may use them to help make the case.

How is the contribution on co-authored papers evaluated? What meaning is attributed to order of listing, if any? In ECE, it is normally assumed that author names are in order of most contribution to least. Faculty generally list their Ph.D. students as first author if the paper is the thesis work of the student.

Are issues such as space or availability of graduate students considered? Possibly in some situations.

Other obstacles or considerations for lack of progress? No.

Are PhD students tracked into their careers? Is a unit-level database maintained? Not generally. However, ECE has no set policy against hiring its own Ph.D. graduates.

What bases are faculty evaluated for interaction with PhD students? Is placement of PhD students considered? It is expected that untenured faculty will be working with several PhD
students, with one or two having graduated by the time of the tenure decision. No formal
evaluation of placement, although specific data is requested of graduates for documentation.

Are there written guidelines or other formal programs for PhD students to prepare for
academic/research careers? No.

Unit: School of History, Technology and Science, Ivan Allen College
Author: Willie Belton
Source: Willie Person, Chair

22 Tenure Track Faculty Members
13 Full Professors (6 Tenured)
6 Associate Professors (5 Tenured)
3 Assistant Professors (6 Untenured)

(1) What information (written or unwritten) about the tenure and promotion process and
its deliberations is provided candidates by the units?

HTS Chair meets with incoming faculty and talks with them about the critical periods of review,
when they occur, and what is expected in performance. The Chair conveys expectations in
research, teaching, and service.

For candidates for tenure and/or promotion, the chair or co-chairs of the RPT committee convey
to the candidate the materials needed for the dossier/package, the expectations about appropriate
references, and the schedule by which materials are due for the package.

(2) How is the tenure and promotion committee in your unit constituted?

The HTS Chair appoints the chair or co-chairs of the RPT committee.

The RPT committee is constituted of all tenured faculty members, plus an untenured member
who is elected/appointed. In case of candidates for promotion, those faculty members who are at
the same rank or above that of the candidate are members of the committee.

(3) Does the unit tenure and promotion committee proceed with their deliberations in
consultation with the school Chair? Or with any other unit committees dealing with
candidate assessment?

The chair or co-chairs of the RPT committee submits a letter in review of the candidate to the
HTS Chair. The letter of review is not written in consultation with the HTS Chair.

The RPT chair or co-chairs coordinate with a committee on peer-evaluation of teaching of the
candidate. The peer evaluation committee is constituted as follows: the RPT committee chair or
co-chairs select three persons (none of whom is chair or co-chair of RPT committee), and
submits the list of three for consideration by candidate. The candidate may then either eliminate
one of these persons or ask that the chair or co-chairs randomly delete one of the three persons. The resulting peer-evaluation of teaching committee is then conducted by two persons. The peer evaluation of teaching committee visits the candidate's classes and fills in a form of assessment/evaluation.

**Unit: School of Industrial and Systems Engineering, College of Engineering**
Author: Ronald Schafer
Source: Professor Jane Ammons, Chair of RPT Committee.

**Constitution of Committee(s)**

*First-level Peer Review Committees:*
Internal Research Committee of 3 faculty in the candidate’s field. Committee may include candidate’s research collaborators. Committee provides a memo that goes with documentation package.

*School level RPT Committee:*
The Reappointment, Promotion, and Tenure (RPT) Committee in ISyE is comprised of six members each appointed by the Chair for three years. There is no requirement that each sub-area be represented on the committee. The members are usually full professors. The Chair of the RPT committee is elected at the first meeting. This year the Chair is Professor Jane Ammons.

**Method of committee(s) assignment**
Sources: Professor Jane Ammons, Chair of RPT Committee. ISyE is AY 2002-2003 REAPPOINTMENT/PROMOTION/TENURE CALENDAR

*First-level Peer Review Committees:*
Appointed by the School Chair based on recommendation of the RPT Committee.

*School level RPT Committee:*
The Reappointment, Promotion, and Tenure (RPT) Committee in ISyE is comprised of six members each appointed by the Chair for three years. Two members rotate off each year.

*Method of ensuring peer technical review:*
The first-level peer review committee evaluates only the quality of intellectual contributions of the candidate.

**Written Guidelines**
Source: Professor Jane Ammons, RPT Committee Chair

The only written document is AY 2002-2003 REAPPOINTMENT/PROMOTION/TENURE CALENDAR, which gives details of the process and important dates. No written guidelines on the methods of committee assignment and operation.

*Performance expectations:* None written.
**Specification of quality publication/presentation venues:** None written.

**Expected information from candidate, including format:** Candidate provides list of 10 potential references. The basic CoE format is used for documentation. For promotion and tenure, documentation is made available to all ISYE faculty in a conference room. Faculty can make comments to include in dossier to be considered by the RPT committee.

**Method(s) of evaluating teaching and service:**
Teaching evaluation scores used. Concern that on-line method is rendering these useless.

**Provisions for feedback to candidate during the process:** Results of three year critical review are discussed with Chair. The annual review that all faculty submit is evaluated by Chair and a letter is sent to each faculty member. A face-to-face meeting can be requested to discuss.

**Mentoring program/philosophy (formal or informal):** Nothing written.

**Instructions/guidelines/understanding for evaluation of interdisciplinary efforts:** None written.

**Mode of committee(s) interaction with unit administrative head/chair:** No written guidelines.

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**Unwritten Guidelines**
Source: RPT Committee Chair, Professor Jane Ammons.

**Performance expectations:** Chair meets with untenured faculty each year as a group to discuss expectations and process. Senior faculty are relied on to convey expectations to untenured faculty.

**Specification of quality publication/presentation venues:** It is assumed that untenured faculty will find out the best journals, etc. Comments on this might occur in RPT letter to candidate or in Internal Review Committee report.

**Method(s) of evaluating teaching and service:** Teaching evaluation scores used. Concern expressed that on-line method is rendering these useless. Good citizenship is noted. Teaching awards are noted.

**Provisions for feedback to candidate during the process:** Results of three year critical review are discussed with Chair. The annual review that all faculty submit is evaluated by Chair and a letter is sent to each faculty member. A face-to-face meeting can be requested to discuss.

**Mentoring program/philosophy (formal or informal):** Informal. A forced pairing was tried but abandoned. Burden is on the untenured faculty to seek out an appropriate mentor.

**Instructions/guidelines/understanding for evaluation of interdisciplinary efforts:** ISyE is said to be comfortable with group activities. In truly interdisciplinary cases, it may be difficult. In such cases, an outside ISyE faculty member may be appointed to the Internal Review Committee.
Particularly difficult to sort out are cases where a PhD student, a junior faculty, and a senior faculty are co-authors.

Mode of committee(s) interaction with unit administrative head/chair:  Depends on case. Chair may meet with RPT committee in specific cases. Effort is made to maintain independent evaluations.

How are teaching, service, research balanced in the evaluation?  Research is a yes/no decision. Teaching and service are tie breakers.

Are citation indices used?  Not required. Rarely (or never) may be used by Internal Review Committee.

How is the contribution on co-authored papers evaluated?  What meaning is attributed to order of listing, if any?  Evaluating contribution of co-authored papers is done on an ad hoc basis. Order of listing may or may not imply degree or quality of contribution.

Are issues such as space or availability of graduate students considered?  This could be a problem in areas such as Statistics, which has few PhD students. This could be taken into account.

Other obstacles or considerations for lack of progress?  No, even though uneven teaching workload assignments may have been given to a faculty member.

Are PhD students tracked into their careers?  Is a unit-level database maintained?  An ISyE database is established for incoming PhD students, and then the Banner system is used to track current students. Voluntary exit survey data is archived when the PhD student graduates.

What bases are faculty evaluated for interaction with PhD students?  Is placement of PhD students considered?  The submitted dossier contains placement information for graduated PhD students, and this information is used in the overall evaluation.

Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers?  ISYE sometimes funds PhD students to attend colloquiums at their annual meetings which are set up to showcase students looking for academic positions.

Unit: Sam Nunn School of International Affairs, Ivan Allen College
Author: Willie Belton
Source: William J. Long, Chair

23 Tenure Track Faculty Members
6 Full Professors (6 Tenured)
5 Associate Professors (5 Tenured)
6 Assistant Professors (6 Untenured)
6 Jointly Appointed Professors (6 Tenured)
(1) What information (written or unwritten) about the tenure and promotion process and its deliberations is provided candidates by the units?

Upon joining the faculty of the Sam Nunn School of International Affairs, each new faculty member is made aware of the general criteria for tenure and promotion. New faculty members meet with the School Chair to discuss service, teaching, and research expectations.

For promotion and tenure the School Chair, along with the chair of the RPT committee, review all documents prior to submission and advise the candidate on preparation of dossier/package. The candidate is asked to provide a list of references. Members of the tenured faculty also provide a list of references. The School Chair, the RPT committee chair, and the candidate work together to develop a final list of references.

(2) How is the tenure and promotion committee in your unit constituted?

The School Chair meets with eligible faculty members and selects a RPT committee chairperson. In a general faculty meeting, the entire faculty votes and validates the School Chair’s selection for P&T committee chair.

The RPT committee is constituted of all tenured faculty members. In the case of candidates for promotion, faculty members who are at the same rank and above that of the candidate are members of the committee.

(3) Does the unit tenure and promotion committee proceed with their deliberations in consultation with the school Chair? Or with any other unit committees dealing with candidate assessment?

The RPT committee proceeds with its deliberations independent of the School Chair. The committee prepares a letter of evaluation and submits the letter to the School Chair. The School Chair prepares his letter of evaluation only after reviewing the RPT committee findings and recommendations.

Unit: School Literature, Communication and Culture, Ivan Allen College
Author: Willie Belton
Source: Robert Kolker, Chair

23 Tenure Track Faculty Members
8 Full Professors (6 Tenured)
8 Associate Professors (5 Tenured)
7 Assistant Professors (6 Untenured)

(1) What information (written or unwritten) about the tenure and promotion process and its deliberations is provided candidates by the units?
During the spring prior to the tenure and promotion year, candidates are given full information on necessary paperwork and deadlines of the P&T process. The School Chair provides this information.

(2) How is the tenure and promotion committee in your unit constituted?

The RPT committee is appointed by the chair, and they work together in gathering reviewers' names (with input from the candidate) and then separately, preparing their own report.

The Chair makes the final selection and contacts reviewers by late spring before the fall promotion period.

(3) Does the unit tenure and promotion committee proceed with their deliberations in consultation with the school Chair? Or with any other unit committees dealing with candidate assessment?

By mid-fall, external reference letters are received and the RPT committee meets with the tenured faculty (the Chair is not present) and reports to the Chair, who then writes the cover letter and passes the entire package to the Dean.

**Unit: School of Materials Science and Engineering, College of Engineering**

Author: David McDowell
Source: Ashok Saxena, former School Chair

**Constitution of committee(s)**

*First-level peer review committees:*
Three faculty, nominally, on each committee, from MSE and other disciplines/units as appropriate.

*School level RPT Committee:*
In MSE, only tenured full-professors serve on the RPT Committee. Among them, six members are selected. The Chair cannot serve on the committee; since two members must rotate out each year and MSE must provide two representatives to the College Committee who cannot serve on the School committee, everyone who is eligible in MSE (faculty size just over 20) gets a chance to serve.

**Method of committee(s) assignment**

*First-level peer review committees:*
Chair gets input from the candidate and usually chooses three or four from his/her list; Chair then adds two to three more members after consultation with the Chair of the RPT Committee.

*School level RPT Committee:*
There is a faculty advisory committee within MSE, but has not been used to provide guidance for setting up evaluation committees. The Chair appoints members of the first-level peer review in consultation with RPT committee Chair. The School RPT Committee is appointed by the Chair. MSE rotates half of the committee each year to maintain continuity. Members serve for two years.

Method(s) of ensuring peer technical review:
First-level peer review committee evaluates only the quality of intellectual contributions of the candidate.

There are no written guidelines or summaries at the MSE School level for the above-listed methods of implementation of committee appointment and operation.

**Written guidelines**
Source: Michael Sacks, RPT Chair

*Performance expectations:* None written

*Specification of quality publication/presentation venues:* None written

*Expected information from candidate, including format:* Same as from Institute Guidelines

*Method(s) of evaluating teaching and service:* Teaching evaluation is based primarily on compiled teaching survey results. No detailed, formal evaluation of service activities is performed.

*Provisions for feedback to candidate during the process:* Candidate is made aware of any serious reservations arising from preliminary discussion with Chair, and may receive communications from the Chair as feedback from the RPT Committee to revise resume format or provide clarification of certain aspects if necessary.

*Mentoring program/philosophy (formal or informal):* No written guidelines exist.

*Instructions/guidelines/understanding for evaluation of interdisciplinary efforts:* None written. Peer review committees are often composed of faculty outside the school for anyone working in interdisciplinary areas.

*Mode of committee(s) interaction with unit administrative head/chair:* None written.

**Unwritten Guidelines**
Sources: Michael Sacks, RPT Chair and Ashok Saxena, former School Chair

*Mentoring program/philosophy (formal or informal):* MSE does have a mentoring program. Junior faculty are assigned mentors. They choose the mentors based on their interests and with suggestions from the Chair.
Instructions/guidelines/understanding for evaluation of interdisciplinary efforts (issue of single PI versus multi-PI): There is often discussion about whether the candidate has developed an independent research program. Funding which is obtained as the PI and as co-PI are decomposed. In contrast, the evaluation of interdisciplinary efforts is generally not so well-scrutinized. It is probably considered only in cases where the interdisciplinary effort is substantial and easily recognized or when the candidate has a appointment in more than one unit. In the past, in some cases, candidates have been asked to submit names of faculty from other units familiar with their research area to serve on peer review committees.

Mode of committee(s) interaction with unit administrative head/chair:
Some intermediate communication may take place between School Chair and RPT Chair prior to final report from RPT Committee on points of clarification or ambiguity of process.

How are teaching, service, research balanced in the evaluation? Emphasis on research.

How is teaching evaluated? Teaching survey results

Are citation indices used? Not routinely. Sometimes school committee members check the citation indices as part of evaluation.

How is the contribution on co-authored papers evaluated? What meaning is attributed to order of listing, if any? First-level committee reports are used if necessary to determine individual’s contributions. Order of listing not commonly an issue; there is little discussion regarding the order of the authors. Most of the discussion is usually focused on the quality of the journals. Occasionally there are comments related to whether students are being included as co-authors.

Are issues such as space or availability of graduate students considered? Obstacles are usually discussed in borderline or weak cases. Space is rarely an issue, but availability of graduate students has been a consideration in several cases. In some cases, this has been brought up in relation to the small pool of graduate students available in some of the smaller academic units such as MSE.

Other obstacles or considerations for lack of progress? Not really; the sense is that possible obstacles are considered in borderline P&T cases.

PhD Student Advising and Development
Source: Karen Hutcheson, Administrative Liaison to RPT process in MSE

Are PhD students tracked into their careers? Is a unit-level database maintained? PhD students are tracked into their careers by completing an exit questionnaire before graduation. A MSE database is maintained on how long it takes students to complete their degrees.
On what bases are faculty evaluated for interaction with PhD students? Is placement of PhD students considered? No. Number of Ph.D. students engaged and number graduated graduates are formally considered in annual evaluations.

Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers?
There are no formal written materials aimed at preparing PhD students for their academic careers. Students who are interested in teaching are encouraged. Several MSE graduates have gone on to become faculty members. There is a Teaching Intern program available but few have availed of the program in recent history.

**Unit: School of Mathematics, College of Sciences**
Author: Mostafa El-Sayed
Source: Professor Spruill

**Constitution of committee(s):**

**First-level peer review committees:**
Three faculty, nominally, on each committee from a combination of ME and other disciplines/units as appropriate. Typically, but not always, chaired by ME faculty member.

**School level RPT Committee:**
The committee is made of three elected and two appointed members as given in the Math faculty book. The candidate is informed in writing the material needed from him or her. No specifics are given nor is a format provided for the candidate. However, the information is concluded from the vita of the faculty available to all. In the School of Mathematics (SOM) the faculty have convenient access to the annual faculty handbook; access is ordinarily restricted to those in the School.

**Method of committee(s) assignment**

**First-level peer review committees:**
The RPT committee, in conjunction with the candidate, appoints two subcommittees, each composed of members of the School, one to evaluate research and one to evaluate teaching. The research subcommittee consists of three members. They generate an assessment of the candidate’s research accomplishments. They have access to the contents of the outside letters. The teaching subcommittee consists of two members and they write a report on the candidate’s teaching accomplishments.

**School level RPT Committee:**
Both the Senior and Junior promotion and tenure committees: (a) solicit the faculty members’ desires concerning their being considered for promotion and tenure each year, (b) give candidates a list of the required documents (from the Dean of CoS guidelines): these include an up to date vita, statements on teaching and research, teaching effectiveness documentation through CIOS forms and peer review information, and (c) arrange for outside referees (**The**
candidate is asked to supply three or four names from which the committee selects two and the remaining four are selected by the committee. The final list is not known by the candidate. The committee tries to avoid advisors, co-authors, etc. and tries to select from the highest quality researchers and institutions).

Method(s) of ensuring peer technical review:
Method(s) of ensuring peer technical review are in-house committee, outside referees, and the Chair. The teaching is evaluated by peer review, CIOS forms, DoTE input and faculty vita. As to the feedback, the candidate is allowed to see the package with outside letters redacted (function of the Chair’s office). An early assessment is made in teaching through mechanisms established by the DoTE’s office and the candidate gets feedback. In research, there is no formal means other than the Chair’s annual faculty performance feedback. There are no formal written procedures to evaluate interdisciplinary efforts. The choice of outside letters is done in conjunction with the Chair. The RPT committee letter goes to the Chair on its way up the line.

Written Guidelines
Source: Professor Spruill

Performance expectations: None written


Expected information from candidate, including format: Same as from CoS and Institute Guidelines.

Method(s) of evaluating teaching and service:
The teaching is evaluated by peer review, CIOS forms, DoTE input and faculty vita. As to the feedback, the candidate is allowed to see the package with outside letters redacted (function of the Chair’s office). An early assessment is made in teaching through mechanisms established by the DoTE’s office and the candidate gets feedback.

Provisions for feedback to candidate during the process:
For details on the P&T process, the member is referred to the appropriate section of the faculty handbook (a copy of this and much other useful information is found at http://www.cos.gatech.edu/resources.htm a relatively new Institute web site which will be mentioned in future handbook editions) for details on the P&T process. In addition, the annual SOM faculty handbook spells out in rather detailed terms the criteria used by the School Salary and Awards committee (criteria pertinent to the P&T process also) in awarding raises. In the handbook the reader is also referred to the web site for the DoTE (Director of Teaching Effectiveness). At this site one can find peer review forms, historical grade distributions, and historical distributions of CIOS ratings. Perhaps most important is the fact that in SOM, the complete academic vitas of all members are available in hard copy. They are bound and found in the faculty lounge. One can consult each vita and discover how many publications, the nature of the journals in which they appeared, and other contributions were to the credit of each member of the department at each stage of their careers. The candidates can also compare their accomplishments in research with those of their colleagues. No SOM faculty should have
surprises about performance criteria in research, service, or teaching when the tenure decision is made.

*Mentoring program/philosophy (formal or informal):* No written guidelines exist.

*Instructions/guidelines/understanding for evaluation of interdisciplinary efforts:* There are no formal written procedures to evaluate interdisciplinary efforts.

*Mode of committee(s) interaction with unit administrative head/chair:* None written.

**Unwritten Guidelines**  
Source: Professor Spruill

*Mentoring program/philosophy (formal or informal):* None aside from DoTE’s office for teaching

*Instructions/guidelines/understanding for evaluation of interdisciplinary:* There are also no formal guidelines for evaluating faculty in more than one department. In the past, the procedure has been to let the School paying more than 50% of the candidate’s salary to take the lead in forming the committee according to their rules and with an indeterminant contribution from Math in terms of number of members etc.

*Mode of committee(s) interaction with unit administrative head/chair:* The RPT committees meet independently from the Chair. The School RPT committee letter goes to the Chair on its way up the line.

*How are teaching, service, research balanced in the evaluation?* Research is rated extremely high at every level, service is more important in going from Associate to Full and unimportant in going from Assistant to Associate unless it is research related (editorial work, etc.) Citations are used judiciously and carefully (unlike their apparently mindless application at some higher levels). In mathematics, authors are virtually always alphabetically listed. We pay more attention to absence of singly authored papers in the vita.

*How is teaching evaluated?* The teaching is evaluated by peer review, CIOS forms, DoTE input and faculty vita.

*Are citation indices used?* Not mentioned.

How is the contribution on co-authored papers evaluated? What meaning is attributed to order of listing, if any? *First-level committee reports are used if necessary to determine individual’s contributions. Interpretation of order of listing of authors varies from one evaluator to the next, and there is little calibration – a cause for concern.*

*Are issues such as space or availability of graduate students considered?* No. Only what is done with the students that are advised. In some cases, lack of graduate students when funding is available raises concerns.
Other obstacles or considerations for lack of progress? Space is not a consideration in Mathematics but graduate students are. They try to be sensitive to each individual’s circumstances and make a reasonable assessment of their accomplishments in light of any obstacles of which they become aware.

**PhD Student Advising and Development**  
Source: Professor Spruill

Are PhD students tracked into their careers? Is a unit-level database maintained?  
There is a relatively new concerted effort at tracking Ph.D. students in their careers in an organized fashion (~5 years maybe). A database is present, but incomplete as it is relatively new.

On what bases are faculty evaluated for interaction with PhD students? Is placement of PhD students considered? The educational and research accomplishments of the faculty member are enhanced by having Ph.D. students. Thus attracting graduate students is a definite plus and some would say a requirement perhaps in going from Associate to Full Professor. Neither placing graduate students nor preparing Ph.D. students for an Academic Research Career are considered by the committee.

Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers?  
Neither placing graduate students nor preparing Ph.D. students for an Academic Research Career are considered by the committee.

**Unit: GWW School of Mechanical Engineering, College of Engineering**  
Author: David McDowell  
Sources: Melody Foster, Administrative Liaison to RPT Committee and David McDowell, RPT Chair

**Constitution of committee(s)**

First-level peer review committees:  
Three faculty, nominally, on each committee from a combination of ME and other disciplines/units as appropriate. Typically, but not always, chaired by ME faculty member.

School level RPT Committee:
In ME, only tenured full-professors serve on the RPT Committee. There are seven members of the Committee, including one Nuclear Engineering member. There is significant overlap from year to year. Given the size of ME (about 70 faculty) and number of full professors, during a given 5-7 year period the committee membership does not typically include a significant fraction of the faculty.
Method of committee(s) assignment

First-level peer review committees:
Chair gets documentation from the candidate. Chair then meets with the School level RPT Committee to select members of the first-level peer review committees.

School level RPT Committee:
Chair meets with elected ME faculty advisory committee in the spring of each year and they jointly select the RPT Committee candidates. Chair appoints the School Level RPT Committee.

Method(s) of ensuring peer technical review:
First-level peer review committee evaluates only the quality of intellectual contributions of the candidate.

There are no written guidelines or summaries at the ME School level for the above-listed methods of implementation of committee appointment and operation. The Chair provides the committees instructions in the committee appointment letters.

Written Guidelines
Source: David McDowell, RPT Chair

Performance expectations: None written
Specification of quality publication/presentation venues: None written
Expected information from candidate, including format: Same as from Institute Guidelines

Method(s) of evaluating teaching and service:
Teaching evaluation is based primarily on compiled teaching survey results. No detailed, formal evaluation of service activities is performed. Candidates are expected to explain service commitments in their RPT document.

Provisions for feedback to candidate during the process: Candidate is made aware of any serious reservations arising from preliminary discussion with Chair, and may receive communications from the School Chair’s office as feedback from the RPT Committee to revise resume format or provide clarification of certain aspects if necessary.

Mentoring program/philosophy (formal or informal): No written guidelines exist.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: None written.

Mode of committee(s) interaction with unit administrative head/chair: None written.

Unwritten Guidelines
Source: David McDowell, RPT Chair
Mentoring program/philosophy (formal or informal): Chairs of sub-disciplinary research area groups within ME provide advice and guidance, as does the School Chair.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts (issue of single PI versus multi-PI): Instruction is sought from first-level committee reports regarding relative intellectual contributions. Occasionally letters of clarification of contributions are sought from collaborators, and actual funding levels of each individual are further clarified.

Mode of committee(s) interaction with unit administrative head/chair: Currently, there is no intermediate communication between School Chair and RPT Chair prior to final report from RPT Committee, although Committee may request School Chair to secure more information or revised format from candidate. This may vary with Committee Chair to some degree.

How are teaching, service, research balanced in the evaluation? Emphasis on research.

How is teaching evaluated? Teaching survey results. Anecdotal feedback from research area group representatives and other faculty as well. Information is also available from graduating student exit surveys.

Are citation indices used? No

How is the contribution on co-authored papers evaluated? What meaning is attributed to order of listing, if any? First-level committee reports are used if necessary to determine individual’s contributions. Interpretation of order of listing of authors varies from one evaluator to the next, and there is little calibration.

Are issues such as space or availability of graduate students considered? No. Only what is done with the students that are advised. In some cases, lack of graduate students when funding is available raises concerns.

Other obstacles or considerations for lack of progress? No

PhD Student Advising and Development

Sources: Melody Foster, Administrative Liaison to RPT process in ME; Bill Wepfer, former Associate Director of Graduate Programs

Are PhD students tracked into their careers? Is a unit-level database maintained? A ME database is obtained and obtained by periodic query of faculty. The method for tracking career success is somewhat ad hoc and anecdotal. At one time ME maintained an extensive database, but the ability to maintain this is sporadic.

On what bases are faculty evaluated for interaction with PhD students? Is placement of PhD students considered? Timely completion and placement are discussed as research products. Every year (as a part of the annual evaluation process) the school Chair is provided a careful evaluation by the Associate Chair for Graduate Studies of how each faculty member performed in terms of graduate student advising.
Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers?

1. Every PhD student does the ME 7757 Teaching Practicum, which covers some elements regarding preparation for an academic career.

2. There is a Woodruff teaching Intern program that allows PhD students to team-teach a course with a faculty mentor.

3. Jeff Donnell and Bill Wepfer started the Professional Practice Practicum---with Fall 2001 (2 students) and Fall 2002 (4 students) offerings. In this Practicum, instructors spend a great deal of time on various items (proposals, IP, Tenure,..) and the students are each required to plan their job search and to submit a CAREER award proposal to the instructors, who then review and return to the student.

4. For the past 10 years, Wepfer has conducted an annual workshop/panel discussion for ME PhD students seeking faculty jobs. This panel consists of the Associate Chair for Graduate Studies, the chair of the ME faculty recruiting committee and two recent hires who have just gone through the process themselves. ME also conducts a similar workshop for graduate students seeking industry jobs.

Unit: School of Modern Languages, Ivan Allen College

Author: Willie Belton
Source: Phillip McKnight, Chair

18 Tenure Track Faculty Members
4 Full Professors (6 Tenured)
10 Associate Professors (5 Tenured)
4 Assistant Professors (6 Untenured)

(1) What information (written or unwritten) about the tenure and promotion process and its deliberations is provided candidates by the units?

The School Chair provides information to incoming faculty members regarding research, teaching, and service expectations.

Candidates for tenure and/or promotion are asked by the School Chair and/or the administrative assistant to prepare a P&T package. An explicit format for the dossier is provided to the candidate. The candidate is asked to provide a list of references and the RPT committee develops a list of references. The School Chair works very closely with the candidate in preparing his/her P&T package.

(2) How is the tenure and promotion committee in your unit constituted?
The tenured faculty elects the RPT committee members. The committee consists of three members and one alternate.

The RPT committee is composed of all appropriately ranked and tenured members of the School's faculty. In the case of promotion to or tenuring of an associate professor, both associate and full professors are members of the committee. In the case of promotion to or tenuring of a full professor, only full professors serve as members of the committee.

(3) Does the unit tenure and promotion committee proceed with their deliberations in consultation with the school Chair? Or with any other unit committees dealing with candidate assessment?

The RPT committee prepares a letter recording its deliberations and submits the letter to the School Chair. The School Chair is an active participant in the RPT committee’s deliberations and also provides an independent letter that is placed in the candidate’s package.

**Unit: School of Physics, College of Sciences**
Author: Mostafa El-Sayed
Source: Ron Fox, Chair, School of Physics

The Committee: The school chair appoints the RPT committee to represent the different disciplines to the extent possible. He first selects the chair and then selects the members of the committee in consultation with the chair.

Information Asked of the Candidate. Documentation as specified by College of Sciences P& T guidelines: the candidate should prepare a statement indicating their accomplishments in research, teaching, and service. This statement should not exceed six pages.

In the CoS directive “If the candidate’s research involves a significant number of multi-authored research papers, there must be some indication of the relative contribution to those papers by the candidate.

Research Evaluation: The outside letters are the most valuable. The number and conditions put on the reviewers follow the CoS requirements (items 3, 6, 7, 8, 9). Citation indices can also be used.

Teaching Evaluation: Students’ evaluations are used, but there is some interest in other measures. Also, for untenured faculty, the DoTE (Director of Teaching effectiveness) is included (item 2 in the CoS P&T procedures) and reported.

Feedback to the Candidate During the Process: None, but sometimes they might meet with the candidate.

Mentoring: An informal assignment of mentors is used. However, according to the chair, this method sometimes works and other times it does not.
Interdisciplinary Efforts: In physics not much interdisciplinary research is carried out. The order of listing of authors depends on the faculty member and does not necessarily signify the relative contributions of the authors.

Committee Interaction with the Chair: The department chair talks only to the RPT committee chair.

General Comments: The chair indicated that there is no formal way to encourage faculty to talk to their students about their future careers. They keep an account of their graduates. For promotion of senior faculty, graduate student placement can be included in the resume, but is not required.

A light service load is assigned to untenured faculty (seminars and recruitment committees). The chair indicated that research is by far the most important item for tenure in the form of research papers in good peer reviewed journals as well as invitations to speak at important national or international meetings. He also believes that scholarship and quality of research is more important than fund raising. However, he indicated that this is his own personal opinion.

**Unit: School of Polymer, Textile & Fiber Engineering, College of Engineering**

Author: Paul Benkeser
Source: Fred Cook, Professor and former School Chair

**Constitution of Committee**

*School level RPT Committee:* The TFE RPT Committee consists of only Full Professors. The individual Area (Technical) Committees are recommended by the candidate and appointed by the TFE Chair after consultation with the TFE RPT Committee.

**Method of Committee Assignments**

*Source:* Fred Cook, Professor.

The TFE Chair appoints the TFE RPT Committee.

**Written Guidelines**

*Source:* Fred Cook, Professor.

*Performance expectations:* COE/Institute Guidelines

*Specification of quality publication/presentation venues:* None

*Expected information from candidate, including format:* Specified by the College of Engineering (COE).

*Method(s) of ensuring peer technical review:* Utilize Area Committees, as per COE Guidelines.
Method(s) of evaluating teaching and service: COE/Institute Guidelines

Provisions for feedback to candidate during the process: None, we have been instructed by Legal and the COE to give no feedback to the candidate during the process.

Mentoring program/philosophy (formal or informal): Since 1989, we’ve asked incoming new faculty to set up mentoring teams consisting of senior faculty (external members to TFE are allowed).

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts: None

Mode of committee(s) interaction with unit administrative head/chair: None

**Unwritten Guidelines**

Mentoring program/philosophy (formal or informal): Each incoming junior faculty member is asked to set up a Mentoring Team, with both internal and external faculty to TFE allowed to serve.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts (issue of single PI versus multi-PI): None, adhere to COE/Institute guidelines.

Mode of committee(s) interaction with unit administrative head/chair: The TFE RPT Committee Chair corresponds with the TFE School Chair.

How are teaching, service, research balanced in the evaluation? Considered of equal weight, as per COE/Institute guidelines.

How is teaching evaluated? Mainly by data from CETL Student Course Evaluation Forms.

Are citation indices used? No.

How is the contribution on co-authored papers evaluated? By COE/Institute guidelines. What meaning is attributed to the order of listing, if any? None.

Are issues such as space or availability of graduate students considered? Yes.

Other obstacles or considerations for lack of progress? Case-by-case basis on consideration of barriers.

**PhD Student Advising and Development**

Are PhD students tracked into their careers? Is a unit-level database maintained? Yes, by Maureen Glass, Administrative Manager.
On what bases are faculty evaluated for interaction with PhD students? Major thesis advisor, serving on Thesis Committees, timely graduation rates, publications originating from PHD theses, etc.

Is placement of PhD students considered? Yes, but heavy emphasis is not placed on this metric due to the current weighting of the TFE PHD program toward international students.

Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers? No

**Unit: School of Psychology, College of Sciences**

Author: Jeannette Yen

Source: Randall Engle, Professor and Chair of School of Psychology

**Constitution of committee(s)**

*First-level peer review committees:*

None.

*School level RPT Committee:*

The RPT committee consists of four tenured faculty.

**Method of committee(s) assignment**

*First-level peer review committees:*

N/A

*School level RPT Committee:*

The RPT committee consists of three people appointed by the chair and a fourth suggested by the candidate. Faculty volunteer to be members on school committees but chair appoints.

**Method(s) of ensuring peer technical review:**

Outside letters. Evaluation of impact of research based on the total number of citations since 1987 for the candidate’s top ten cited papers as the metric. Chair’s review of quality of publication journals.

**Written Guidelines**

*Performance expectations:* The Chair and the Personnel Committee (three tenured faculty) carefully review candidate’s file on a yearly basis. Chair reviews expectations with candidate, conveying defined expectations at time of interview. Written guidelines from Faculty Handbook and CoS website.

Expectations are discussed with candidate at time of interview and reviewed yearly. At the interview, Chair presents rules to survive at Tech: need a grant (unit has high level of research
dollars/faculty), need yearly publications of quality in highly cited and recognized journals (such as Psychology Review or Journal of Experimental Psychology), must teach (first year: teach one course, 2nd year: teach 2 courses, 3rd year: 3 courses but can buy out with research funds). Chair facilitates transition of new faculty by providing time (graduate research assistantship for student of untenured faculty, 1 mo. salary/summer for first 2 summers, house-seeking visit funded, space needs met (in some cases, by reducing the space of some senior faculty to provide space for new faculty).

To improve teaching, Chair conducted an analysis of teaching load and worked with Associate Chair, Undergraduate Coordinators, and Graduate Coordinators to reduce teaching load, eliminating small classes. Instructors, evaluated by Chair (review of text, syllabus, course surveys), have been successfully responsible for introductory level course. Chair also teaches introductory psychology as an example of importance of this responsibility. Choice of courses to teach is based on faculty expertise. Faculty members are encouraged to cover introductory courses; assignments made only if no faculty make choice for these courses. Each faculty member (with very few exceptions) must teach one undergraduate course each year.

**Specification of quality publication/presentation venues:** Chair informs candidate that, if teaching and service are acceptable, he/she would support tenure if they had two publications in the most widely cited journal (Psychology Review) and if they also had a multi-year extramural grant. Evaluation of impact of research is based on the total number of citations since 1987 for the candidate’s top 10 cited papers as the metric. Proceedings are not considered in # publications, only refereed journals.

**Expected information from candidate, including format:** Specified in CoS guidelines (see [http://www.cos.gatech.edu/criteria.html](http://www.cos.gatech.edu/criteria.html)).

**Method(s) of evaluating teaching and service:** DOTE and student surveys.

**Provisions for feedback to candidate during the process:** The Personnel Committee does an in-depth analysis of the candidate’s file, summarized in a letter. The Chair does a follow-up analyses, summarized in separate letter. Only Chair meets with candidate individually. Candidate also meets with the chair of the PC separately. Third year is critical review year.

**Mentoring program/philosophy (formal or informal):** Chair encourages within-department mentoring. Encouragement of lunches between junior and senior faculty (once a month), with formal policy to pick up lunch tab. Formal mentor-mentee program (once a month) with senior outside of department (Hartley).

**Instructions/guidelines/understanding for evaluation of interdisciplinary efforts:** By example, recent hires have been joint appointments between Computing and Psychology.

The following excerpts from the PSYCHOLOGY homepage indicates supportive environment for interdisciplinary approaches:
The School of Psychology maintains excellent research and educational interactions within the College of Sciences as well as with other scientific and technological disciplines on campus, such as The Graphics, Visualization, and Usability Center (GVU) and Cognitive Science. In recent years, joint graduate courses and research projects have involved students in industrial engineering (human factors and applied measurement), management (organizational behavior), architecture (environmental design), and computing (artificial intelligence, cognitive science, and human-computer interaction).

The School is composed of three overlapping programs, Industrial/Organizational, Experimental and Engineering/Applied Experimental.

This program participates in a campus-wide, interdisciplinary program in cognitive science, including scientists from the Colleges of Computing, Engineering, and Architecture.

Evaluation of joint appointments: The other school is asked to recommend someone for the committee. Otherwise the standards are the same. That sometimes is a problem. For instance, the other unit that Psychology occasionally shares faculty with has different standards - not to say weaker - just different - than Psychology so that is something that must be dealt with.

Mode of committee(s) interaction with unit administrative head/chair: Chair meets yearly with all faculty. In addition, Chair meets with the junior faculty as a group each year.

Unwritten Guidelines

Mentoring program/philosophy (formal or informal): Chair facilitates interactions of junior with senior faculty by picking up check for monthly lunches, often offering to set up lunches with senior faculty chosen by junior faculty. By meeting with senior faculty, mentors can be chosen by junior faculty. This person can serve as an advocate during reviews of file by contributing valuable information because of their familiarity with candidate.

Instructions/guidelines/understanding for evaluation of interdisciplinary efforts (issue of single PI versus multi-PI): Initial definition of research focus should be apparent in single or senior-authored publications. Common thread in reported research, led by candidate, should be apparent in multi-investigator grants and papers.

Mode of committee(s) interaction with unit administrative head/chair: Concerted effort by Chair to maintain an open welcoming atmosphere to promote highest productivity by faculty. Chair makes daily rounds to faculty to promote openness and interaction.

How are teaching, service, research balanced in the evaluation? Chair has made focused effort to reduce teaching load and provide time and support for research efforts (graduate research assistants for untenured, 1 month/summer for first 2 summers of salary support for untenured faculty, buy-out option from teaching with grant funds, use of instructors for first years coursework, teaching release for development of new courses).
How is teaching evaluated? In addition to the use of DOTE and student surveys, a close review of text, syllabus, grade distribution, and student evaluations is conducted by Chair.

Are citation indices used? Evaluation of impact of research based on the total number of citations since 1987 for the candidate’s top 10 cited papers as the metric.

How is the contribution on co-authored papers evaluated? What meaning is attributed to order of listing, if any? Common thread in candidate’s own research must be apparent. If the common thread relevant to the candidate’s research is obvious, then order is less important.

Are issues such as space or availability of graduate students considered? Faculty can request specific applicants to be their student. Support provided by department for graduate assistantships for untenured faculty.

Other obstacles or considerations for lack of progress? Highly selective hiring process makes progress to tenure more successful. Chair explicitly states expectations of faculty to survive at Tech during hiring process. Chair has latitude in making critical decisions on budget allocation, space, and time available for research, teaching and service. Broad interpretation of guidelines enables Chair to develop and encourage special expertise of faculty. Chair spends the time and thought needed to promote open interactions between all faculty, facilitating productivity as a member of Research I universities. Chair supports efforts to promote women. In addition to Stopping the Clock, it is important to define the strategies for Starting the Clock.

**PhD Student Advising and Development**

Are PhD students tracked into their careers? Yes.

On what bases are faculty evaluated for interaction with PhD students? N/A

Is placement of PhD students considered? N/A

Are there written guidelines or other formal programs for PhD students to prepare for academic/research careers?

Yes. Professional Problems in Psychology: course on how to write grants, ethics. Teaching Practicum: another course to provide guidelines for teaching.

**Unit: School of Public Policy, Ivan Allen College**

Author: Willie Belton

Source: Susan E. Cozzens, Chair

26 Tenure Track Faculty Members
10 Full Professors (6 Tenured)
8 Associate Professors (5 Tenured)
8 Assistant Professors (6 Untenured)
(1) What information (written or unwritten) about the tenure and promotion process and its deliberations is provided candidates by the units?

Prior to the tenure and promotion year, candidates are given full information on necessary paper work and deadlines of the P&T process. The School Chair provides this information.

(2) How is the tenure and promotion committee in your unit constituted?

In consultation with the candidate, the School Chair appoints a specialist reading committee. The committee is comprised of three to five appropriately ranked and tenured Georgia Tech faculty members, of whom at least three are usually members of the faculty of the School, and all of whom are qualified to evaluate the candidate's research. In the case of post-tenure review, a vote of the School faculty elects the committee.

Using the external letters and the candidate's statement, biosketch, and publications, the specialist reading committee reports to the SPP RPT committee on their evaluation of the candidate's creative contributions, using the criteria stated in the Faculty Handbook.

The SPP RPT Committee is composed of all appropriately ranked and tenured members of the School's faculty. In the case of promotion to or tenuring of an associate professor, both associate and full professors are members of the committee. In the case of promotion to or tenuring of a full professor, only full professors are members of the committee. The committee elects its own chair.

(3) Does the unit tenure and promotion committee proceed with their deliberations in consultation with the school Chair? Or with any other unit committees dealing with candidate assessment?

The School Chair does not participate in the deliberations of the SPP RPT committee. The School RPT committee reports results of the deliberations to the School Chair.
A.2 Sample Letters From Unit Chair Requesting External Reference Letters

Review of sample letters from various units revealed a wide range of formats for requesting input from external references. Surprisingly, the typical letter was rather vague in terms of requesting specific, useful information, for example comments on the quality of the top five intellectual products put forth by the candidate or comparison of the candidate to other leading individuals at the same career stage. It is unlikely that the RPT Committees will benefit much in critical discernment of the cases based on responses to vague requests. We list here two examples of request letters that are more detailed in their requests. We also note that another good practice observed in some letters is to request that the respondent/reference explicitly state their past/current relationship to the candidate.

Example Letter #1:

DATE

NAME
TITLE
ADDRESS
CITY,STATE ZIP

DEAR __________________________________________

Dr. _______________has listed you as a reference for his promotion to ___________Professor and tenure decision. Your participation in this very important benchmark in a faculty member's career would be much appreciated. To assist you in this assessment, a package containing Dr. _______________’s vita and examples of scholarly publications is enclosed. Please provide us your candid thoughts about Dr. _______________’s promotion and tenure. In particular, your thoughts on the following factors in this decision would be most useful.

- **Level of Contribution**: Each candidate for tenure should demonstrate a substantive contribution to his/her field. Please comment on this level of contribution, with specific examples cited, if possible. This contribution most often manifests itself in scholarly publications, but there might be other contributions that are significant.

- **Quality of Contribution**: Georgia Tech is placing a great deal of emphasis on the quality of contribution along with the overall level. Please comment on the quality of the candidate's contribution. For example, are the journals published in first-rate publications? Has research or published work been significant in defining new directions in the candidate's field? Are you aware of any awards or other means of recognition that illustrate quality of contribution? Georgia Tech requests each candidate to describe his/her major accomplishments in a statement that has been provided to you. We would appreciate your assessment of these accomplishments from the perspective of contribution to the field.
• **Peer Comparison:** Please compare the candidate to his peers at other universities or research-related institutes. Does he have the potential to continue making substantive contributions when compared to his peers.

The Georgia Institute of Technology will maintain the confidentiality of your evaluation to the greatest possible extent. While the Georgia Open Records Act does apply, Dr. ______________ has waived his right under the Act to review your evaluation.

If you are unable to act as a reference for Dr. ______________, please let me know as soon as possible. I realize such reviews take precious time, especially for individuals as busy as you. However, it is precisely because of your stature in the field that we are asking for your participation in this process. In order for the tenure process to remain on schedule, we need your letter no later than ________.

Thank you for your participation in this process.

Sincerely,

Dr.
Professor and Chair
XXXX
Example Letter #2:

January 22, 2004

Professor xx
Department of ________
ZZZZ University
ZZZZZ, ZZ 01234

Dear Professor xx:

Dr. *The Candidate* will be considered this fall for tenure and promotion to the rank of Associate Professor at the Georgia Institute of Technology. The decision requires input from external references, and we ask you to assist us in that regard.

Because you work in a field related to his, we seek your candid assessment of the creativity, impact, productivity, and promise of Dr. Candidate’s research. Any comments you may be able to make on the standing he has achieved in the professional community or on his leadership, teaching, or service would be very helpful. It would be most useful if you could summarize your assessment of Dr. Candidate by comparing him to the leaders, by name, in your research field when they were at a similar career stage. Finally, we would be interested in knowing if you would recommend someone with Dr. Candidate’s record (as you know it) for tenure at your institution.

The following information is enclosed to help you in your evaluation: (1) Dr. Candidate’s resume, (2) his description of his research directions, and (3) copies of five publications he has chosen as being among his most significant.

The Georgia Institute of Technology will maintain the confidentiality of your evaluation to the greatest extent possible. While the Georgia Open Records Act does apply, Dr. Candidate has formally waived rights to access reference letters and has agreed that such correspondence shall remain confidential.

Let me thank you in advance for your assistance. I know from personal experience the difficulty of the task that I am requesting of you. Nevertheless, the timing of our process requires that we have a letter from you by ________ in order to meet our internal schedule for promotion and tenure documentation. I hope you will let me know by fax (________) or e-mail (________@gatech.edu) if you need more information or if you are unable to respond by the requested date.

Sincerely,

Chair of ________

Enclosures
A.3 Good Examples of Clarity of Guidelines for Promotion and Tenure

In surfing Georgia Tech academic unit websites, it is relatively common to find information related to “legalistic” aspects of the tenure and promotion process, such as format, cover sheets, guidelines for timing of submission of documentation, guidelines for three page narrative, etc. It is much less common to find guidelines that go further than this to discuss expectations of faculty performance, provide frank discussions of methods and perspectives, evaluation of teaching, research and service, success rates of prior cases in the unit, etc. In this section we report two examples of refreshingly clear and direct expressions of expectations, one from the College of Sciences website and the other from within the School of Biology, within CoS. PTAC does not necessarily endorse the specific procedures in these examples as recommended best practices that ought to apply to all academic units, but we do endorse the candid and direct nature of these guidelines, and strongly recommend that units across the Institute give thought to developing similar written guidelines that communicate standards. It is difficult to determine how many units within the Institute publish guidelines and faculty performance expectations on secure internal websites. Beyond functional review guidelines and timetables for decisions at various stages of the process, written guidelines and expectations for RPT committees are virtually non-existent across the Institute.

A.3.1 College of Sciences Guidelines

The following information is openly posted on the College of Sciences website and is a good example of a step in the right direction for posting clear, written guidelines of expectations.

**COLLEGE OF SCIENCES**

**PROMOTION AND TENURE PROCEDURE**

1. Promotion and tenure decisions follow at least five years of service at Georgia Tech (see Time Line). Early promotions are unusual and are only considered when performance is outstanding and exceptional. Each case must be thoroughly justified by the School Chair.

2. Student teaching evaluation forms for all courses taught at Georgia Tech need to be included in all tenure packages. The School Chair and faculty committee will also include other measures of teaching effectiveness such as peer teaching evaluations from the Director of Teaching Effectiveness (DoTE) and mentoring of graduate and undergraduate students in research.

3. All tenure and promotion packages usually contain at least five letters from outside referees. The candidate may suggest some referees, but the faculty committee or School Chair will select the majority. The referees selected by the candidate will be indicated as such. A list of all people asked to write letters will be included in the package. All letters received concerning the candidate must be included in the package together with a short biographical description for each referee. At the referee's request, all reference letters will be held confidential.
4. Generally, the referees should not have personal or professional relationships with the candidates (i.e., collaborators, mentors, or co-workers). If letters from such persons are included, they must be justified by the School Chair and identified as such.

5. The candidate will be asked to sign a statement indicating that he or she will not ask to see external reference letters or the identity of the external referees.

6. In the letter asking them to write review letters, referees are asked to provide names of other people who could evaluate the research program of the candidate. For example the following phase can be used: "The Dean of our College has asked that you identify other potential reviewers of Professor X." A copy of the request letter is included in the package.

7. Referees are asked to sign a separate note indicating that they expect their identities and remarks to be confidential.

8. The candidate will be asked if there are potential outside referees who they would not want to review their work. Such requests are normally honored.

9. The candidate will be asked to prepare a statement indicating their accomplishments in research, teaching, and service (maximum of six pages). The candidate should be aware that this statement will be read both by experts and non-experts in their field.

10. If the candidate's research involves a significant collaborative effort, there must be some indication of relative contributions in the research statement. The Chair or faculty committees will evaluate this information.

11. The Chair or faculty committees will evaluate the impact of the journals in which the candidate has published.

12. After the package has been put together, the candidate will review the contents of the package without seeing the actual review letters or the identity of the referees. The candidate will then sign a statement indicating that she or he has reviewed the package.

Accessed 7/28/03
COLLEGE OF SCIENCES

NORMAL CRITERIA FOR PROMOTION AND TENURE

1. Research
   a) This is first and foremost in the evaluation for tenure and promotion.
   b) Based on the evaluation of Impact and Discovery.
2. Teaching
   a) Good teaching is necessary (but not sufficient) for tenure and promotion.
   b) Make sure you have documented evidence (evaluations, etc.)
3. Service
   a) Service to the profession and Georgia Tech.
   b) Service does not normally play a pivotal role in consideration for tenure (but often does in promotion to Full).

Frequently Asked Questions

1. What is used to evaluate Impact and Discovery?
   Impact and Discovery are determined by a function of (Number of papers) X (Impact of papers). The number of papers of faculty awarded tenure has varied from two to many. Also, while one may write lots of papers, if they have no impact the net "score" is zero.
   Impact is determined by such things as:
   · Prestige of journals in which candidate has published. This will vary by discipline. The Chair and Promotion and Tenure committee will have substantial input on the discipline specific journal classifications.
   · External reference letters (please see Procedure for how these are selected)
   · Scientific Awards
   · Citation Indices (Used only for promotion to Full due to their time lags.)
   · Grants Awarded from National Competitions (ie. NIH, NSF, NASA, etc.)
   · Graduate Students trained and impact of their work
   · Invited papers
   · Invitation to give seminars

2. How do the committee at levels beyond the department evaluate Impact and Discovery?
   A CoS P&T committee member presents the candidate's case. The School Chairs are present to answer CoS P&T committee questions. The Dean presents the case and answers questions at the Provost's level. In addition, each committee considers the whole file including the external letters.

3. How many people are granted tenure and/or promotion?
   Of all the people who went up for tenure in CoS in the last five years (1998-2002) 95% were awarded tenure. Of those who started as Assistant Professors and went up for tenure 92% were awarded tenure. If you consider those who left due to warning that their records would not result in tenure, 83% of those eligible assistant professors got tenure. Of those hired at associate or full, the tenure rate has been 100%.
The success rate of all faculty who went up for promotion from Associate to Full is 86%. This number is therefore comparable to the percentage of Assistant Professors getting tenure.

4. Why are grants so important?
First, of course, is the fact that money is needed to run and maintain a laboratory, computer equipment and graduate students. Secondly, getting a peer-reviewed grant from a scientific funding agency (such as NIH, NSF, etc.), is a further indicator of your status in the scientific community.

5. What types of service are good to do?
· Service on Institute and School Committees
· Professional review panels (e.g., NIH review panels, National Lab review panels, Advisory Boards, etc.)
· National Committees (e.g., Scientific Society Committees)
· Organizing and/or chairing sessions at scientific meetings
· Reviewing journal articles
· Recruiting graduate students
NOTE: Large service roles at Tech are not expected of faculty until after tenure.

6. What do I do if I feel overloaded with service responsibilities?
First of all, it is important to know that turning down any committee work at Tech will not count against your tenure. Service is not pivotal for tenure but often plays a role in promotion to Full. Tech is the place that wants to support your efforts to establish your national reputation. So, you may want to focus on the service activities that further that goal.

7. What if I am interested in getting involved with more service at Tech?
Often Large service roles at Tech are generally not expected by faculty until after tenure for the sake of the untenured faculty. So, your Chair or other administrators may be trying to protect you from too many service duties. Talk to them if you'd like to change this.

Accessed 7/28/03
THIRD YEAR REVIEW DECISION DESCRIPTION

Four possible outcomes:

1. **Reappointment**: This decision means you are well on your way to tenure. Good job! Keep going...

2. **Reappointment with counseling**: This decision means you are also on your way to tenure. However, there are some concerns that need to be addressed that will help you to further your situation. You will go up for critical review the next year.

3. **Reappointment with warning**: This decision means you are not on a path to tenure. There are definite areas you need to work on. You will go up for critical review the next year as well.

4. **Non-Reappointment**: This decision occurs when you are clearly not making forward progress, and it terminates your appointment at Tech at the end of the next fiscal year.

TENURE REVIEW DECISION DESCRIPTION

1. **Yes**: You are now a tenured member of the Georgia Tech Faculty. Congratulations.

2. **No**: You have not currently met the expectations of achieving tenure at Georgia Tech. You may always choose to go up again. The fall of your seventh academic year as academic faculty is the final opportunity. If the decision is no, your appointment at Georgia Tech terminates at the end of the seventh academic year on June 30th.
Excerpts from Procedures & Practices Regarding Promotion in the School of Biology
(last revised 14 March 2002, by D. Dusenbery, provided by Jeannette Yen)

Criteria Used

- Publications are essential. The general expectation seems to be about two publications in referred journals per year, with the quality of the journal considered.
- Letters from outside reviewers are solicited by the School RPT Committee. The basic question that the letters are expected to answer is whether or not the candidate has established a good reputation in the field.
- Has the candidate been successful in obtaining grant support? This is important for two reasons. First, it is generally assumed that good scientific research cannot be conducted without outside support (although there could be exceptions in some cases). Second, successful grants (especially from competitive sponsors such as NSF or NIH) are indications of approval by experts in the field.
- Evidence of effective teaching. Teaching is important to the Institute, but the effectiveness of teaching is difficult to document. In the past heavy reliance was placed on written surveys of student opinions. However, this system has recently been replaced by a web-based survey, and the response rate is much poorer. How teaching will be assessed in the future is less clear. Statements from individual students are usually not considered because of large variance in how individual students perceive individual classes and teachers.
- Any documentation of recognition of research accomplishments is useful. Examples might be awards by societies of researchers, election to society offices, editorships, etc. This more commonly applies to more senior faculty.
- Citations of papers published by the candidate may be considered, especially for candidates with publications that have been out for many years.
- Service is usually not very important, unless the candidate is way out of the norm. Nonetheless, it is important to document service, usually by listing participation in School and Institute committees in the CV. Service to the profession, such as editorships, arranging meetings, etc. is also considered.
- Evaluation of Publications:
  - Realize that few of the people doing the evaluations have time to read whole papers, and more objective evidence of the quality and impact of publications is often sought.
  - There is no hard number as to a satisfactory number of publications. In the 1970’s an average of one regular research paper published in a referred journal annually was used as a benchmark. As Georgia Tech has improved and more support for research has been provided to new faculty, this standard has crept up. Now the expectation is more like two per year.
  - The reference letters usually provide useful information on the quality of a candidate’s publications as perceived by prominent scientists in the field.
addition, to the extent practical, the School RPT Committee attempts to objectively evaluate the quality and impact of publications. Most often this involves assessing the quality of the journal in which the publication appears. The ISI impact factor of a journal (# citations / # papers, over some time period) provides the basic data. However, impact factors vary significantly between fields, and the most useful data is ISI’s ranking of journals within subdisciplines (http://jcrweb.com). It is recognized that review journals usually rank higher than primary journals publishing research results. For candidates with longer publication records, counts of citations of the specific papers may be considered.

- **Letters of Reference**
  - Candidates can suggest the names of outside reviewers to include or exclude. Exclusions are honored and some of the included suggestions are used. However, the School of Biology RPT Committee strives to pick most of the reviewers independently. (Some important individuals in the decision process discount letters from people suggested by the candidate.) Letters from mentors and collaborators are discouraged. Usually requests are made to 8 or 9 individuals in order to get 5 or 6 letters.
  - Obviously letters from more prominent scientists carry more weight. So it is advantageous for faculty members to be known to prominent scientists in their field. (Networking is important in research as in many other activities.)

- **Grants**
  - Successfully obtaining funding for one’s research is important. The more money the better, but the source also counts. Successful grants from very competitive, peer reviewed sources such as NIH or NSF count most. Research contracts from industry count less. (If you are not free to publish the results, they may be worthless for promotion.)
  - Unsuccessful grant proposals cut both ways. A candidate who doesn’t have funding and hasn’t submitted many proposals (< 1/yr) is perceived as not trying very hard. On the other hand, a candidate who has submitted many proposals (> 3/yr) without success in getting funding may be viewed as unable to write good proposals or choosing poor research problems. (Only information you provide is generally available to committee members.)

- **Independence of Research**
  - The Institute and the School expect that individual faculty members will be independent researchers, leading their own group and not dependent on other faculty members. Thus, it is important that the candidate is Principal Investigator (PI) on at least some grants and has some papers that don’t involve co-authors from other research groups. Particularly problematic is the candidate that is always co-author with another more senior researcher, especially if the co-author was a mentor of the candidate.
Another complication in evaluating research productivity is the increasing appearance of collaborative papers with large numbers of authors. How should these be counted? Co-authors from the candidate’s own research group (students, technicians, or postdocs paid from grants of which the candidate is the PI) are no problem. But papers resulting from collaboration between research groups should be credited only in part to each group.

- **Teaching**
  - Teaching is a problem area because Georgia Tech, like other academic institutions, wants to give it considerable weight in promotion decisions, but assessing teaching effectiveness is notoriously difficult. In the 1980’s and 1990’s, written surveys of student opinion were taken at the end of most classes at Georgia Tech, and these received considerable attention in the review process. In the last year or two, the Institute switched to a web-based survey, and student participation dropped considerably as well as average scores. This leads to considerable uncertainty at this time as to how teaching effectiveness will be evaluated. (Only information you provide is generally available to committee members.)

- **Timing** - Generally, there is a range of years during which an individual is eligible to be considered for promotion or tenure. Normally, at least 5 years service at Georgia Tech are required. Usually, each individual would like to get promotion and tenure as early as possible. However, an unsuccessful attempt can leave a negative impression, and it is usually best to wait until you have the strongest case you are likely to have. For example, it may be better to go up just after you have been awarded a 3-year grant than just after one has terminated.

The decision of the Institute is concerned with predicting the future performance of an individual and there is often a tendency to extrapolate recent performance rather than average over the whole record. On the other hand, a flurry of publications just before the tenure decision can lead to doubts about how the candidate would perform after receiving tenure.
Appendix B. Analysis of PTAC Survey

PROMOTION AND TENURE ADVANCE COMMITTEE (PTAC)

AN INVENTORY OF RESULTS OF THE SPRING 2003 SURVEY ON PROMOTION AND TENURE PROCESSES AT GEORGIA INSTITUTE OF TECHNOLOGY

David L. McDowell, Regents’ Professor and PTAC Chair
Mary Frank Fox, PhD, NSF ADVANCE Professor of Sociology
J. Joseph Hoey, Ed.D. Director, Office of Assessment
Priya Gill, B.S.E.E, Graduate Assistant
Georgia Tech, Office of Assessment

October 2003
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Addendum – Descriptive Statistics
1 Introduction

The Promotion and Tenure ADVANCE Committee (PTAC) was constituted as part of the NSF ADVANCE project to identify measures for improving Promotion and Tenure (P&T) evaluation processes and to provide foundations for achieving enhanced consistency in the structure and methodology of the promotion and tenure committees at the Georgia Institute of Technology.

As part of the process for understanding the current promotion and tenure process, the perceptions of the academic faculty regarding faculty support, development and evaluation issues, as well as the culture at Georgia Tech, a survey was formulated by a team consisting of PTAC Chair David McDowell, survey expert and ADVANCE Professor Mary Frank Fox, and J. Joseph Hoey of the Office of Assessment at Georgia Tech. After three draft versions developed collaboratively by Professors McDowell and Fox, starting December 3, 2002, the PTAC members met for 3.5 hours in February and March 2003 to provide extensive feedback and additional questions, leading to subsequent revisions that involved Dr. Hoey as well, who provided additional guidance in formulating cardinal response sets. The survey was in essentially final form by mid-March 2003. The final draft of the survey was implemented in web-based format under the direction of Linda Cabot of OIT. Graduate assistant Priya Gill of the Office of Assessment was instrumental in statistical and interpretive analysis of the survey results in drafting this report. The survey was carried out over the set of all full time academic faculty, including administrators. This report brings forth the major results of this survey.

The report is divided into seven sections with each section examining a different aspect of faculty perceptions. The survey questions are divided into these sections and the responses disaggregated by the following demographic factors to evaluate the effect of each on perceptions and culture:

- Gender
- Rank and tenure status
- College of affiliation
- Number of years of service
- Administrative status
- Family status

Statistical tests have been carried out on the differences between responses according to the above factors. In addition, responses where there are statistically significant differences have been examined to look for patterns for purposes of gauging future institutional transformation. In addition, the response trends for questions where there are no such differences have been reported to indicate the baseline conditions.

The survey results constitute a Spring 2003 baseline for Georgia Tech academic faculty perceptions of development, support, mentoring, collaborative environment, intellectual environment, and evaluative procedures in promotion and tenure. Similar surveys will be administered in alternate years to measure perceptions of institutional transformation and the impact of the web-based Awareness of Decisions in Evaluating Promotion and Tenure (ADEPT)
tool developed by PTAC for use by faculty candidates for promotion and tenure (P&T), as well as RPT Committees in various units.

2 Methodology

2.1 The Survey

The survey process commenced on April 10, 2003 and closed on May 31, 2003. All academic faculty were given the choice of responding to the survey online or by downloading the survey and filling out a printed version. In addition to announcement of the survey by e-mail from Provost Jean-Lou Chameau, and several subsequent reminders, the survey was also publicized in the Second Annual ADVANCE conference held in April 2003 to enhance response rates. Furthermore, PTAC Chair D.L. McDowell made presentations to Dean’s committees in the Ivan Allen College, College of Sciences and College of Engineering to publicize the survey in advance.

The survey consisted of 34 questions covering the following domains:

- Resource allocation and success
- Mentoring and networking
- Perceptions of evaluative methods and procedures for research, teaching and service
- Interdisciplinary collaborations
- Entrepreneurship
- Environment and culture of Georgia Tech
- Demographic information

2.2 The Analysis

The survey had an overall response rate of 37% (n = 325) of the entire population of academic faculty at Georgia Tech. The response rates by demographic category are as given in Table 1. As can be seen from this Table, the response rates are fairly uniform across categories and thus can be considered as representing overall institutional opinion. Faculty were considered “administrative” if they were supported 50% or more time for administrative duties in a single unit or among multiple units; 23% of the respondents fell within this category. The faculty rank data was consolidated into two categories in order to match categories given in the survey with the categories of the institute-wide population data.

The responses to the survey were analyzed by each of the above demographic characteristics to gauge the variation in perceptions. Tests for statistical significance were run for these differences as follows:

- Chi-square tests to investigate the questions having differences in response patterns
  - By gender
  - By administrative status
  - By faculty rank and tenure status
  - By college
  - By number of years of service
• T-tests for investigating the significant differences in mean ratings (response means)
  o By gender
  o By administrative status

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<tr>
<th>Table 1: Demographics of respondents</th>
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<tr>
<td><strong>Category</strong></td>
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<td>Total response</td>
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<td>Gender</td>
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<tr>
<td>Female</td>
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<tr>
<td>Male</td>
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<td>Total response</td>
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<tr>
<td>Administrative Appointment</td>
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<tr>
<td>Not holding &gt;50% administrative appointment</td>
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<tr>
<td>Total response</td>
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<tr>
<td>Rank</td>
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<tr>
<td>Associate Professor/ Full Professor/ Regents professor/ Others</td>
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<td>Total response</td>
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<td>Ethnicity</td>
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<td>White</td>
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<td>College</td>
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<td>College of Computing</td>
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<td>College of Management</td>
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<td>Ivan Allen College</td>
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<td>Total response</td>
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• Analysis of Variance (ANOVA) for determining significant differences in mean ratings
  o By college
  o By faculty rank and tenure status
Disaggregation by ethnicity was not carried out since the number of respondents in three of the five categories was very low.

The survey is divided into six clear sections, each dealing with a specific domain as indicated in Section 2.1 above, and a seventh section on demographics. In this report, the results of the above statistical analyses, along with the overall descriptive statistics, were split based on their relevance to each of these aspects. Some of the questions are relevant to more than one aspect and are accordingly analyzed in multiple sections. The following sections give the results of these analyses.

3 Resource Allocation and Success

3.1 The questions in this Section attempt to discern the perceptions of faculty regarding the extent to which various resources have been helpful in career progress towards P&T at Georgia Tech, perceptions regarding the importance of various resources as components of a hiring package for faculty, perceptions regarding the extent to which various resources are critical to performance as a faculty member, the extent to which various Institute-wide resources are actually used, perceptions of the extent to which various modes of allocation of resources are considered critical for faculty success, perceptions of the extent to which faculty consider their personal research to be “equipment intensive,” and perceptions of equity of assignment and rotation of service opportunities among faculty.

3.2 Response Patterns:

3.2.1 If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: start-up package

The highest percentage of respondents (58%) reported that the start-up package had been “very helpful” in their career progress towards P&T. When disaggregated by gender, rank, college and administrative status, similar trends were observed with the start-up package being rated as “very helpful” by the highest percentage of faculty in each group. However when disaggregated by number of years of service, the highest percentage of respondents (42%) with more than 20 years of service at Georgia Tech reported that a start-up package had not been available to them. The response profiles by years of service at Georgia Tech are given in Figure 1A.
Figure 1A: If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure: start-up package

This significant difference by years of service was observed even in the response means to this question when disaggregated by number of years of service. The response mean of faculty with less than 3 years of service was significantly higher than that of faculty having more than 20 years of service at Georgia Tech. Also the faculty with less than 7 years of service had rated help provided by the start-up package significantly higher than the rating awarded by faculty with more than 13 years of service. The data suggest a reported increase in start-up package support in the last 15 years, and especially in the last 10 years. Figure 1B compares mean ratings (response means).
3.2.2 If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: quality of office space

The highest percentage of respondents (43%) reported that the quality of office space was “moderately helpful” in their career progress towards P&T. When disaggregated by gender, rank, administrative status and years of service, similar trends were observed with the quality of office space being rated as “moderately helpful” by the highest percentage of faculty in each group. However when disaggregated by college, the highest percentage of respondents who are primarily affiliated with the College of Computing (38%) rated the quality of office space as being “slightly helpful” towards their career progress, while the highest percentage of respondents affiliated with the College of Architecture (67%) rated this resource as being “very helpful” towards their career progress. The response profiles by college are given in the following graph.

One may interpret these results in different ways. It may be that faculty members in units with newer facilities and fewer space problems take office space for granted and therefore consider it as less of a factor in their career progress. Hence, the reader is cautioned against drawing the conclusion that a “very helpful” response implies that high quality office space has been available.
In testing the mean ratings, a significant difference was observed in the mean ratings when disaggregated by administrative status of the faculty (considered administrative if faculty holds a 50% or higher administrative appointment at Georgia Tech). Respondents who do not hold administrative positions at Georgia Tech had a higher response mean (2.89) to this resource than those holding administrative appointment (2.57), on a 4-point scale, with 1 = not at all helpful and 4 = very helpful. Figure 2B indicates these differences.
3.2.3 If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: quality of laboratory space

The highest percentage of respondents (48%) reported that the quality of laboratory space was “very helpful” in their career progress. When disaggregated by gender, rank, administrative status and years of service, similar trends were observed with the quality of laboratory space being rated as “very helpful” by the highest percentage of faculty in each group. However when disaggregated by college, the highest percentages of respondents affiliated with the College of Architecture (67%), the College of Management (33%) and the Ivan Allen College (50%) rated the quality of laboratory space as being “not available” in their career progress towards P&T. This response is not surprising considering the fact that these schools do not require research work to be carried out in laboratories. The response profiles by college are given in Figure 3.

There were no significant differences in the mean ratings by any of the disaggregated groups.
If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: quality of laboratory space

3.2.4 If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: quality of graduate students

The highest percentage of respondents (58%) reported that the quality of graduate students was “very helpful” in their career progress. When disaggregated by gender, rank, administrative status and years of service, similar trends were observed, with the quality of graduate students being rated as “very helpful” by the highest percentage of faculty in each group. However when disaggregated by college, the highest percentage of the respondents affiliated with the College of Management (33%) rated the quality of graduate students as being moderately helpful towards career progression. The highest percentage of respondents from the Ivan Allen College (35%) perceived the quality of graduate students as only slightly helpful in career progression. However, these results must be viewed with some degree of caution in view of the low response rates of faculty within the Ivan Allen College and the College of Management. Faculty respondents from the Colleges of Computing and Engineering had very similar response profiles. Notably, the College of Sciences had markedly lower percentage of respondents rating help provided by quality of graduate students as “very helpful” than respondents from either the College of Computing or the College of Engineering. This might be due to more
reliance on post doctoral fellows in the Sciences, or may reflect a perception that graduate student quality in the College of Sciences needs to be improved. The response profiles by college are shown in Figure 4A.

Figure 4A: If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure: quality of graduate students

![Chart showing responses by college.](chart.png)

On analyzing the mean ratings by gender, the response mean of female faculty (2.96) was significantly higher than that of male faculty (2.48), on a 4-point scale, with 4 = very helpful and 1 = not at all helpful. Figure 4B presents differences in the mean ratings by gender.
On analyzing the mean ratings by college, the response mean of respondents from the College of Engineering was significantly higher than those of the College of Management, the College of Sciences and the Ivan Allen College. The mean ratings of respondents from the College of Sciences and the College of Computing were also significantly higher than that those of respondents from the Ivan Allen College. Figure 4C shows differences in the mean ratings by college.
On analyzing the mean ratings by family status, the response mean of faculty who are married and have more than two children or dependents (3.67) was significantly higher than that of faculty who are “single, divorced or widowed” (2.79) on 4-point scale, with 5 = far ahead of peers and 1 = far behind. Faculty members with an increasing number of dependents consider quality of graduate students to be increasingly helpful in career progress towards P&T. Figure 4D indicates these differences in the mean ratings.
If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: time to think, reflect

The highest percentage of respondents (54%) reported that time to think and reflect was “very helpful” in their career progress. This was a common response irrespective of gender, rank, college, administrative status, family status or number of years of service of the respondent.

If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: having a mentor

There was no clear majority response to this question, with “very helpful” (28%) and “slightly helpful” (28%) being the most common responses. However on disaggregation by number of years of service, a greater percentage of faculty with more than 20 years of service at Georgia Tech in a tenure-track position indicated that mentoring was “not
available” (25%) or “not at all helpful” (18%) in their career progress towards P&T. On the other hand, the perception that mentoring has been either “very helpful” or “moderately helpful” is lowest for the respondents having 4-6 years of service at Georgia Tech. Figure 5 shows these response patterns disaggregated by number of years of service at Georgia Tech.

Figure 5: If available as a resource, to what extent have each of the following resources been helpful in your career progress towards promotion and tenure:

- Having a mentor

No significant differences were found in the mean ratings of any of the disaggregated groups.

3.2.7 If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: quality of colleagues

The highest percentage of respondents (47%) reported that the quality of colleagues was “very helpful” in their career progress. This was a common response irrespective of the gender, rank, college, administrative status, family status or number of years of service of the respondent.
3.2.8 *If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure: collegial environment*

The highest percentage of respondents (45%) reported that a collegial environment was “very helpful” in career progress. When disaggregated by college, rank, administrative status and years of service, similar trends were observed, with collegial environment being rated as “very helpful” by the highest percentage of faculty in each group. When disaggregated by gender, a significantly lower percentage of female faculty respondents (36%) rated collegial environment as being very helpful in their career progress towards promotion and tenure than male faculty respondents (47%). The response profiles by gender are given in the Figure 6A.

*Figure 6A: If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure: collegial environment*

On analyzing the mean ratings by gender, the response mean of male faculty (3.24) was significantly higher than that of female faculty (2.84) on a 4-point scale, with 4 = very helpful and 1 = not at all helpful. Figure 6B shows these differences in the mean ratings (response means).
If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?:

- parking

The highest percentages of respondents reported that parking was “not at all helpful” (30%) or “slightly helpful” (32%) in their career progression. This was a common response irrespective of the gender, rank, college, administrative status, family status or number of years of service of the respondent. Even though a higher percentage of respondents in some of the groups responded that parking was “moderately helpful” in their career progress, these differences were not statistically significant.

* Significantly different at p = 0.01.
3.2.10 If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: teaching resources

Similar percentages of respondents reported that teaching resources were “slightly helpful” (36%) and “moderately helpful” (37%) in career progression. When disaggregated by gender, rank, administrative status and years of service, similar trends were observed with teaching resources being rated equally as “slightly helpful” and “moderately helpful” by the highest percentage of faculty in each group. When disaggregated by college, high percentages of respondents in the College of Architecture (56%) and the College of Sciences (45%) indicated that this resource was “moderately helpful”. On the other hand, high percentages of respondents in the College of Computing (52%), the College of Management (46%) and the Ivan Allen College (39%) indicated that this resource was “slightly helpful”. Respondents from the College of Engineering were equally split between “slightly helpful” (37%) and “moderately helpful” (38%). Faculty members within the College of Architecture find teaching resources either “moderately helpful” (55%) or “very helpful” (22%). Response profiles by college are shown in Figure 7.

Figure 7: If available as a resource, to what extent have each of the following resources been helpful in your career progress towards promotion and tenure: teaching resources

No significant differences were found among the mean ratings of any of the disaggregated groups.
3.2.11 If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: administrative support staff

There was no clear majority response to this question. Similar percentages of respondents reported that the administrative support staff was “slightly helpful” (33%) or “moderately helpful” (34%) in their career progress towards promotion and tenure. This was a common response, irrespective of the gender, rank, college, administrative status, family status or number of years of service of the respondent.

3.2.12 If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: other

Faculty were also asked to list any other resources that were helpful in their career progress towards P&T. Table 2 lists these resources along with response frequency.

<table>
<thead>
<tr>
<th>Comment Number</th>
<th>Resource</th>
<th>Number of Comments</th>
<th>Percentage of Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Computer / IT support</td>
<td>5</td>
<td>19%</td>
</tr>
<tr>
<td>2</td>
<td>Dynamic leadership/ Chair</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>3</td>
<td>Library resources</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>4</td>
<td>Clear information on what is expected/ Performance evaluations</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>5</td>
<td>Colleagues in other schools/ Interdisciplinary opportunities</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>6</td>
<td>College or school based equipment facilities</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>7</td>
<td>Lack of administrative support in earlier years (not now) contributed to the end of my research work</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>8</td>
<td>Matching funds</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>9</td>
<td>Mentor, mentor, mentor</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>10</td>
<td>OSP</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>11</td>
<td>Quality of undergraduate students as research assistants</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>12</td>
<td>Release time from teaching</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>13</td>
<td>Sabbatical</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>14</td>
<td>Salary</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>15</td>
<td>Strong research seminar program</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>16</td>
<td>Understanding RPT committee and school director</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>17</td>
<td>We lack adequate office space and adequate staff support</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Total Number of Comments</td>
<td>26</td>
<td>100%</td>
</tr>
</tbody>
</table>
3.5.13 *How important do you consider the following as components in a hiring package for faculty?: graduate student support*

The highest percentage of respondents (68%) indicated that graduate student support was a “very important” component in a hiring package for faculty. This was the most frequent response in each group of respondents even when the responses were disaggregated by gender, rank, administrative appointment and number of years of service. However when disaggregating the responses by college, it was found that, unlike other colleges, the highest percentage of respondents (44%) from the College of Architecture indicated that graduate student support was a “slightly important” component of the hiring package for faculty. This result must however be viewed with caution due to the low response rate from the College of Architecture (17%). The response profiles by college are given in Figure 8A.

Figure 8A: How important do you consider the following as components in hiring package for faculty: graduate student support

On analyzing the mean ratings by college, the response mean of faculty of the College of Engineering was significantly higher than that of respondents from the College of Architecture, the College of Sciences, and the Ivan Allen College. Also the response mean of faculty respondents from the College of Computing was significantly higher that that of respondents of the College of Architecture and the Ivan Allen College. Mean ratings on a 4-point scale, with “4 = Very important” and “1 = Not at all important”, are shown in Figure 8B.
On analyzing the mean ratings by administrative status, the response mean of faculty holding administrative positions (3.76) was significantly higher than the response mean of faculty not holding administrative positions (3.51), again on a 4-point scale, with 4 = very important and 1 = Not at all important. Figure 8C indicates these differences in the mean ratings.
3.5.14 How important do you consider the following as components in a hiring package for faculty?: summer salary support

The highest percentage of respondents (67%) indicated that summer salary support was a “very important” component in a hiring package for faculty. This was the most frequent response in each group of respondents on disaggregating the responses by gender, rank, college, administrative appointment and number of years of service. There were no significant differences between the mean ratings of the groups.
3.5.15 How important do you consider the following as components in a hiring package for faculty?: equipment, space

The highest percentage of respondents (70%) indicated that equipment and space were “very important” components in a hiring package for faculty. This was the most frequent response in each group of respondents even when the responses were disaggregated by gender, rank, administrative appointment and number of years of service. However when disaggregating the responses by college, it was found that unlike other colleges, the highest percentage of respondents (44%) who were primarily affiliated with the College of Architecture indicated that equipment and space were “moderately important” components of a hiring package for faculty. This result must be viewed with caution due to the low response rate from the College of Architecture (17%). Also, an equal percentage of respondents (33%) from the College of Management indicated that space and equipment are “slightly important,” “moderately important,” and “very important” components in a hiring package. The response profiles by college are shown in Figure 9A.

On analyzing the mean ratings by gender, the response mean of female faculty respondents (3.78) was significantly higher than that of male faculty respondents (3.57) on a 4-point scale, with 4 = very important and 1 = not at all important. Figure 9B shows these differences in the mean ratings.
On analyzing the mean ratings by college, the response mean of respondents from the College of Management (3.00) was significantly lower than that of respondents from the College of Engineering (3.62) and the College of Sciences (3.83). Figure 9C shows these differences in mean ratings.

* Significantly different at p=0.01.
3.5.16 *How important do you consider the following as components in a hiring package for faculty?: flexibility of funds*

The highest percentage of respondents (54%) indicated that flexibility of funds was a "very important" component in a hiring package for faculty. This was also the most frequent response among each group of respondents when the responses were disaggregated by gender, rank, college, administrative appointment and number of years of service.

On disaggregating the mean ratings, it was found that there were significant differences by rank and tenure status in the importance placed on the flexibility of funds as a component of hiring package. The response mean of recently hired Untenured Associate or Full Professors (3.87) was significantly higher than the response mean of Tenured Associate Professors (3.22) on a 4-point scale, with 4 = very important and 1= not at all important, as shown in Figure 10A.
Figure 10A: How important do you consider the following as components in the hiring package for faculty: flexibility of funds

On disaggregating the mean ratings by number of years of service at Georgia Tech, the response mean of respondents with less than 3 years of service at Georgia Tech (3.65) was significantly higher than that of respondents with 13-19 years of service at Georgia Tech (3.20). Figure 10B shows mean ratings by years of service.
3.5.17 How important do you consider the following as components in a hiring package for faculty?: travel support

There was no clear majority response to this question with “very important” (44%) and “moderately important” (41%) being the most common responses to this question. However, on disaggregation by college, a higher percentage of respondents from the College of Architecture, the College of Management and the Ivan Allen College reported that travel support was “very important,” while a higher percentage of the respondents from the College of Computing and the College of Sciences reported that it was “moderately important”. Equal percentages of respondents from College of Engineering indicated that travel support was “moderately important” and “very important” component of hiring package. The response patterns by college are shown in Figure 11A.
Figure 11A:  How important do you consider the following as components in a hiring package for faculty: travel support

On disaggregating the mean ratings, it was found that there were significant differences by gender in the importance placed on the travel support as a component of hiring package. The response mean of female faculty (3.51) was significantly higher than the response mean of male faculty (3.22) on a 4-point scale, with 4 = very important and 1 = not at all important. Figure 11B indicates these differences.
Figure 11B: How importance do you consider the following as components in a hiring package for faculty: travel support

On analyzing the mean ratings by college, the response mean of the faculty affiliated with Ivan Allen College (3.71) was significantly higher than that of the faculty affiliated with the College of Engineering (3.21) and the College of Sciences (3.05). Figure 11C compares mean ratings.

* Significantly different at p=0.006.
3.5.18 How important do you consider the following as components in a hiring package for faculty?: reduced teaching load

The highest percentage of respondents (62%) indicated that reduced teaching load was a “very important” component in a hiring package for faculty. This was also the most frequent response in each group of respondents even when gender, rank, college, administrative appointment and number of years of service disaggregated the responses.

On disaggregating the mean ratings however, it was found that Untenured Assistant Professors (3.71) rated the “importance of reduced teaching load as a component of hiring package” significantly higher than did Tenured Full Professors (3.41). The responses were on a 4-point scale, with 4 = very important and 1 = not at all important. One may view this result in two ways. Perhaps senior faculty have a broader perspective on what makes a difference in the long run in achieving success in promotion and tenure.
On the other hand, perhaps the impact of reduced teaching load in early years is not as well recounted by senior faculty. Or perhaps such reduced teaching loads were not available in hiring packages when some of the current senior faculty started their careers. Figure 12 shows these results.

**Figure 12:** How important do you consider the following as components in a hiring package for faculty: reduced teaching load

<table>
<thead>
<tr>
<th>Rank of Respondent</th>
<th>Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untenured Assistant Professor (UAP)</td>
<td>3.71</td>
</tr>
<tr>
<td>Tenure Associate Professor (TAP)</td>
<td>3.58</td>
</tr>
<tr>
<td>Tenured full professor (TFP)</td>
<td>3.41</td>
</tr>
<tr>
<td>Untenured Assoc. or full professor, recently hired (UAFP)</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Rank of Respondent

- Untenured Assistant Professor (UAP)
- Tenure Associate Professor (TAP)
- Tenured full professor (TFP)
- Untenured Assoc. or full professor, recently hired (UAFP)
3.5.19 *How important do you consider the following as components in a hiring package for faculty?: other*

Faculty were asked to list any other resources that they reported were an important component in a hiring package for faculty. Table 3 lists these resources along with the response frequency.

**Table 3: Other resources that were an important component of hiring package**

<table>
<thead>
<tr>
<th>Comment Number</th>
<th>Resource</th>
<th>Number of Comments</th>
<th>Percentage of Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Salary</td>
<td>3</td>
<td>14 %</td>
</tr>
<tr>
<td>2</td>
<td>Flexibility of funds/ ability to roll funds for a few years</td>
<td>2</td>
<td>9 %</td>
</tr>
<tr>
<td>3</td>
<td>Administrative support</td>
<td>2</td>
<td>9 %</td>
</tr>
<tr>
<td>4</td>
<td>Support for Post-Docs</td>
<td>2</td>
<td>9 %</td>
</tr>
<tr>
<td>5</td>
<td>Technical support/ technical lab personnel</td>
<td>2</td>
<td>9 %</td>
</tr>
<tr>
<td>6</td>
<td>Book and journal funds</td>
<td>1</td>
<td>4.5 %</td>
</tr>
<tr>
<td>7</td>
<td>Core research facilities</td>
<td>1</td>
<td>4.5 %</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>1</td>
<td>4.5 %</td>
</tr>
<tr>
<td>9</td>
<td>High quality students</td>
<td>1</td>
<td>4.5 %</td>
</tr>
<tr>
<td>10</td>
<td>Limit on new course preparations</td>
<td>1</td>
<td>4.5 %</td>
</tr>
<tr>
<td>11</td>
<td>Option of confining teaching to one semester</td>
<td>1</td>
<td>4.5 %</td>
</tr>
<tr>
<td>12</td>
<td>Sabbatical</td>
<td>1</td>
<td>4.5 %</td>
</tr>
<tr>
<td>13</td>
<td>Start-up funds</td>
<td>1</td>
<td>4.5 %</td>
</tr>
<tr>
<td>14</td>
<td>Time to reflect and think, which is often lacking in this environment</td>
<td>1</td>
<td>4.5 %</td>
</tr>
<tr>
<td>15</td>
<td>Travel is quiet important – must be able to talk to sponsors</td>
<td>1</td>
<td>4.5 %</td>
</tr>
<tr>
<td>16</td>
<td>Would really like some student/ graduate assistance during the summer when a lot more work can be accomplished</td>
<td>1</td>
<td>4.5 %</td>
</tr>
<tr>
<td>Total Number of Comments</td>
<td></td>
<td>22</td>
<td>100 %</td>
</tr>
</tbody>
</table>
3.5.20 To what extent are the following types of space critical to your performance as a faculty member?: laboratory/research space

The highest percentage of respondents (55%) reported that the space for laboratory/research was “very critical” in performance as a faculty member. On disaggregating by gender, rank, number of years of service and administrative status, similar trends were observed with laboratory/research space being rated as “very critical” by the highest percentage of faculty in each group. Not surprisingly, when disaggregated by college, all the respondents from the College of Management and a high percentage of respondents from the Ivan Allen College (42%) rated laboratory/research space as “not at all critical” while a high percentage of faculty respondents from the College of Architecture (44%) rated it as “somewhat critical”. The highest percentage of respondents from the College of Sciences (69%), the College of Engineering (64%) and the College of Computing (62%) rated laboratory/research space as being “very critical” in their performance as a faculty member. The response profiles by college are given in Figure 13A.

Figure 13A: To what extent are the following types of space critical to your performance as a faculty member: laboratory/research space

An interesting pattern was found when the responses regarding criticality of research space were disaggregated by number of years of service at Georgia Tech. Even though the highest percentage of respondents in each of the categories indicated that laboratory/research space was “very critical” in their performance as a faculty member, these percentages showed an increase with increase in the number of years of service at Georgia Tech. Figure 13B indicates the disaggregated response pattern.
Figure 13B: To what extent are the following types of space critical to your performance as faculty member: laboratory/research space

On disaggregating the mean ratings by college, it was found that respondents from the College of Management and the Ivan Allen College rated the criticality of laboratory/research space much lower than faculty affiliated with other colleges. Respondents from the College of Management rated this resource significantly lower than faculty affiliated with the Ivan Allen College. Faculty respondents from the College of Architecture also awarded a low rating to this resource, but their rating was not significantly different from those of other colleges. Figure 13C shows the mean ratings.
3.5.21 To what extent are the following types of space critical to your performance as a faculty member?: office for self

The highest percentage of respondents (62%) reported that the space for office for oneself was “very critical” in performance as a faculty member. There were no statistically significant differences when disaggregating the responses by gender, rank, college, number of years of service and administrative status with “very critical” being the most common response in each sub-group. There weren’t any significant differences in mean ratings among any of the categories examined.

3.5.22 To what extent are the following types of space critical to your performance as a faculty member?: offices for visiting scholars

A high percentage of the respondents (39%) reported that the office space for visiting scholars was “slightly critical” to performance as a faculty member. A similar percentage (30%) of respondents reported that this space was “not critical. There were no statistically significant differences when disaggregating the responses by gender, rank, college, number of years of service and administrative status, with “slightly critical” or “not
critical” being the most common response in each sub-group. There weren’t any significant differences in mean ratings among any of the categories.

3.5.23 To what extent are the following types of space critical to your performance as a faculty member?: office for graduate students

The highest percentage of respondents (42%) reported that the space for offices for graduate students was “somewhat critical” in the performance as a faculty member. On disaggregating by gender, rank, number of years of service and administrative status, similar patterns were observed of graduate students’ office space being rated as “somewhat critical” by the highest percentage of faculty in each group. However, when disaggregated by college, high percentages of respondents from the College of Architecture (44%), the College of Engineering (43%) and the College of Sciences (57%) rated offices for graduate students as “somewhat critical” to performance as a faculty member. The highest percentages of respondents from the Colleges of Computing (43%) and Engineering (39%) rated this resource as “very critical” to their performance. The highest percentage (42%) of respondents from the College of Management on the other hand, rated this resource as “slightly important”. The responses from Ivan Allen College faculty were equally split between the four choices, i.e. “very critical”, “somewhat critical”, “slightly critical” and “not at all critical”.

Figure 14A: To what extent are the following types of space critical to your performance as a faculty member: office for graduate students

On disaggregating by mean ratings by college, the response mean of the respondents from the College of Engineering (3.14) was significantly higher than the mean ratings of
the respondents from the Ivan Allen College (2.51). The disaggregated means by college are shown in Figure 14B.

Figure 14B: To what extent are the following types of space critical to your performance as a faculty member: office for graduate students

![Bar chart showing mean ratings for different colleges]

3.5.24 To what extent are the following types of space critical to your performance as a faculty member?: quality classroom space

The highest percentage of respondents (41%) reported that quality classroom space was “somewhat critical” in their performance as a faculty member. On disaggregating the responses by gender, rank, number of years of service and administrative status, similar trends were observed with the of quality classroom space being rated as “somewhat critical” by the highest percentage of faculty in each group. However, when disaggregated by college, the highest percentages of respondents from the College of Architecture, the College of Management and Ivan Allen College rated quality classroom space as “very critical” in their performance as a faculty member. On the other hand,
most respondents from the Colleges of Engineering, Computing and the Sciences rated quality classroom space as “somewhat critical”. The response patterns by college are shown in Figure 15A.

Figure 15A: To what extent are the following types of space critical to your performance as a faculty member: quality classroom space

Similar response patterns were observed on disaggregating the response mean by college. The response mean of the respondents from the Ivan Allen College (3.45) was significantly higher than the mean ratings of respondents from the College of Computing (2.67), the College of Engineering (2.75), and the College of Sciences (2.69) on a 4-point scale, with 4 = very critical and 1 = not at all critical.
3.5.25 To what extent are the following types of space critical to your performance as a faculty member?: communal areas for faculty

The highest percentage of respondents (35%) reported that communal spaces were “somewhat critical” to their performance as a faculty member. On disaggregating the responses by gender, rank, number of years of service and administrative status, similar trends were observed with the communal spaces being rated as “somewhat critical” by the highest percentage of faculty in each group. However, when disaggregated by college, a high percentage of respondents from the Ivan Allen College (37%) rated communal areas as being “very critical” to their performance as a faculty member. The highest percentage of respondents affiliated with the College of Architecture (56%) and the College of Computing (55%) indicated that they reported that this space was “somewhat critical” to their performance. On the other hand the highest percentage of respondents from the College of Management (42%), the College of Sciences (54%) and the College of Engineering (34%) reported that communal areas for faculty members were only “slightly critical”.

Figure 15B: To what extent are the following types of space critical to your performance as a faculty member: quality classroom space
Figure 16A: To what extent are the following types of space critical to your performance as a faculty member: communal areas for faculty

The response mean of the respondents from the Ivan Allen College (2.92) was significantly higher than the mean ratings of respondents from the College of Sciences (2.14) and the College of Engineering (2.15) on a 4-point scale, with 4 = very critical and 1 = not at all critical. Figure 16B shows the mean ratings by college.
3.5.26 To what extent are the following types of space critical to your performance as a faculty member?: other

Faculty members were also asked to list any other spaces or space-related issues that are critical to their performance as a faculty member. Table 4 lists these responses, including some responses that are not directly relevant to space issues.
Table 4: Other critical spaces

<table>
<thead>
<tr>
<th>Comment Number</th>
<th>Resource</th>
<th>Number of Comments</th>
<th>Percentage of Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meeting spaces/ faculty clubs</td>
<td>6</td>
<td>21%</td>
</tr>
<tr>
<td>2</td>
<td>Library – carrels/ program library space</td>
<td>4</td>
<td>14%</td>
</tr>
<tr>
<td>3</td>
<td>Conference rooms/ meeting rooms</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>4</td>
<td>Administrative support</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>5</td>
<td>Computer support</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>6</td>
<td>Adequate salary</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td>7</td>
<td>Adequately “wired” classrooms</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td>8</td>
<td>Availability of space at nearby field/ marine stations very critical</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td>9</td>
<td>Campus aesthetics</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td>10</td>
<td>“d” [offices for graduate students] and “f” [communal areas for faculty] are not existing</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td>11</td>
<td>Direct access to University level administration &amp; to colleagues from other part of GT</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td>12</td>
<td>I would add that these {the resources listed in this question set} are almost all inadequate</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td>13</td>
<td>Parking</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td>14</td>
<td>Post-Doc office</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td>15</td>
<td>Proximity to other faculty/ campus</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td>16</td>
<td>Time release from irrelevant committee work and other work which may be better handled by senior tenured faculty</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td>17</td>
<td>Extended hour campus services</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td></td>
<td>Total Number of Comments</td>
<td>29</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.5.27 To what extent do you use each of the following types of Institute-wide resources?:

computing

The highest percentage of respondents (38%) indicated that they had made “moderate usage” of Institute-wide computing resources. This was found to be the most common response when disaggregating the responses by gender, rank, number of years of service and administrative appointment. On disaggregating the responses by college however, the highest percentage of respondents from the College of Architecture (44%) indicated that they had heavily used this resource. The highest percentage of respondents from the College of Science (59%), the College of Management (58%) and Ivan Allen College (47%) indicated moderate usage of this resource. A similar percentage of respondents from the College of Computing had indicated that they had “little usage” (48%) or “moderate usage” (43%) of this resource. The highest percentage of respondents from the College of Engineering (37%) had indicated that they had “little usage” of Institute-wide computing resources. Figure 17 shows the response patterns by college.
3.5.28 To what extent do you use each of the following types of Institute-wide resources?: multimedia assistance

The highest percentage of respondents (46%) indicated that they made “little usage” of Institute-wide multimedia assistance resources. This was the most common response on disaggregating the responses by gender, rank, number of years of service and administrative appointment.

On disaggregating the responses by college, a higher percentage of respondents from the College of Architecture and the Ivan Allen College indicated that they had used these resources either moderately or heavily. The highest percentage of respondents from College of Computing indicated that they had never used these resources.
Figure 18A: To what extent do you use the following types of Institute-wide resources: multimedia assistance

Analysis of the mean ratings of the usage of multimedia assistance resources by college brought out a similar result. The response mean of respondents from the College of Architecture (2.63) was significantly higher than those from the College of Computing (1.57), and was higher than those of the Colleges of Sciences, Engineering and Management. Results were reported on a 4-point scale, with 4 = heavy usage and 1= not at all [used]. Figure 18B shows the results.
3.5.29 To what extent do you use each of the following types of Institute-wide resources?: teaching development

The highest percentage of respondents (44%) indicated that they had made little use of Institute-wide teaching development resources. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences between the mean ratings of different groups.

3.5.30 To what extent do you use each of the following types of Institute-wide resources?: proposal preparation

Surprisingly, the highest percentage of respondents (40%) indicated that they had made little usage of these resources. In fact a high percentage of respondents (33%) indicated that they had never used this resource. This was the most common response on
disaggregating the responses by gender, rank, number of years of service and administrative appointment.

On disaggregating the responses by college however, the highest percentage of respondents from the College of Management (91%) indicated that they had never used these resources. The highest percentage of respondents from the College of Architecture (78%) and the Ivan Allen College (68%) indicated that they had never used or made little use of these resources. The usage patterns in other colleges were higher. Only respondents from the College of Computing indicated a substantial level (>20%) of heavy usage. Figure 19 summarizes results.

Figure 19: To what extent do you use the following types of Institute-wide resources: proposal preparation

![Figure 19: To what extent do you use the following types of Institute-wide resources: proposal preparation](image)

3.5.31 To what extent do you use each of the following types of Institute-wide resources?: faculty leave programs

The highest percentage of respondents (58%) indicated that they had never used Institute-wide faculty leave program resources. This was the most common response on disaggregating the responses by gender, college and administrative appointment of the respondent. On disaggregating the responses by rank and tenure status and also years of service at Georgia Tech, there is a clear pattern of increasing use of this resource with increase in rank and years in service at Georgia Tech. The increased time horizon may increase the probability of using these faculty leave resources, or it may be indicative of a reluctance of faculty at lower ranks to make use of them. Figures 20A and 20B show response patterns by rank and years of service.
Figure 20A: To what extent do you use each of the following types of resources: faculty leave programs

Rank and Tenure Status

Percentage of Responses

- Heavy usage
- Moderate usage
- Little usage
- Not at all
Analyzing the response mean also brought out significant differences in the response mean by faculty rank and tenure status and number of years of service at Georgia Tech. The response mean of respondents from the ranks of Tenured Full Professors (1.82) and Tenured Associate Professors (1.73) was significantly higher than that of Untenured Assistant Professors (1.29). Similarly, the response mean of respondents having less than three years of service at Georgia Tech was significantly lower than that of faculty having service length between 7 years and 19 years. Figures 20C and 20D show these mean ratings.
Figure 20C: To what extent do you use each of the following Institute-wide resources: faculty leave programs

<table>
<thead>
<tr>
<th>Rank and Tenure Status</th>
<th>Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untenured Assistant Professor (UAP)</td>
<td>1.29</td>
</tr>
<tr>
<td>Tenure Associate Professor (TAP)</td>
<td>1.73</td>
</tr>
<tr>
<td>Tenured full professor (TFP)</td>
<td>1.82</td>
</tr>
<tr>
<td>Untenured Assoc. or full professor, recently hired (UAFP)</td>
<td>1.29</td>
</tr>
</tbody>
</table>
3.5.20 To what extent do you use each of the following types of Institute-wide resources?: continuing education

The highest percentage of respondents (68%) responded that they had never used Institute-wide continuing education resources. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences between the mean ratings of different groups.

3.5.21 To what extent do you use each of the following types of Institute-wide resources ?: international programs

The highest percentage of respondents (57%) responded that they had not been involved with international program resources. This was the most common response on disaggregating the responses by gender, rank, number of years of service and administrative appointment. On disaggregating by college, even though “not at all [used]” was the most common response in each of the colleges, except among the respondents from the College of Architecture, the percentage of respondents indicating no usage declined markedly from a high of 75% among the respondents from the College of Management to a low of 33% among the respondents from the College of Architecture, as shown in Figure 21.
3.5.22 To what extent do you use each of the following types of Institute-wide resources?: family support programs

The highest percentage of respondents (79%) responded that they had never used Institute-wide family support programs. This was the most common response on disaggregating the responses by college, rank, number of years of service and administrative appointment. However on disaggregating the responses by gender, the percentage of female faculty respondents reporting “moderate usage” was substantially
higher than that of male faculty respondents. Figure 22 indicates the response patterns by gender.

**Figure 22:** To what extent do you use each of the following Institute-wide resources: family support programs

![Bar chart showing response patterns by gender for family support programs](image)

3.5.23 *To what extent do you use each of the following types of Institute-wide resources?: online course software*

The highest percentage of respondents (50%) responded that they had never used Institute-wide on-line course software resources. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences between the mean ratings of different groups.

3.5.24 *To what extent do you use each of the following types of Institute-wide resources?: entrepreneurial support*

The highest percentage of respondents (65%) responded that they had never used Institute-wide entrepreneurial support resources. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. On analyzing the mean ratings by college, the response
means of the respondents from the College of Engineering (1.63) and the College of Computing (1.57) were significantly higher than that of the respondents from the College of Sciences (1.26). The overall pattern of low usage of this resource was surprising in view of the fact that 73% of the total respondents had indicated in response to a subsequent question that they were involved in some form of entrepreneurial activity.

Figure 23: To what extent do you use each of the following Institute-wide resources: entrepreneurial support

<table>
<thead>
<tr>
<th>Primary College of Affiliation</th>
<th>Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>COA</td>
<td>1.33</td>
</tr>
<tr>
<td>COC</td>
<td>1.57</td>
</tr>
<tr>
<td>COE</td>
<td>1.63</td>
</tr>
<tr>
<td>COS</td>
<td>1.26</td>
</tr>
<tr>
<td>DCOM</td>
<td>1.17</td>
</tr>
<tr>
<td>IAC</td>
<td>1.32</td>
</tr>
</tbody>
</table>
3.5.37 Which of the following modes of allocation of resources do you consider most critical for faculty success?

Faculty members were asked the following question:

“Which two of the following modes of allocation of resources do you consider most critical for faculty success? Please indicate the most important with a ‘1’ and the second most important with a ‘2.’ Do not rank the others.

- Access to high performance computing
- Quality laboratory equipment
- Faculty offices & classrooms
- Laboratory technicians and professional support personnel
- Assistance/support with state-of-the-art library facilities
- Travel support for conferences and program development
- Support for graduate students
- Faculty leave and development programs
- Family friendly policies and family support programs
- Other”

Figures 24A, 24B and 24C present these differences disaggregated by gender and college affiliation. Support for graduate students was the mode of allocation that the highest percentage of respondents considered as “most important” (35%) and also as “second most important” (23%). After this, 25% of the respondents ranked quality laboratory equipment as “most important” and 16% of the respondents ranked it as “second most important.” Similar patterns of responses were observed when disaggregating the responses by faculty rank, administrative status and years of service. However there were significant differences by gender and college on the mode of allocation ranked “most important.” Very substantial differences were reported by gender in the top three categories of support considered “most important” for graduate students, quality laboratory equipment, and faculty leave and development programs. As seen in Figure 24A, female faculty respondents ranked faculty leave and development programs much higher than male faculty respondents as the “most important” mode of allocation critical to faculty success, higher than they ranked quality laboratory equipment, and nearly as high as support for graduate students. According to response frequency, female respondents also ranked family friendly policies and family support programs much higher than male faculty respondents. Support for laboratory technicians and professional support personnel was ranked twice as high by female faculty respondents than by male faculty respondents. Male faculty respondents ranked support for graduate students, quality laboratory equipment and access to high performance computing significantly more critical than female faculty respondents. There were also significant differences by college regarding the mode of allocation ranked “second most important”, as presented in Figure 24C.
Figure 24A: Which of the following modes of allocation of resources do you consider most critical towards for faculty success. Please indicate the most important with a "1"
Figure 24B: Which of the following modes of allocation of resources do you consider the most critical for faculty success. Please indicate the most important with a "1"
Figure 24C: Which of the following modes of allocation of resources do you consider most critical for faculty success? Please indicate the second most important with a "2"
Those respondents who had preferred other modes of allocation of resources were asked to specify their preferences. The following Table indicates these responses:

<table>
<thead>
<tr>
<th>Comment Number</th>
<th>Preferred modes of allocation of resources</th>
<th>Number of Comments</th>
<th>Percentage of Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Laboratory / research space and its quality</td>
<td>4</td>
<td>24%</td>
</tr>
<tr>
<td>2</td>
<td>Reduced/ reasonable teaching load “it consumes inordinate amounts of time to have new course preps every other year”</td>
<td>4</td>
<td>24%</td>
</tr>
<tr>
<td>3</td>
<td>Library</td>
<td>2</td>
<td>12%</td>
</tr>
<tr>
<td>4</td>
<td>Quality of graduate students</td>
<td>2</td>
<td>12%</td>
</tr>
<tr>
<td>5</td>
<td>Adequate salary</td>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td>6</td>
<td>Money for subjects and databases</td>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td>7</td>
<td>Reduction in the overwhelming amount of committees, meetings etc.</td>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td>8</td>
<td>Seed monies for starting research</td>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td>9</td>
<td>What is critical depends on field</td>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Total Number of Comments</td>
<td>17</td>
<td>100%</td>
</tr>
</tbody>
</table>

3.5.38 To what extent do you consider your personal research to be equipment intensive (i.e., success depends upon equipment)?

Faculty were asked to rate their research in terms of it being equipment intensive on a 4-point continuous scale, with 4 = highly dependent and 1 = not at all dependent. The response mean to this question was 2.83, which implies that most respondents considered their success to depend upon equipment. On disaggregating the response by college, the mean responses of respondents from the Colleges of Computing (3.05), Engineering (3.06), and Sciences (3.05) were significantly higher than those of respondents from the College of Management (1.46) and the Ivan Allen College (2.00). Figure 25A shows these differences in mean ratings by college.
A somewhat surprising result was found on disaggregating the responses by number of years of service at Georgia Tech. The response mean of respondents having more than 20 years of service was significantly lower than the mean ratings of respondents having 4-6 and 7-12 years of service at Georgia Tech. Faculty having 4-6 years of service rated their reliance on equipment as the highest among all the groups. Figure 25B presents these differences in mean ratings according to number of years of service.
Figure 25B: To what extent do you consider personal research to be equipment intensive
To what extent do you believe that assignment of service opportunities among faculty at Georgia Tech are equally allocated and rotated?

Faculty were asked to rate the extent of their belief that assignments and service opportunities were equally allocated and rotated on a continuous 4-point scale, with 4 = very equally allocated and rotated and 1 = not at all equally allocated and rotated. Significant differences in response were observed by faculty rank and tenure status. The mean ratings of respondents in the rank of Tenured Associate Professor (1.97) were significantly lower than those of Untenured Assistant Professors (2.45). Tenured Full Professors respondents also had a somewhat lower response mean (2.21), as shown in Figure 26A. Interestingly, recently hired Untenured Associate or Full Professor respondents, presumably with experience elsewhere, showed greater belief that assignments and service opportunities among faculty are equally allocated and rotated.

Figure 26A: To what extent do you believe that assignment of service opportunities among the faculty at Georgia Tech are equally allocated and rotated.
When disaggregated by years of service, the response mean of respondents having less than 3 years of service (2.61) is significantly higher than the mean ratings of respondents having more than 7 years of service at Georgia Tech, as shown in Figure 26B.

**Figure 26B:** To what extent do you believe that assignment of service opportunities among faculty at Georgia Tech are equally allocated and rotated

3.5.40 *How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors: equity of women faculty*

Refer to Section 8.4.22 of this report

4 **Mentoring and Networking**

4.1 The questions in this section try to gauge the perceived role of mentoring and networking in faculty development and career progress towards P&T. Faculty were also asked to provide their opinion on various aspects of the nature of mentoring and networking at Georgia Tech and compare to the culture/environment of peer institutions.

4.2 The Tables indicating the response means to the relevant questions are included in the Addendum.
4.3 Response Patterns:

4.3.1 How important do you consider the role of mentoring in achieving successful outcomes in tenure and promotion evaluations?

Faculty were asked to rate the importance of the role of mentoring in achieving successful outcomes in promotion and tenure evaluations on a continuous 4-point scale, with 4 = very important and 1 = not at all important. The response mean to this question was 3.00. However on disaggregating by gender, female faculty respondents (3.34) rated the importance of the role of mentoring significantly higher than male faculty respondents (2.91), as shown in Figure 27.

![Figure 27: How important do you consider the role of mentoring in achieving successful outcomes in tenure and promotion evaluations](chart)

* Significantly different at p < 0.001.

4.3.2 To what extent do you consider the following forms of collaborative research, teaching, and/or service with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations?: collaborative research, teaching and/or service with peers in your unit at Georgia Tech

The highest percentage of respondents (44%) considered collaborative research, teaching, and/or service with peers in their unit to be “somewhat important” in achieving successful outcomes in promotion and tenure evaluations. This was the most common response on disaggregating the responses by gender, college, rank, number of years of...
service and administrative appointment. Responses were measured on a continuous 4-point scale, with 4 = very important and 1= not at all important. There were no significant differences between the mean ratings of different groups.

4.3.3 To what extent do you consider the following forms of collaborative research, teaching, and/ or service with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations?: collaborative research, teaching and/ or service with peers outside your unit but within Georgia Tech faculty

The highest percentage of respondents (42%) considered collaborative research, teaching, and/ or service with peers outside their unit but within Georgia Tech to be “slightly important” in achieving successful outcomes in promotion and tenure evaluations. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. Responses were measured on a continuous 4-point scale, with 4 = very important and 1= not at all important. There were no significant differences between the mean ratings of different groups.

4.3.4 To what extent do you consider the following forms of collaborative research, teaching, and/ or service with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations?: collaborative research, teaching and/ or service with peers outside of Georgia Tech

The highest percentage of respondents (39%) considered collaborative research, teaching, and/ or service with peers outside of Georgia Tech to be “somewhat important” in achieving successful outcomes in promotion and tenure evaluations. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. Responses were measured on a continuous 4-point scale, with 4 = very important and 1= not at all important. There were no significant differences between the mean ratings of different groups.

4.3.5 To what extent do you consider the following forms of collaborative research, teaching, and/ or service with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations?: social networking outside of normal faculty duties with peers in your unit at Georgia Tech

The highest percentage of respondents (38%) considered social networking outside of normal faculty duties with peers in their unit to be “somewhat important” in achieving successful outcomes in promotion and tenure evaluations. Responses were measured on a continuous 4-point scale, with 4 = very important and 1= not at all important. This was the most common response on disaggregating the responses by gender, college, rank, and administrative appointment. However on disaggregating the responses by number of years of service (Figure 28A) the highest percentage of respondents having service less than 12 years indicated that this activity was “somewhat important” while the highest percentage of respondents having more than 12 years of service at Georgia Tech indicated that this activity was “slightly important”. In disaggregating the mean ratings by number of years of service, the response mean of respondents with less than 3 years of

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service was significantly higher than that of respondents with more than 12 years of service, as shown in Figure 28B.

**Figure 28A:** To what extent do you consider the following forms of collaborative teaching, research and service w/ peers in your unit to be important in achieving successful outcomes in P&T evaluations: social networking outside of normal faculty duties
Figure 28B: To what extent do you consider the following forms of collaborative teaching, research & service activities w/ peers in your unit to be important in achieving successful outcomes in P&T evaluations: social networking w/ peers in your unit

<table>
<thead>
<tr>
<th>Number of Years of Service at Georgia Tech</th>
<th>Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>3.04</td>
</tr>
<tr>
<td>II</td>
<td>2.81</td>
</tr>
<tr>
<td>III</td>
<td>2.68</td>
</tr>
<tr>
<td>IV</td>
<td>2.46</td>
</tr>
<tr>
<td>V</td>
<td>2.40</td>
</tr>
</tbody>
</table>

4.3.6 To what extent do you consider the following forms of collaborative research, teaching, and/ or service with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations?: social networking outside of normal faculty duties with peers outside your unit but within the Georgia Tech faculty

The highest percentage of respondents (44%) considered social networking outside of normal faculty duties with peers in outside their unit but within Georgia Tech faculty to be “slightly important” in achieving successful outcomes in promotion and tenure evaluations. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences between the mean ratings of different groups.

4.3.7 To what extent do you consider the following forms of collaborative research, teaching, and/ or service with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations?: social networking outside of normal faculty duties with peers outside of Georgia Tech

The highest percentage of respondents (42%) considered social networking outside of normal faculty duties with peers outside of Georgia Tech to be “somewhat important” in achieving successful outcomes in promotion and tenure evaluations. This was the most common response on disaggregating the responses by gender, college, rank, number of
years of service and administrative appointment. There were no significant differences between the mean ratings of different groups.

Hence, respondents perceive social networking outside Georgia Tech to be somewhat more important in achieving successful outcomes in P&T than social networking within Georgia Tech.

4.3.8 If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: having a mentor

Refer to Section 3.5.6 of this report.

4.3.9 If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: quality of colleagues

Refer to Section 3.5.7 of this report.

4.3.10 If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?: collegial environment

Refer to Section 3.5.8 of this report.

4.3.11 To what extent are the following types of space critical to your performance as a faculty member?

Refer to Section 3.5.25 of this report.

4.3.12 To what extent do you consider the following to be an effective measure of research productivity?: collaboration with colleagues

Refer to Section 5.4.11 of this report.

4.3.13 To what extent do you believe untenured faculty engagement in interdisciplinary research to be “wise” or “prudent” in terms of implications for successful tenure and promotion outcomes?

Refer to Section 5.4.41 of this report.

4.3.14 To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?: collegiality

Refer to Section 8.4.12 of this report.
4.3.15 To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?: faculty gathering space

Refer to Section 8.4.13 of this report.

4.3.16 To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?: integrated faculty/student spaces

Refer to Section 8.4.14 of this report.

4.3.17 How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors?: campus collegiality

Refer to Section 8.4.23 of this report.

5 Perception of Evaluative Methods and Procedures

5.1 In this Section, academic faculty perceptions are presented with respect to the degree of impact of various aspects on the promotion and tenure decision.

5.2 Aspects analyzed in this Section include mentoring, collaborative teaching, research and service, degree of scrutiny of records, teaching evaluation methods, measures of research productivity, evaluative methods for the relative contribution of faculty in co-authored articles, interdisciplinary collaboration and entrepreneurial activities. In addition, the respondents are asked to evaluate their own understanding of the promotion and tenure process at Georgia Tech.

5.3 Tables indicating the mean ratings to the relevant questions are included in the Addendum.

5.4 Response Patterns

5.4.1 In promotion and tenure evaluations within your home school/unit, to what level of scrutiny do you believe that records in research are subjected?

The highest percentage of respondents (85%) reported that records in research undergo a “great deal of scrutiny” in home school/unit during promotion and tenure evaluations. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment.

On analyzing the mean ratings, the response mean of respondents holding administrative appointments (3.93) was significantly higher than the response mean of respondents not holding administrative appointments (3.76) on a 4-point scale, with 4 = great deal of
scrutiny and 1= almost no scrutiny. This might indicate more depth of understanding among administrative faculty of the promotion and tenure process. It might also reflect a greater investment in the “belief” by administrative faculty in a higher level of scrutiny of research records.

Figure 29: In promotion and tenure evaluations within your home School/unit, to what level of scrutiny do you believe that records in research are subjected

<table>
<thead>
<tr>
<th>Administrative Status at Georgia Tech</th>
<th>Responses of faculty not holding administrative appointment</th>
<th>Responses of faculty holding administrative appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.93</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significantly Different at p=0.001

5.4.2 In promotion and tenure evaluations within your home school/unit, to what level of scrutiny do you believe that records in teaching are subjected?

The highest percentage of respondents (54%) reported that records in teaching undergo “some scrutiny” in the home school/unit during promotion and tenure evaluations. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment.

On analyzing the mean ratings by rank and tenure status, the response mean of Tenured Full Professor respondents (3.07) was significantly higher than that of respondents in the category Tenured Associate Professor on a 4-point scale, with 4 = great deal of scrutiny and 1= almost no scrutiny. The response mean of Untenured Assistant Professor respondents (2.73) was also lower. Since Tenured Full Professors have served on more RPT committees, this implies that junior faculty may underestimate the level of scrutiny to which their teaching records may be subjected in P&T reviews. Another possible
interpretation is that senior faculty may overestimate the level of scrutiny to which teaching records are subjected.

Figure 30: In promotion and tenure evaluations within your home school/ unit, to what level of scrutiny do you believe that records in teaching are subjected

<table>
<thead>
<tr>
<th>Rank and Tenure Status</th>
<th>Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untenured Assistant Professor (UAP)</td>
<td>2.73</td>
</tr>
<tr>
<td>Tenure Associate Professor (TAP)</td>
<td>2.73</td>
</tr>
<tr>
<td>Tenured full professor (TFP)</td>
<td>3.07</td>
</tr>
<tr>
<td>Untenured Assoc. or full professor, recently hired (UAFP)</td>
<td><strong>3.33</strong></td>
</tr>
</tbody>
</table>

5.4.3 In promotion and tenure evaluations within your home school/ unit, to what level of scrutiny do you believe that records in service are subjected?

The highest percentage of respondents (43%) reported that records of service activities undergo “little scrutiny” in the home school/ unit during promotion and tenure evaluations. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment.

On analyzing the mean ratings by rank and tenure status, the response mean of Untenured Associate or Full Professor respondents (3.13) was significantly higher than those of respondents from the ranks of Untenured Assistant Professors (2.26), Tenured Associate Professors (2.23) and Tenured Full Professors (2.38) on a 4-point scale, with 4 = great deal of scrutiny and 1= almost no scrutiny. Since Untenured Associate or Full Professors have experience elsewhere, either at other universities or industries/labs, there is an inconsistency in their perceptions of the importance of service and those of faculty whom have risen through the ranks at Tech.
5.4.4  To what extent do you consider the following to be effective in evaluation of teaching?: on-line student surveys of teaching, using multiple choice questions

A similar percentage of respondents indicated that they considered on-line student surveys of teaching, using multiple-choice questions as being “slightly effective” (35%) or “somewhat effective” (37%) in evaluation of teaching. These were the most common responses on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment.

On analyzing the mean ratings by rank and tenure status, Untenured Assistant Professor respondents rated this method of evaluation significantly higher than did Tenured Full Professor respondents.
5.4.5 To what extent do you consider the following to be effective in evaluation of teaching?: exit interview or survey

The highest percentage of respondents (50%) considered that exit interviews or surveys were “somewhat effective” in evaluating teaching. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in mean ratings.

5.4.6 To what extent do you consider the following to be effective in evaluation of teaching?: classroom assessment and feedback techniques

The highest percentage of respondents (51%) considered that classroom assessment and feedback techniques were “somewhat effective” in evaluating teaching. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in mean ratings.
5.4.7 *To what extent do you consider the following to be effective in evaluation of teaching?: web page bulletin boards*

The highest percentage of respondents (51%) considered that web page bulletin boards (as a possible instrument) are “not at all effective” in evaluating teaching. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment.

On analyzing mean ratings by rank and tenure status, the response mean of Untenured Assistant Professor respondents (1.84) was significantly higher that that of Tenured Associate Professor respondents (1.45) on a 4-point scale, with 4 = very effective and 1 = not at all effective.

![Bar chart](chart.png)

5.4.8 *To what extent do you consider the following to be effective in evaluation of teaching?: real-time audience response systems*

The highest percentage of respondents (43%) considered that real-time audience response systems was “slightly effective” in evaluating teaching. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in mean ratings.
5.4.9 **To what extent do you consider the following to be effective in evaluation of teaching?: post-graduation surveys of students**

The highest percentage of respondents (46%) considered that post-graduation surveys of students was “somewhat effective” in evaluating teaching. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in mean ratings.

5.4.10 **To what extent do you consider the following to be effective in evaluation of teaching?: peer evaluation of teaching**

The highest percentage of respondents (41%) considered that peer evaluation was “somewhat effective” in evaluating teaching. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in mean ratings.

5.4.11 **To what extent do you consider the following to be effective measures of research productivity?: collaboration with colleagues**

The highest percentage of the respondents (41%) considered collaboration with colleagues to be a “slightly effective” measure of research productivity. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment.

On analyzing the mean ratings by number of years of service, the mean ratings of respondents having less than three years of service (2.92) rated interdisciplinary collaboration significantly higher than respondents with more than 20 years of service (2.34) on a 4-point scale, with 4 = very effective and 1 = not at all effective.
5.4.12 To what extent do you consider the following to be effective measures of research productivity?: developing center activities

Equal percentages of respondents considered developing center activities to be a “slightly effective” (37%) or “somewhat effective” (37%) measure of research productivity. This was the most common response on disaggregating the responses by gender, rank, number of years of service and administrative appointment. On disaggregating by college, the highest percentage of respondents affiliated with the College of Science (47%), the College of Management (54%) and the Ivan Allen College (54%) rated developing center activities as a “slightly effective” measure of productivity. Respondents affiliated with the College of Computing were equally split between “slightly effective” (43%) and “somewhat effective” (48%). On the other hand, the highest percentages of respondents affiliated with the College of Engineering (42%) and the College of Architecture (56%) rated this measure as “slightly effective”. These differences were also evident on analyzing the mean ratings by college, with the response mean of respondents from the College of Engineering (2.73) being significantly higher than the response mean of respondents from the College of Sciences (2.23) and the College of Management (1.73) on a 4-point scale, with 4 = very effective and 1 = not at all effective. Figures 35A and 35B provide response patterns by college.
Figure 35A: To what extent do you consider the following to be effective measures of research productivity: developing center activities
On analyzing the mean ratings by number of years of service at Georgia Tech, the response mean of respondents with 7-12 years of service (2.74) was significantly higher than that of respondents with 13-19 years of service at Georgia Tech (2.20) on a 4-point scale, with $4 = $very effective$ and $1 = $not at all effective$. Figure 35C presents these differences in the mean ratings.
To what extent do you consider the following to be effective measures of research productivity?: developing center activities

The highest percentage of the respondents (48%) considered editing a book to be a “slightly effective” measure of research productivity. This was the most common response on disaggregating the responses by gender, rank, number of years of service and administrative appointment. However on disaggregating the responses by college, the highest percentage of respondents affiliated with the College of Computing (52%), the College of Engineering (54%) and the College of Sciences (46%) rated editing a book as a “slightly effective” measure of research productivity. Similar percentages of respondents affiliated with the College of Management (50%) and the Ivan Allen College (38%) rated this measure of productivity as “slightly effective” or “somewhat effective”. On the other hand, the highest percentage of the respondents from the College of Architecture (78%) rated this as “somewhat effective”. The response patterns by college are given in Figure 36A.
Figure 36A: To what extent do you consider the following to be effective measures of research productivity: editing a book

By college, the response means of respondents affiliated with the College of Architecture (3.00) and Ivan Allen College (2.70) were significantly higher than those of respondents affiliated with the College of Engineering (2.12) and the College of Management (1.50). The response mean of respondents affiliated with the College of Sciences (2.27) was significantly higher than that of respondents affiliated with the College of Management (1.50) on a 4-point scale, with 4 = very effective and 1 = not at all effective. Figure 36B shows these differences in the mean ratings.
5.4.14 To what extent do you consider the following to be effective measures of research productivity?: editing an archival journal

Similar percentages of respondents considered editing an archival journal to be a “slightly effective” (39%) or “somewhat effective” (36%) measure of research productivity. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in the mean ratings.

5.4.15 To what extent do you consider the following to be effective measures of research productivity?: external funding

Similar percentages of respondents considered external funding to be a “somewhat effective” (42%) or “very effective” (46%) measure of research productivity. This was the most common response on disaggregating the responses by gender, rank, number of years of service and administrative appointment. On disaggregating the responses by college, the highest percentages of respondents from the College of Engineering (51%) and the College of Sciences (53%) indicated that external funding was a “very effective” measure of research productivity. Similar percentages of respondents from the Ivan Allen
College indicated that this was a “somewhat effective” (37%) or “very effective” (40%) measure of research productivity. The highest percentages of respondents from the College of Architecture (44%), the College of Computing (67%) and the College of Management (50%) indicated that this was a “somewhat effective” measure. Figure 37A plots these differences in response patterns by college.

**Figure 37A:** To what extent do you consider the following to be effective measures of research productivity: external funding

On analyzing the mean ratings by college, the response means of respondents affiliated with the College of Computing (3.19), the College of Engineering (3.40), the College of Sciences (3.50) and Ivan Allen College (3.13) were significantly higher than that of respondents from the College of Management (2.33) on a 4-point scale where, 4= very effective and 1= not at all effective. Figure 37B presents these differences in the mean ratings by college.
5.4.16 To what extent do you consider the following to be effective measures of research productivity?: invited presentations

The highest percentage of the respondents (46%) considered invited presentations to be a “somewhat effective” measure of research productivity. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by mean ratings.

5.4.17 To what extent do you consider the following to be effective measures of research productivity?: number of conference articles

Similar percentages of respondents considered the number of conference articles to be a “slightly effective” (37%) or a “somewhat effective” (40%) measure of research productivity. This was the most common response on disaggregating the responses by gender, rank, and administrative appointment.

However, on disaggregating the responses by college, the highest percentages of respondents affiliated with the College of Sciences (46%), the College of Management (42%) and Ivan Allen College (42%) indicated this as a “slightly effective” measure of research productivity. On the other hand, the highest percentage of the respondents affiliated with the College of Computing indicated that this was a “very effective”
measure of research productivity. The highest percentages of respondents affiliated with the College of Architecture (44%) and the College of Engineering (45%) indicated that this was a “somewhat effective” measure of research productivity. Figure 38A shows the difference in response patterns by college.

Figure 38A: To what extent do you consider the following to be effective measures of research productivity: number of conference articles

On disaggregating by number of years of service at Georgia Tech, the highest percentage of the respondents having 4 to 6 years of service or more than 20 years of service at Georgia Tech considered the number of conference articles to be a “slightly effective” measure of research productivity. The highest percentage of respondents having other periods of service indicated that this was a “somewhat effective” measure of research productivity. Figure 38B presents the response pattern by years of service.
On analyzing the mean ratings by college, the response mean of respondents affiliated with the College of Computing (3.52) was significantly higher than those of the respondents affiliated with the College of Architecture (2.89), the College of Engineering (2.65), the College of Sciences (2.35) and the College of Management (2.08) on a 4-point scale, with 4 = very effective and 1 = not at all effective. Differences in mean ratings according to college are shown in Figure 38C.
5.4.18 To what extent do you consider the following to be effective measures of research productivity?: number of journal articles

The highest percentage of the respondents (60%) considered the number of journal articles to be a “very effective” measure of research productivity. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

5.4.19 To what extent do you consider the following to be effective measures of research productivity: number of MS students

The highest percentage of the respondents (42%) considered the number of MS students to be a “slightly effective” measure of research productivity. This was the most common response on disaggregating the responses by gender, rank, number of years of service and administrative appointment. On disaggregating the responses by college, the highest percentage of respondents affiliated with the College of Management (58%), the College of Sciences (50%), the College of Computing (57%) and Ivan Allen College (44%) rated the number of MS students as being a “slightly effective” measure of research productivity. Equal percentages of respondents from College of Architecture (38%) rated this as a “slightly effective” or a “somewhat effective” measure of research productivity. On the other hand, the highest percentage of the respondents from College of Engineering
rated this as a “somewhat effective” measure of research productivity. The response mean of the respondents from the College of Engineering (2.54) was significantly higher than the response means of the respondents affiliated with the College of Sciences (2.14) and the College of Management (1.58) on a 4-point scale, with 4 = very effective and 1 = not at all effective. Figure 39A indicates these differences by college.

Figure 39A: To what extent do you consider the following to be effective measures of research productivity: number of MS students
To what extent do you consider the following to be effective measures of research productivity?: number of MS Students

Similar percentage of respondents considered the number of PhD students to be a “somewhat effective” (40%) or “very effective” (42%) measure of research productivity. These were the most common response on disaggregating the responses by gender, rank, number of years of service and administrative appointment. However on disaggregating by college, the highest percentage of respondents affiliated with the College of Engineering (53%) indicated that this was a “very effective” measure of research productivity. The highest percentage of the respondents from the College of Management (42%), on the other hand, indicated that this was a “slightly effective” measure of
research productivity. The highest percentages of the respondents from the College of Sciences (50%), the College of Computing (65%) and Ivan Allen College (43%) indicated that this was a “somewhat effective” measure. Equal percentages of respondents from the College of Architecture (38%) indicated that this was a “somewhat effective” or “very effective measure of research productivity. The response mean of the respondents from the College of Engineering (3.40) was significantly higher than the response mean of the respondents from the College of Management (2.67) and Ivan Allen College (2.81) on a 4-point scale, with 4 = very effective and 1 = not at all effective. Figure 40A shows response patterns by college.

Figure 40A: To what extent do you consider the following to be effective measures of research productivity: number of PhD students
5.4.21 To what extent do you consider the following to be effective measures of research productivity?: professional awards

The highest percentage of the respondents (41%) considered professional awards to be a “somewhat effective” measure of research productivity. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

5.4.22 To what extent do you consider the following to be effective measures of research productivity?: quality of journal articles

The highest percentage of the respondents (80%) considered quality of journal articles to be a “very effective” measure of research productivity. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences of mean ratings among any of the groups.
5.4.23 To what extent do you consider the following to be effective measures of research productivity?: quality of conference articles

Similar percentages of respondents considered the quality of conference articles to be a “somewhat effective” (34%) or a “very effective” (39%) measure of research productivity. These were the most common responses on disaggregating the responses by gender, rank, number of years of service and administrative appointment. However on disaggregating by college, the highest percentages of the respondents from the College of Computing (91%) and the College of Engineering (44%) indicated that this was a “very effective” measure of research productivity. The highest percentages of the respondents from the College of Sciences (52%) and the College of Management (36%) indicated that this was a “somewhat effective” measure of research productivity. Equal percentages (34%) of respondents affiliated with the Ivan Allen College indicated that they considered this “very effective” or “somewhat effective measure of research productivity. On the other hand, equal percentages (33%) of respondents affiliated with the College of Architecture indicated that they considered this a “very effective” or “somewhat effective” or “slightly effective” measure of research productivity. The mean rating of respondents from the College of Computing (3.90) was significantly higher than the mean ratings of respondents from the College of Engineering (3.17), the College of Sciences (3.17), the College of Management (2.73) and the Ivan Allen College (2.84) on a 4-point scale, with 4 = very effective and 1 = not at all effective. Figures 41A and 41B show these differences by college.
Figure 41A: To what extent do you consider the following to be effective measures of research productivity: quality of conference articles
5.4.24 To what extent do you consider the following to be effective measures of research productivity?: refereeing journal articles

The highest percentage of the respondents (44%) considered refereeing journal articles to be a “slightly effective” measure of research productivity. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. On analyzing the mean ratings of respondents by rank and tenure status, the mean rating of respondents in the category Untenured Associate/ Full Professor, recently hired (3.27) was significantly higher than those of respondents in the categories of Tenured Full Professors (2.41), Tenured Associate Professors (2.34) and Untenured Assistant Professors (2.50). Figure 42 illustrates these differences by faculty rank and tenure status.
5.4.25 To what extent do you consider the following to be effective measures of research productivity?: research monographs

The highest percentage of the respondents (40%) considered research monographs to be a “somewhat effective” measure of research productivity. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. On analyzing the mean ratings by college, the response mean of respondents affiliated with the Ivan Allen College (3.18) was significantly higher than those of the respondents from the College of Engineering (2.66) and the College of Computing (2.33). Figure 43 plots these differences by college.
5.4.26 To what extent do you consider the following to be effective measures of research productivity?: textbooks

Similar percentage of respondents considered [writing] textbooks to be a “slightly effective” (32%) or a “somewhat effective” (39%) measure of research productivity. These were the most common responses on disaggregating the responses by gender, rank, number of years of service and administrative appointment. However on disaggregating by college, the highest percentages of the faculty respondents affiliated with the College of Computing (62%) and the College of Sciences (47%) indicated that this was a “slightly effective” measure of research productivity. The highest percentage of the respondents affiliated with the College of Management (67%) indicated that this was a “not at all effective” measure of research productivity. The highest percentages of the faculty respondents affiliated with the College of Architecture (68%) and the Ivan Allen College (45%) reported that this was a “somewhat effective” measure of research productivity. Similar percentages of respondents from the College of Engineering indicated that this was a “slightly effective” (34%) or “somewhat effective” measure of research productivity. The mean rating of the respondents from the College of Computing (3.90)
was significantly higher than the mean rating of the respondents from the College of Management (1.33), was significantly lower than those of respondents from the Ivan Allen College (2.58), the College of Sciences (2.41), the College of Engineering (2.55) and the College of Architecture (2.78), with 4 = very effective and 1 = not at all effective. Figures 44A and 44B show these differences by college.

Figure 44A: To what extent do you consider the following to be effective measures of research productivity: textbooks

![Bar chart showing the percentage of responses for different primary colleges of affiliation regarding the effectiveness of textbooks.]
5.4.27 To what extent do you consider the following to be effective measures of research productivity?: undergraduate research projects

The highest percentage of the respondents (51%) considered undergraduate research projects to be a “slightly effective” measure of research productivity. This was the most common response on disaggregating the responses by gender, college, number of years of service and administrative appointment. On disaggregating the responses by faculty rank and tenure status, the highest percentages of the respondents who were Tenured Associate Professors and Tenured Full Professors considered this to be a “slightly effective” measure of research productivity. Most respondents who were Untenured Associate/ Full Professors (recently hired) reported that was a “somewhat effective” measure of research productivity. Similar percentages of respondents among Untenured Assistant Professors rated this as a “somewhat effective” (44%) or “slightly effective” (38%) measure of research productivity. Figure 45 summarizes results by rank and tenure status.
Figure 45: To what extent do you consider the following to be effective measures of research productivity: undergraduate research projects.

- Very effective
- Somewhat effective
- Slightly effective
- Not at all effective

Rank and Tenure Status:
- Untenured Associate or Full Professor, recently hired
- Tenured Associate Professor
- Tenure full Professor
- Untenured Assistant Professor
5.4.28 To what extent do you consider the following to be effective measures of research productivity?: other

Faculty were also asked to list other methods that they considered to be effective in measuring research productivity; results appear in Table 6.

Table 6: Other Methods of Measuring Research Productivity

<table>
<thead>
<tr>
<th>Comment Number</th>
<th>Method of Measuring Research Productivity</th>
<th>Number of Comments</th>
<th>Percentage of Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Placement of graduates</td>
<td>3</td>
<td>12.5%</td>
</tr>
<tr>
<td>2</td>
<td>Books/ scholarly books beyond monograph</td>
<td>3</td>
<td>12.5%</td>
</tr>
<tr>
<td>3</td>
<td>Chair conferences</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>4</td>
<td>Number of students graduated</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>5</td>
<td>Citations</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>6</td>
<td>Consulting</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>7</td>
<td>Fellowships</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>8</td>
<td>Inventions/ software technology transfer</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>9</td>
<td>Non-traditional scholarship (non-discovery research)</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>10</td>
<td>Number of conference sessions, IPC, etc.</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>11</td>
<td>Number of grant proposals</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>12</td>
<td>Patents</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>13</td>
<td>Performances and creative work</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>14</td>
<td>Public outreach</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>15</td>
<td>Quality of funding</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>16</td>
<td>Quality of monographs</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>17</td>
<td>Quality of PhD thesis</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>18</td>
<td>Quality, PhD student publications</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>19</td>
<td>Single authored papers</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Total Number of Comments</td>
<td>25</td>
<td>100%</td>
</tr>
</tbody>
</table>
5.4.29 What interpretation do you give to the relative contribution of various co-authors of a paper, based on the order by which the authors are listed?

The respondents were asked to indicate the interpretation that they give to the relative contribution of various co-authors of a paper, based on the order by which the authors are listed. Table 7 summarizes responses.

Table 7: Interpretation of relative contribution of various co-authors of a paper based on the order by which they are listed.

<table>
<thead>
<tr>
<th>Interpretation</th>
<th>Number of Responses</th>
<th>Percentage of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 First to last, indicating decreasing contribution (first highest)</td>
<td>197</td>
<td>27.8%</td>
</tr>
<tr>
<td>2 Faculty member listed as last author, indicating co-authorship with graduate students or less senior faculty members</td>
<td>180</td>
<td>25.4%</td>
</tr>
<tr>
<td>3 The order is highly dependent on field</td>
<td>118</td>
<td>16.6%</td>
</tr>
<tr>
<td>4 The order is highly dependent on individual preference</td>
<td>105</td>
<td>14.8%</td>
</tr>
<tr>
<td>5 Alphabetical order, implying relatively equal contributions among authors</td>
<td>91</td>
<td>12.8%</td>
</tr>
<tr>
<td>6 Other interpretations</td>
<td>12</td>
<td>1.7%</td>
</tr>
<tr>
<td>7 First to last, indicating increasing contribution (first lowest):</td>
<td>6</td>
<td>0.8%</td>
</tr>
<tr>
<td>Total Number of Responses</td>
<td>709</td>
<td>100%</td>
</tr>
</tbody>
</table>

5.4.30 To what extent do you believe that citation indices are valid measures of the quality of scholarly output within the following contexts?: a single discipline

The highest percentage of the respondents (47%) considered citation indices to be “somewhat valid” measures of quality of scholarly output within a single discipline. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences among the groups by mean ratings.

5.4.31 To what extent do you believe that citation indices are valid measures of the quality of scholarly output within the following contexts?: interdisciplinary areas

Similar percentage of respondents regarded citation indices as “somewhat valid” (38%) or “slightly valid” (40%) measures of quality of scholarly output within a single discipline. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. On analyzing the response means by gender, the mean rating of male respondents (2.46) was significantly higher than that of female respondents (2.14) on a 4-point scale, with 4 = very valid and 1 = not at all valid. These data are presented in Figure 46.
Figure 46: To what extent do you believe that Citation Indices are valid measures of quality of scholarly output within the following contexts: interdisciplinary areas

<table>
<thead>
<tr>
<th>Gender of Respondent</th>
<th>Mean Rating*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responses of Female faculty</td>
<td>2.14</td>
</tr>
<tr>
<td>Responses of Male faculty</td>
<td>2.46</td>
</tr>
</tbody>
</table>

* Significantly different at p = 0.01

5.4.32 To what extent do you consider the following to be useful sources of information regarding relative contribution of faculty members in co-authored articles?: candidate’s statement

The highest percentage of the respondents (48%) considered the candidate’s statement to be a “somewhat useful” source of information regarding the relative contribution of faculty members in co-authored articles. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.
5.4.33 To what extent do you consider the following to be useful sources of information regarding relative contribution of faculty members in co-authored articles?: order of listing of authors

The highest percentage of the respondents (40%) considered the order of listing of authors to be a “somewhat useful” source of information regarding the relative contribution of faculty members in co-authored articles. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

5.4.34 To what extent do you consider the following to be useful sources of information regarding relative contribution of faculty members in co-authored articles?: PI information on supporting grants

The highest percentage of the respondents (47%) considered PI information on supporting grants to be a “somewhat useful” source of information regarding the relative contribution of faculty members in co-authored articles. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

5.4.35 To what extent do you consider the following to be useful sources of information regarding relative contribution of faculty members in co-authored articles?: anecdotal evidence from other faculty on RPT Committee

Similar percentages of respondents considered anecdotal evidence from other faculty members on RPT Committees to be a “somewhat useful” (33%) or “slightly useful” (41%) source of information regarding the relative contribution of faculty members in co-authored articles. These were the most common response on disaggregating the responses by college, rank, number of years of service and administrative appointment. On disaggregating by gender (Figures 47A and 47B), the highest percentage of the female faculty respondents (53%) indicated that this was a “slightly useful” source of information. Somewhat lower percentages of male faculty respondents regarded this as a “slightly useful” (38%) or “somewhat useful” (36%) source of information regarding relative contribution of faculty members in co-authored articles. The mean rating of the respondents among the male faculty (2.37) was significantly higher than that of female faculty respondents (2.04).
Figure 47A: To what extent do you consider the following to be useful sources of information regarding relative contribution of faculty contribution in co-authored articles: anecdotal evidence from other faculty on RPT committee

![Bar chart showing the distribution of responses by gender.](chart.png)
Figure 47B: To what extent do you consider the following to be useful source of information regarding relative contribution of faculty in co-authored articles: anecdotal evidence from other faculty on RPT committee

5.4.36 To what extent do you consider the following to be useful sources of information regarding relative contribution of faculty members in co-authored articles?: first level peer review reports

The highest percentage of the respondents (50%) considered first level peer review reports to be “somewhat useful” sources of information regarding the relative contribution of faculty members in co-authored articles. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

* Significantly different at p=0.005
5.4.37 To what extent do you consider the following to be useful sources of information regarding relative contribution of faculty members in co-authored articles?: letters of reference

Similar percentages of respondents considered letters of reference to be “somewhat useful” (41%) or “very useful” (43%) sources of information regarding the relative contribution of faculty members in co-authored articles. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

5.4.38 To what extent do you consider the following to be useful sources of information regarding relative contribution of faculty members in co-authored articles?: other

Faculty were asked to list any other sources of information that they consider useful in determining the relative contribution of faculty members in co-authored articles; Table 8 summarizes responses.

<table>
<thead>
<tr>
<th>Comment Number</th>
<th>Source of information regarding contribution</th>
<th>Number of Comments</th>
<th>Percentage of Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Co-authors/ information from co-authors</td>
<td>2</td>
<td>12 %</td>
</tr>
<tr>
<td>2</td>
<td>No big deal- assume equal/ all parties contribute, and should be recognized as such</td>
<td>2</td>
<td>12 %</td>
</tr>
<tr>
<td>3</td>
<td>Co-authored articles as extremely rare or non-existent in my field/ not relevant to my field</td>
<td>2</td>
<td>12 %</td>
</tr>
<tr>
<td>4</td>
<td>Actually reading the papers produced by a given candidate</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td>5</td>
<td>Anecdotal evidence from peers elsewhere</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td>6</td>
<td>Confidential comments from trusted colleagues</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td>7</td>
<td>Corresponding authorship</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td>8</td>
<td>Cross-correlation with funding</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td>9</td>
<td>Culture: i.e., graduate student as first author</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td>10</td>
<td>Presentation</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td>11</td>
<td>Previous articles on related topic order of authorship</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td>12</td>
<td>Single-authored papers</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td>13</td>
<td>Student co-authors</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td>14</td>
<td>Who is the advisor if a student is a co-author</td>
<td>1</td>
<td>6 %</td>
</tr>
<tr>
<td></td>
<td>Total Number of Comments</td>
<td>17</td>
<td>100 %</td>
</tr>
</tbody>
</table>
5.4.39 To what extent do you perceive outside letters of reference are influential in the tenure and promotion evaluation process at Georgia Tech?

Faculty were asked to rate their perception of the influence of outside letters of reference in tenure and promotion evaluation process at Georgia Tech on a continuous 4-point scale, with 1 = not at all influential and 4 = strongly influential. The response mean for this question was 3.23. There were no significant differences on disaggregating the ratings by gender, college, rank, number of years of service and administrative status.

5.4.40 To what extent do you understand the tenure and promotion evaluation process at Georgia Tech?

Faculty were asked to rate their understanding of the tenure and promotion evaluation process at Georgia Tech on a continuous 4-point scale, with 1 = do not understand at all and 4 = understand very well. The response mean for this question was 3.28. There were no significant differences on disaggregating the ratings by gender, college and administrative status.

On disaggregating the responses by rank, the mean rating of respondents from the rank of Tenured Full Professors (3.62) was significantly higher than the mean ratings of respondents from the ranks of Untenured Assistant Professors (2.88), Tenured Associate Professors (3.15) and Untenured Associate or Full Professors, recently hired (2.80). Similarly, on disaggregating by number of years of service at Georgia Tech, the mean rating of the respondents having less than 3 years of service at Georgia Tech (2.90) was significantly lower than the mean rating of the respondents having more than three years of service at Georgia Tech. Figures 48A and 48B show these response distributions.
Figure 48A: To what extent do you understand the tenure and promotion evaluation process at Georgia Tech
5.4.41 To what extent do you believe that untenured faculty engagement in interdisciplinary research to be “wise” or “prudent” in terms of implications for successful tenure and promotion outcomes?

Faculty were asked to rate their belief about untenured faculty engagement in interdisciplinary research as being “wise” or “prudent” in terms of implications for successful tenure and promotion outcomes on a continuous 4-point scale, with 1 = highly imprudent and 4 = highly prudent. The mean rating for this question was 2.76. There were no significant differences on disaggregating the ratings by rank, number of years of service and administrative status.

On disaggregating the responses by gender, the response mean of male faculty respondents (2.82) was significantly higher than the response mean of female faculty respondents (2.53). On disaggregating the mean ratings by college, the mean rating of the respondents from the College of Management (1.83) was significantly lower than the mean ratings of respondents affiliated with the College of Computing (2.71), the College of Engineering (2.90), the College of Sciences (2.70) and the Ivan Allen College (2.54). Figures 49A and 49B present these results.
Figure 49A: To what extent do you believe untenured faculty engagement in interdisciplinary research to be "wise" or "prudent" in terms of implications for successful tenure and promotion outcomes

![Bar chart showing mean ratings for male and female faculty](chart.png)

* Significantly different at p = 0.006
5.4.42 To what extent do you think that interdisciplinary work with faculty in units other than one’s own is evaluated in a consistent manner in tenure and promotion decisions within home school or unit?

Faculty were asked to rate their perception of “the extent to which interdisciplinary work with faculty in units other than one’s own is evaluated in a consistent manner in tenure and promotion decisions within the home school or unit” on a continuous 4-point scale, with 1 = highly inconsistent and 4 = highly consistent. The response mean for this question was 2.4. There were no significant differences on disaggregating the ratings by gender, college, rank, number of years of service and administrative status.
5.4.43 To what extent do you think that interdisciplinary collaboration is valued in your home school or unit?

The respondents were asked to rate their perception of “the value of interdisciplinary collaboration in their home school or unit” on a continuous 4-point scale, with 1 = not at all valued and 4 = highly valued. The response mean for this question was 2.94. There were no significant differences on disaggregating the ratings by gender, rank and number of years of service.

On disaggregating the mean ratings by college, the response mean of respondents affiliated with the College of Management (2.33) was significantly lower than that of respondents from the College of Computing (3.43). On disaggregating the responses by administrative status, the mean rating of respondents holding half-time or greater administrative position at Georgia Tech (3.20) was significantly higher than that of respondents not holding such administrative positions at Georgia Tech (2.89). Figures 50A and 50B present these data.
5.4.44 To what extent do you think that faculty in your home school or unit value entrepreneurial activities that are consistent with professional practice in the discipline (such as startup company ventures, outside business development activities, consulting, etc.)?

Faculty were asked to rate their perception of “the extent to which faculty in their home school or unit valued entrepreneurial activities that are consistent with professional practice in the discipline” on a continuous 4-point scale, with 1 = not at all valued and 4 = highly valued. The mean rating for this question was 2.23. There were no significant differences on disaggregating the ratings by gender, rank, number of years of service and administrative status.

On disaggregating the responses by college, the mean rating of respondents from the College of Sciences (1.79) was significantly lower than the mean rating of the respondents affiliated with both the College of Computing (2.50) and College of Engineering (2.37), as shown in Figure 51.

* Significantly different at p = 0.009
Figure 51: To what extent do you think that faculty in your home school or unit value entrepreneurial activities that are consistent with professional practice in the discipline

<table>
<thead>
<tr>
<th>Primary College of Affiliation</th>
<th>Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Architecture (COA)</td>
<td>2.44</td>
</tr>
<tr>
<td>College of Computing (COC)</td>
<td>2.50</td>
</tr>
<tr>
<td>College of Engineering (COE)</td>
<td>2.37</td>
</tr>
<tr>
<td>College of Sciences (COS)</td>
<td>1.79</td>
</tr>
<tr>
<td>DuPree college of Management (DCOM)</td>
<td>1.92</td>
</tr>
<tr>
<td>Ivan Allen College (IAC)</td>
<td>2.06</td>
</tr>
</tbody>
</table>

5.4.45 How important do you consider the role of mentoring in achieving successful outcomes in promotion and tenure evaluations?

See Section 4.3.1 of this report.

5.4.46 To what extent do you consider the following forms of collaborative research, teaching, and/or service with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations: Collaborative research, teaching and/or service with peers in your unit at Georgia Tech

See Section 4.3.2 of this report.

5.4.47 To what extent do you consider the following forms of collaborative research, teaching, and/or service with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations?: Collaborative research, teaching and/or service with peers outside your unit but within Georgia Tech faculty

See Section 4.3.3 of this report.
5.4.48 To what extent do you consider the following forms of collaborative research, teaching, and/ or service with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations?: Collaborative research, teaching and/ or service with peers outside of Georgia Tech

See Section 4.3.4 of this report.

5.4.49 To what extent do you consider the following forms of collaborative research, teaching, and/ or service with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations?: Social networking outside of normal faculty duties with peers in your unit at Georgia Tech

See Section 4.3.5 of this report.

5.4.50 To what extent do you consider the following forms of collaborative research, teaching, and/ or service with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations?: Social networking outside of normal faculty duties with peers outside your unit but within the Georgia Tech faculty

See Section 4.3.6 of this report.

5.4.51 To what extent do you consider the following forms of collaborative research, teaching, and/ or service with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations?: Social networking outside of normal faculty duties with peers outside of Georgia Tech

See Section 4.3.7 of this report.

### 6 Interdisciplinary collaborations

6.1 This Section deals with faculty perceptions regarding the importance of interdisciplinary collaboration in faculty development and evaluations. It also deals with the perception among the faculty regarding the prudence of carrying out interdisciplinary work.

6.2 **Response Patterns:**

6.2.1 To what extent do you consider the following to be effective measures of research productivity?: collaboration with colleagues

See Section 5.4.11 of this report

6.2.2 To what extent do you consider the following to be effective measures of research productivity?: developing center activities

See Section 5.4.12 of this report
6.2.3 To what extent do you consider the following to be effective measures of research productivity?: citation indices

See Section 5.4.30 of this report

6.2.4 To what extent do you believe that citation indices are valid measures of the quality of scholarly output within the following contexts?: interdisciplinary areas

See Section 5.4.31 of this report

6.2.5 To what extent do you believe untenured faculty engagement in interdisciplinary research to be “wise” or “prudent” in terms of implication for successful tenure and promotion outcomes?

See Section 5.4.41 of this report

6.2.6 To what extent do you think that interdisciplinary work with faculty in units other than one’s own is evaluated in a consistent manner in tenure and promotion decisions within home school or unit?

See Section 5.4.42 of this report

6.2.7 To what extent do you think that interdisciplinary collaboration is valued in your home school or unit?

See Section 5.4.43 of this report

6.3 Tables indicating the mean ratings to the relevant questions are included in the Addendum.

7 Entrepreneurship

7.1 This Section deals with faculty perceptions related to encouragement, facilitation and evaluation of entrepreneurial activities. In addition, these questions also try to bring out the major entrepreneurial activities in which academic faculty engage.

7.2 Tables listing mean ratings to the relevant questions are included in the Addendum.

7.3 Response Patterns:

7.3.1 To what extent do you consider the following to encourage entrepreneurial activities at Georgia Tech?: administrative support

The highest percentage of the respondents (50%) consider that administrative support “somewhat encourages” entrepreneurial activities at Georgia Tech. This was the most common response on disaggregating the responses by gender, college, rank, number of
years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

7.3.2 To what extent do you consider the following to encourage entrepreneurial activities at Georgia Tech?: contract/ licensing support

The highest percentage of the respondents (45%) consider that contract/ licensing support “somewhat encourages” entrepreneurial activities at Georgia Tech. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment.

On analyzing the mean ratings by number of years of service at Georgia Tech, the mean rating of respondents having more than 20 years of service (2.90) was significantly higher than that of respondents having 13 to 19 years of service at Georgia Tech (2.29) on a 4-point scale, where 4 = strongly encourages and 1= strongly discourages.

Figure 52: To what extent do you consider the following to encourage entrepreneurial activities at Georgia Tech: contract/ licensing support

7.3.3 To what extent do you consider the following to encourage entrepreneurial activities at Georgia Tech?: intellectual environment

The highest percentage of the respondents (56%) consider that the intellectual environment “somewhat encourages” entrepreneurial activities at Georgia Tech. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings
7.3.4 To what extent do you consider the following to encourage entrepreneurial activities at Georgia Tech?: availability of collaborators

The highest percentage of the respondents (62%) consider that availability of collaborators “somewhat encourages” entrepreneurial activities at Georgia Tech. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment.

On analyzing the mean ratings by number of years of service at Georgia Tech, the response mean of respondents having less than three years of service (3.22) was significantly higher than that of respondents having 13 to 19 years of service at Georgia Tech (2.80) on a 4-point scale, where 4 = strongly encourages and 1= strongly discourages.

![Figure 53: To what extent do you consider the following to encourage entrepreneurial activities at Georgia Tech: availability of collaborators:](image)

7.3.5 To what extent do you consider the following to encourage entrepreneurial activities at Georgia Tech?: promotion and tenure reviews

The highest percentage of respondents (49%) consider that promotion and tenure reviews “somewhat discourage” entrepreneurial activities at Georgia Tech. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.
7.4 Fully 73% of the respondents indicating that they did engage in entrepreneurial activities. Consulting was the most common form of entrepreneurial activity, with 69% of the respondents involved in consulting. Many of the respondents were involved in more than one entrepreneurial activity. The percentage of respondents and the activity engaged in is given in the following table:

<table>
<thead>
<tr>
<th>Entrepreneurial Activity</th>
<th>Number of respondents</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Consulting</td>
<td>223</td>
<td>61.4 %</td>
</tr>
<tr>
<td>2 Other professional practice</td>
<td>48</td>
<td>13.2 %</td>
</tr>
<tr>
<td>3 Starting a company</td>
<td>41</td>
<td>11.3%</td>
</tr>
<tr>
<td>4 Serving on the board of directors</td>
<td>26</td>
<td>7.2%</td>
</tr>
<tr>
<td>5 Other</td>
<td>25</td>
<td>6.9%</td>
</tr>
<tr>
<td>Total</td>
<td>363</td>
<td>100%</td>
</tr>
</tbody>
</table>

Responses of faculty who indicated that they were involved in other entrepreneurial activities are listed in the next table.

<table>
<thead>
<tr>
<th>Entrepreneurial Activity</th>
<th>Number of respondents</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Licensing/ patent development/ faculty commercialization grants/ other patent related activities</td>
<td>13</td>
<td>48 %</td>
</tr>
<tr>
<td>2 Serving on advisory board</td>
<td>3</td>
<td>11 %</td>
</tr>
<tr>
<td>3 Software development</td>
<td>3</td>
<td>11 %</td>
</tr>
<tr>
<td>4 Attempted to obtain ATDC support</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>5 Helping start two companies</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>6 Innovative designs/ prototypes</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>7 Leave of absence to work at a start up company</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>8 Product development</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>9 Sponsored research</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>10 Trustee of a non-profit</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>100%</td>
</tr>
</tbody>
</table>
8 Environment and Culture of Georgia Tech

8.1 The questions discussed in this Section are those which clearly bring out faculty perceptions regarding the culture of Georgia Tech related to faculty development and evaluative processes.

8.2 The main issues that these questions address are academic faculty perceptions regarding distribution of service opportunities, interdisciplinary research, entrepreneurial activities, timing of research meetings, and comparison of the culture of Georgia Tech with peer institutions. In addition, this Section also addresses the faculty perceptions of what constitutes a “positive environment.”

8.3 Tables listing mean ratings to the relevant questions are included in Addendum.

8.4 Response Patterns:

8.4.1 To what extent do you favor/ or prefer the following times of day for research meetings with colleagues?: early morning

The highest percentage of the respondents (50%) reported that research meetings with colleagues are “not at all preferred” in the early morning. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

8.4.2 To what extent do you favor/ or prefer the following times of day for research meetings with colleagues?: mid/ late morning

The highest percentage of the respondents (38%) reported that research meetings with colleagues were “somewhat preferred” in the mid/ late morning. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

8.4.3 To what extent do you favor/ or prefer the following times of day for research meetings with colleagues?: early afternoon

A similar percentage of the respondents reported that research meetings with colleagues are “somewhat preferred” (39%) or “strongly preferred” (36%) in the early afternoon. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

8.4.4 To what extent do you favor/ or prefer the following times of day for research meetings with colleagues?: late afternoon
The highest percentage of the respondents (31%) reported that research meetings with colleagues are “somewhat preferred” in the late afternoon. This was the most common response on disaggregating the responses by gender, college, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings. On disaggregating the responses by faculty rank, the highest percentage of the respondents among the Untenured Associate/ Full Professors, recently hired (53%) indicated that they “strongly preferred” this meeting time. The highest percentage of the respondents among the Untenured Assistant Professors (38%) and Tenured Full Professors (35%) reported that this time was “somewhat preferred”. A similar percentage of respondents among Tenured Associate Professors reported that this time was “strongly preferred” (24%) or “slightly preferred” (29%) or “not at all preferred” (27%). Figure 54 shows these response patterns by rank.

Figure 54: To what extent do you favor/ or prefer the following times for research meetings with colleagues: late afternoon

![Bar chart showing response patterns by rank and tenure status]

8.4.5 To what extent do you favor/ or prefer the following times of day for research meetings with colleagues?: evenings

The highest percentage of the respondents (73%) reported that research meetings with colleagues are “not at all preferred” in the evenings. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.
8.4.6 To what extent do you favor/ or prefer the following times of day for research meetings with colleagues?: weekends

The highest percentage of the respondents (86%) reported that research meetings with colleagues were “not at all preferred” in the weekends. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

8.4.7 Have you ever reported harassed at Georgia Tech by comments of faculty regarding personal appearance or attire?

The highest percentage of the respondents (91%) indicated that they had never reported harassed at Georgia Tech by comments from faculty regarding personal appearance or attire. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

8.4.8 To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?: flexible work hours

The highest percentage of the respondents (74%) considered that flexible work hours “greatly contribute” towards a positive environment for intellectual achievement in teaching and research. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. When analyzing the means by gender, the mean rating of the female faculty respondents (3.83) was significantly higher than the mean rating of the male faculty respondents (3.62) on a 4-point scale, with 4 = greatly contribute and 1 = do not contribute.
8.4.9 To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?: use of internet, telecommuting

The highest percentage of the respondents (64%) considered that use of Internet telecommunicating “greatly contribute” towards a positive environment for intellectual achievement in teaching and research. This was the most common response on disaggregating the responses by college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

8.4.10 To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?: internet course offerings

Similar percentage of respondents considered that internet course offerings “do not contribute” (40%) or “slightly contribute” (38%) towards a positive environment for intellectual achievement in teaching and research. This was the most common response on disaggregating the responses by college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

* Significantly different at p=0.003
8.4.11 To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?: workplace informality

The highest percentage of the respondents (44%) considered that workplace informality “somewhat contributes” towards a positive environment for intellectual achievement in teaching and research. This was the most common response on disaggregating the responses by college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

8.4.12 To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?: collegiality

The highest percentage of the respondents (60%) considered that collegiality “greatly contributes” towards a positive environment for intellectual achievement in teaching and research. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

When analyzing the mean ratings by administrative status, the mean rating of respondents holding administrative positions (3.74) was significantly higher than that of respondents not holding administrative positions (3.49) on a 4-point scale, with 4 = greatly contribute and 1 = do not contribute.
To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research: collegiality

* Significantly different at p = 0.001

8.4.13 To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?: faculty gathering place

Similar percentages of the respondents indicated that they considered that faculty gathering spaces “somewhat contribute” (35%) or “slightly contribute” (36%) towards a positive environment for intellectual achievement in teaching and research. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.
8.4.14 To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?: integrated faculty/student spaces

The highest percentage of the respondents (39%) considered that integrated faculty/student spaces “somewhat contribute” towards a positive environment for intellectual achievement in teaching and research. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment. There were no significant differences in any of the groups by the mean ratings.

8.4.15 To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?: office space

The highest percentage of the respondents (48%) considered that office space “somewhat contribute” towards a positive environment for intellectual achievement in teaching and research. This was the most common response on disaggregating the responses by gender, college, rank, number of years of service and administrative appointment.

On analyzing the mean ratings by college, the mean rating of the respondents affiliated with the Ivan Allen College (3.54) was significantly higher than respondents affiliated with the College of Engineering (3.05) on a 4-point scale, with 4 = greatly contribute and 1 = do not contribute. The mean rating of the respondents from the College of Architecture was the highest (3.67) of all colleges.
Figure 57: To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research:

- **office space**

![Bar chart showing mean ratings for office space by college](chart.png)

8.4.16 To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?: classroom space

The highest percentage of the respondents (39%) considered that classroom space “somewhat contributes” towards a positive environment for intellectual achievement in teaching and research. This was the most common response on disaggregating the responses by gender, rank, number of years of service and administrative appointment.

On disaggregating the responses by college, the highest percentages of respondents affiliated with the College of Management (50%), the College of Architecture (44%) and the Ivan Allen College (47%) considered that classroom space “greatly contributes” towards a positive environment. The highest percentages of the respondents affiliated with the College of Engineering (38%), the College of Sciences (46%) and the College of Computing (52%) reported that classroom space “somewhat contributes” towards a positive environment.

On analyzing the mean ratings by college, the mean rating of respondents affiliated with the Ivan Allen College (3.38) was significantly higher than the mean rating of faculty affiliated with the College of Engineering (2.79) on a 4-point scale, with 4 = greatly contribute and 1 = do not contribute.
Figure 58A: To what extent do you consider the following factors contribute to a positive environment for intellectual achievement in teaching and research: classroom space.
8.4.17 How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors?: equity of women faculty

The highest percentage of the respondents (42%) indicated that the culture of Georgia Tech is “about the same” when compared with the culture of peer institutions in being progressive with regard to equity of women faculty. This was the most common response on disaggregating the responses by rank, number of years of service and administrative appointment.

On disaggregating the responses by college, the highest percentage of the respondents affiliated with the Ivan Allen College (40%) perceived that Georgia Tech is slightly behind peer institutions in being progressive with regard to equity of women faculty. The highest percentages of the respondents affiliated with the College of Architecture (56%), College of Sciences (50%), College of Management (64%) and College of Engineering (42%) indicated that Georgia Tech is “about the same” as peer institutions in this regard.
The highest percentage of respondents affiliated with the College of Computing (43%), on the other hand, indicated that Tech is slightly ahead of peer institutions in this regard. Similar differences were observed while analyzing the mean ratings by college. The mean rating of respondents from the Ivan Allen College (2.26) was significantly lower than the mean ratings of respondents from the College of Engineering (3.32) and the College of Computing (3.14). The mean rating of the respondents from the College of Engineering (3.32) was significantly higher than that of respondents from the College of Sciences (2.67) on a 5-point scale, with 5 = far ahead of peers and 1 = far behind. Figures 59A and 59B indicate these differences by college.

**Figure 59A:** How would you perceive that the culture/ environment of Georgia Tech compares with peer institutions in being progressive with regards to the following: equity of women faculty

![Equity of Women Faculty Perceptions by College](image)
On disaggregating the responses by gender, the highest percentage of the respondents among the male faculty (48%) indicated that Georgia Tech is about the same as peer institutions in being progressive with regard to equity of women. The highest percentage of the female faculty respondents (42%), on the other hand, indicated that Georgia Tech is slightly behind. On analyzing the mean ratings by gender, the mean rating of male faculty respondents (3.09) was significantly higher than the mean rating of female faculty respondents (2.49) on a 5-point scale, with 5 = far ahead of peers and 1 = far behind. Figures 59C and 59D indicate these differences by gender.
**Figure 59C:** How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors: equity of women faculty

![Bar chart showing percentage of responses for male and female respondents regarding equity of women faculty.]

**Figure 59D:** How do you perceive that the culture/environment of Georgia Tech with Peer Institutions in being progressive with regard to the following factors: equity of women faculty

![Bar chart showing mean ratings for male and female faculty respondents regarding equity of women faculty.]

* Significantly different at p < 0.001
The highest percentage of faculty respondents (37%) indicated that the culture of Georgia Tech is “about the same” when compared with the culture of peer institutions in being progressive with regard to equity of minority faculty. This was the most common response on disaggregating the responses by number of years of service and administrative appointment.

On disaggregating the responses by college, the highest percentages of the respondents affiliated with the College of Management (54%) and the College of Sciences (50%) indicated that Georgia Tech is “about the same” as peer institutions in being progressive with regard to equity of minority faculty. Similar percentage of respondents from the College of Computing indicated that Georgia Tech was “about the same” (38%) or “slightly behind” (33%) peer institutions in this regard. Similar percentages of faculty respondents from the College of Engineering indicated that Georgia Tech is “about the same” (35%) or “slightly ahead” (36%) of peer institutions in this regard. Similar percentages of respondents from Ivan Allen College indicated that Georgia Tech is “far behind” (29%), “slightly behind” (26%) or “about the same” (24%) as peer institutions in this regard. On the other hand the highest percentage of the respondents (44%) from the “College of Architecture” indicated that Georgia Tech is “slightly behind” peer institutions in this regard. On analyzing the mean ratings, the mean rating of the faculty affiliated with the College of Computing (3.00) was significantly higher than the mean ratings of faculty respondents affiliated with the College of Architecture (2.33), the College of Sciences (2.86) and the Ivan Allen College (2.45) on a 5-point scale, with 5= far ahead of peers and 1 = far behind. Figures 60A and 60B show these responses by college.
Figure 60A: How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors: equity of minority faculty.
On disaggregating the responses by faculty rank, the highest percentages of the respondents among the Untenured Assistant Professors (42%), Tenured Associate Professors (44%) and Untenured Associate / Full Professors, recently hired (40%) indicated that Georgia Tech is “about the same” as peer institutions in being progressive with regard to equity of minority faculty. As summarized in Figure 60C, a similar percentage of respondents among the Tenured Full Professors indicated that Georgia Tech is “about the same” (31%) or “slightly behind” peer institutions in this regard.
On disaggregating the responses by gender, similar percentages of the respondents among the female faculty indicated that Georgia Tech is “slightly behind” (32%) or “about the same” (36%) as peer institutions in being progressive with regard to equity of minority faculty. Similar percentages of respondents among the male faculty on the other hand indicated that Georgia Tech is “about the same” (38%) or “slightly ahead” of peer institutions in this regard. On analyzing the mean ratings, the mean rating of male faculty respondents (3.28) was significantly higher than the mean rating of female faculty respondents (2.66) on a 5-point scale, with 5 = far ahead of peers and 1 = far behind. Figures 60D and 60E indicate these differences by gender.
Figure 60D: How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors: equity of minority faculty.
Figure 60E: How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors: equity of minority faculty

* Significantly different at p < 0.001
8.4.19 How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors?: faculty development

The highest percentage of the respondents (40%) indicated that the culture of Georgia Tech is “about the same” as peer institutions in being progressive with regard to faculty development. This was the most common response on disaggregating the responses by gender, college, rank and administrative appointment.

On disaggregating the responses by gender, the highest percentage of the male faculty respondents (41%) indicated that Georgia Tech is “about the same” as peer institutions in being progressive with regard to faculty development. Similar percentages of female faculty respondents indicated that Georgia Tech is “slightly behind” (36%) or “about the same” (40%) as peer institutions in this regard. Figure 61A plots responses by gender.

On disaggregating the responses by number of years of service, The highest percentages of the respondents having 13 to 19 years of service at Georgia Tech (41%), 4 to 6 years of service at Georgia Tech (57%) and less than 3 years of service (43%) indicated that Georgia Tech is “about the same” as peer institutions in being progressive with regard to faculty development. Similar percentages of respondents having more than 20 years of service at Georgia Tech indicated that Georgia Tech is “slightly behind” (33%) or “about the same” (31%) as peer institutions in this regard. Similar percentage of respondents having 7 to 12 years of service at Georgia Tech indicated that Tech is “slightly behind”
(3%), “about the same” (32%) or “slightly ahead” (26%) of peer institutions in this regard. On analyzing the mean ratings, the mean rating of respondents having less than 3 years of service at Georgia Tech (3.09) was significantly higher than the mean ratings of respondents having 13 to 19 years of service (2.46) and greater than 20 years of service at Tech (2.36) on a 5-point scale, with 5 = far ahead of peers and 1 = far behind. Figures 61B and 61C indicate these differences by number of years of service at Georgia Tech.

**Figure 61B:** How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regards to the following factors: faculty development
Figure 61C: How do you perceive that the Culture/Environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors: Faculty development.
8.4.20 How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors: balance of work and family

The highest percentage of the respondents (51%) perceived that Georgia Tech is “about the same” as peer institutions in being progressive with regard to balance of work and family. This was the most common response on disaggregating the responses by college, rank, number of years of service and administrative status.

On disaggregating the responses by gender of the respondent, the highest percentage of male faculty respondents (56%) indicated that Georgia Tech is “about the same” as peer institutions in being progressive with regard to balance of work and family. Equal percentages of female faculty respondents (33%), on the other hand, indicated that Georgia Tech is “slightly behind” or “about the same” as peer institutions in this regard. On analyzing the mean ratings by gender, the mean rating of the male respondents (2.77) was significantly higher than the mean rating of female respondents (2.36) on a 5-point scale, with 5 = far ahead of peers and 1 = far behind. Figures 62A and 62B indicate these differences by gender.

Figure 62A: How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors: balance of work and family

![Chart showing responses by gender](chart.png)
On analyzing the mean ratings by number of years of service of the respondent, the mean rating of respondents having less than 3 years of service at Georgia Tech (3.00) was significantly higher than the mean rating of respondents having more than 20 years of service at Georgia Tech (2.36). Figure 62C indicates these differences by number of years of service of the respondent at Georgia Tech.
Figure 62C: How do you perceive that the Culture/Environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors: balance of work and family

On analyzing the mean ratings by faculty rank, the mean rating of the respondents who were Untenured Associate/ Full Professors, recently hired (3.47) was significantly higher than those of respondents in the categories of Tenured Full Professors (2.72), Tenured Associate Professors (2.51) and Untenured Assistant Professors (2.70). Figure 62C compares responses according to rank of the respondent.
8.4.21 How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors?: time to reflect and write

Similar percentages of respondents perceived that the culture of Georgia Tech is “about the same” as (39%) or “slightly behind” (34%) peer institutions in being progressive with regard to time to reflect and write. There were no significant differences by gender, rank and administrative status in the frequency of these responses. On disaggregating the responses by college, a somewhat higher percentage of respondents from the College of Sciences and the College of Management ranked Georgia Tech as about the same or better than peer institutions than the respondents from other colleges, as shown in Figure 63A.
Analyzing the response patterns by number of years of service at Georgia Tech, a significantly higher percentage of respondents having less than three years of service at Georgia Tech rated Tech as about the same or ahead of peer institutions than did respondents with more years of service at Tech (Figure 63B). In fact, there is a clear decline by increasing years of service in the percentage of respondents who rated Georgia Tech as about the same or a peer or ahead of peer institutions.
Figure 63B: How do you perceive that the culture/environment of Georgia Tech compares with the peer institutions in being progressive with regard to the following factors: time to reflect and write

On analyzing the mean ratings by college (Figure 63C), the response mean of respondents from the College of Sciences (2.73) was significantly higher than those from the College of Engineering (2.26) and the College of Computing (2.00) on a 5-point scale, with 5 = far ahead of peers and 1 = far behind.
Figure 63C: How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors: time to reflect and write

On analyzing the mean ratings by rank and tenure status (Figure 63D), the response mean of respondents from the category Untenured Associate or Full Professors, recently hired was significantly higher than those of respondents from categories of Untenured Assistant Professors, Tenured Associate Professors and Tenured Full Professors.
Figure 63D: How do you perceive that the culture/environment of Georgia Tech compares with peer institutes in being progressive with regard to the following factors: time to reflect and write.
On analyzing the mean ratings by number of years of service at Georgia Tech (Figure 63E), the response mean of respondents having less than 3 years of service at Georgia Tech was significantly higher than that of respondents having more than 6 years of service at Georgia Tech, with the response mean being the lowest for respondents having 13 to 19 years of service.

8.4.22 How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors?: staff and infrastructure support

The highest percentages of respondents perceived the culture of Georgia Tech to be “about the same” as (33%) or “slightly behind” (32%) that of peer institutions in being progressive with regard to staff and infrastructure support. There were no significant differences by gender, college, rank, number of years of service at Georgia Tech and administrative status in the frequency of these responses. However, on analyzing the mean ratings by college, the response mean of the respondents from the College of Computing (3.05) was significantly higher than those of respondents from the College of Management (1.67) and the Ivan Allen College (2.11) on a 5-point scale, with 5 = far ahead of peers and 1 = far behind. Figure 64 compares the mean ratings by college.
8.4.23  How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors?: campus collegiality

The highest percentage of respondents (34%) perceived that the culture of Georgia Tech is “about the same” as peer institutions in being progressive with regard to campus collegiality. Approximately equal percentages of respondents rated Georgia Tech as “slightly ahead” (27%) and “slightly behind” (22%) peer institutions. There were no significant differences by rank, number of years of service at Georgia Tech and administrative status in the frequency of these responses. There were, however, significant differences by gender in response to this question. A higher percentage of male faculty respondents ranked Georgia Tech as about the same or ahead of peer institutions than female faculty respondents (Figure 65A).
Figure 65A: How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors: campus collegiality

Analyzing the response patterns by college (Figure 65B), significantly higher percentages of respondents from the College of Architecture, the College of Computing, the College of Sciences and the College of Management rated Georgia Tech as about the same or ahead of peer institutions with regard to collegiality than did respondents from the College of Engineering and the Ivan Allen College.
Figure 65B: How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors: campus collegiality

However on analyzing the mean ratings by college (Figure 65C), the response mean of faculty respondents from the Ivan Allen College (2.45) was significantly lower than respondents from the College of Computing (3.71) and the College of Sciences (3.22) on a 5-point scale, with 5 = far ahead of peers and 1 = far behind.
8.4.24 How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors?: respect for staff

The highest percentage of the respondents (63%) perceived that the culture of Georgia Tech is “about the same” as peer institutions in being progressive with regard to respect for staff. There were no significant differences by gender, college, rank, number of years of service at Georgia Tech and administrative status in the frequency of this response. However on analyzing the mean ratings by college, the response mean of respondents from the College of Engineering (3.17) was significantly higher than that of respondents from the Ivan Allen College (2.59) on a 5-point scale, with 5 = far ahead of peers and 1 = far behind. Figure 66 compares mean ratings by college.
Figure 66: How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to following factors: respect for staff

9 Demographic Information

9.1 Table 1 indicates demographics.
10 Survey Instrument

Dear Georgia Tech Faculty Member:
This survey is concerned with factors that have been identified as potentially having an effect on the promotion and tenure process at Georgia Tech. Your participation is very important. Please be assured that your answers are confidential. No individual’s answers will ever be identified in any report. Any and all data provided will be maintained under strict confidentiality by the Georgia Tech Office of Information Technology. No report will contain any analyses or tables that would allow identification of an individual faculty response. Reports prepared by the Georgia Tech Office of Assessment will present only highly-aggregated results. Your participation is voluntary, though we very much hope you will respond. Please be assured that your participation or nonparticipation will not affect your status at Georgia Tech.

Q1. If available as a resource, to what extent have each of the following resources been helpful in your own career progress towards promotion and tenure?

<table>
<thead>
<tr>
<th>Resource</th>
<th>NOT AT ALL HELPFUL</th>
<th>SLIGHTLY HELPFUL</th>
<th>MODERATELY HELPFUL</th>
<th>VERY HELPFUL</th>
<th>NOT AVAILABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Start-up package</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b. Quality of office space</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c. Quality of laboratory space</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d. Quality of graduate students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e. Time to think, reflect</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>f. Having a mentor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>g. Quality of colleagues</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>h. Collegial environment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>i. Parking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>j. Teaching resources</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>k. Administrative support staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>l. Other (specify): __________________________</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Q2. How important do you consider the following as components in a hiring package for faculty?

<table>
<thead>
<tr>
<th>Component</th>
<th>NOT AT ALL IMPORTANT</th>
<th>SLIGHTLY IMPORTANT</th>
<th>MODERATELY IMPORTANT</th>
<th>VERY IMPORTANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Graduate student support</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. Summer salary support</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c. Equipment, space</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>d. Flexibility of funds</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>e. Travel support</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>f. Reduced teaching load</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>g. Other (specify): __________________</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Q3. To what extent are the following types of space critical to your performance as a faculty member?

<table>
<thead>
<tr>
<th>Type of Space</th>
<th>NOT AT ALL</th>
<th>SLIGHTLY CRITICAL</th>
<th>SOMEWHAT CRITICAL</th>
<th>VERY CRITICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory/research space</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Office for self</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Offices for visiting scholars</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Offices for graduate students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Quality classroom space</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Communal areas for faculty (e.g. faculty lounge)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Other (specify): ______________________</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Q4. To what extent do you use each of the following types of Institute-wide resources?

<table>
<thead>
<tr>
<th>Type of Resource</th>
<th>NOT AT ALL</th>
<th>LITTLE USAGE</th>
<th>MODERATE USAGE</th>
<th>HEAVY USAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computing (OIT, other)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Multimedia assistance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Teaching development</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Proposal preparation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Faculty leave programs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Continuing education</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>International programs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Family support programs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>On-line course software</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Entrepreneurial support</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Q5. Which two of the following modes of allocation of resources do you consider most critical for faculty success? Please indicate the most important with a “1” and the second most important with a “2.” Do not rank the others.

___ Access to high performance computing
___ Quality laboratory equipment
___ Faculty offices & classrooms
___ Laboratory technicians and professional support personnel
___ Assistance/support with state-of-the-art library facilities
___ Travel support for conferences and program development
___ Support for graduate students
___ Faculty leave and development programs
___ Family friendly policies and family support programs
___ Other (specify): ____________________________

Q6. To what extent do you consider your personal research to be “equipment intensive” (i.e., success depends upon equipment)? [circle one choice]

| 1 | 2 | 3 | 4 |
|--------------------------------|
| Not at all | Highly Dependent |

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Q7. How important do you consider the role of mentoring to be in achieving successful outcomes in tenure and promotion evaluations? [circle one choice]

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Important</td>
<td>Very</td>
<td></td>
</tr>
</tbody>
</table>

Q8. To what extent do you consider the following forms of collaborative teaching, research and service activities with peers in your unit to be important in achieving successful outcomes in tenure and promotion evaluations?

<table>
<thead>
<tr>
<th>Collaborative research, teaching and/or service…</th>
<th>NOT AT ALL IMPORTANT</th>
<th>SLIGHTLY IMPORTANT</th>
<th>SOMEWHAT IMPORTANT</th>
<th>VERY IMPORTANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. with peers in your unit at Georgia Tech</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. with peers outside your unit but within the Georgia Tech faculty</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c. with peers outside of Georgia Tech</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social networking outside of normal faculty duties…</th>
<th>NOT AT ALL IMPORTANT</th>
<th>SLIGHTLY IMPORTANT</th>
<th>SOMEWHAT IMPORTANT</th>
<th>VERY IMPORTANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>d. with peers in your unit at Georgia Tech</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>e. with peers outside your unit but within the Georgia Tech faculty</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>f. with peers outside of Georgia Tech</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Q9. To what extent do you believe that assignments of service opportunities among faculty at Georgia Tech are equally allocated and rotated? [circle one choice]

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all equally</td>
<td>Very equally</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allocated and rotated</td>
<td>Allocated and rotated</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q10. In promotion and tenure evaluations within your home School/unit, to what level of scrutiny do you believe that records in research, teaching, and service are subjected (in methods and benchmarking, for example)?

<table>
<thead>
<tr>
<th>Areas:</th>
<th>ALMOST NO SCRUTINY</th>
<th>LITTLE SCRUTINY</th>
<th>SOME SCRUTINY</th>
<th>GREAT DEAL OF SCRUTINY</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Research</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. Teaching</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c. Service</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Q11. To what extent do you consider the following means to be effective in evaluation of teaching?

<table>
<thead>
<tr>
<th>Means of Evaluation</th>
<th>NOT AT ALL EFFECTIVE</th>
<th>SLIGHTLY EFFECTIVE</th>
<th>SOMEWHAT EFFECTIVE</th>
<th>VERY EFFECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. On-line student surveys of teaching, using multiple-choice questions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. Exit interview or survey</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c. Classroom assessment and feedback techniques</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>d. Web page bulletin boards</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>e. Real-time audience response systems</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>f. Post-graduation surveys of students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>g. Peer evaluation of teaching</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Q12. To what extent do you consider the following to be effective measures of research productivity?

<table>
<thead>
<tr>
<th>Measures of Research Productivity</th>
<th>NOT AT ALL EFFECTIVE</th>
<th>SLIGHTLY EFFECTIVE</th>
<th>SOMEWHAT EFFECTIVE</th>
<th>VERY EFFECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Collaboration with colleagues</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. Developing center activities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c. Editing a book</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>d. Editing an archival journal</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>e. External funding</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>f. Invited presentations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>g. Number of conference articles</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>h. Number of journal articles</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>i. Number of MS students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>j. Number of PhD students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>k. Professional awards</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>l. Quality of journal articles</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>m. Quality of conference articles</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>n. Refereeing journal articles</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>o. Research monographs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>p. Textbooks</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>q. Undergraduate research projects</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>r. Other (specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q13. What interpretation do you give to the relative contribution of various co-authors of a paper based on the order of listing of authors? (check all that apply with an “x”)

___ First to last, indicating decreasing contribution (first highest)
___ First to last, indicating increasing contribution (first lowest)
___ Faculty member listed as last author, indicating co-authorship with graduate students or less senior faculty members
___ Alphabetical order, implying relatively equal contributions among authors
___ The order is highly dependent on field
___ The order is highly dependent on individual preference
___ Other (specify): ___________________________________
Q14. To what extent do you believe that citation indices are valid measures of the quality of scholarly output within the following contexts?

<table>
<thead>
<tr>
<th></th>
<th>NOT AT ALL VALID</th>
<th>SLIGHTLY VALID</th>
<th>SOMEWHAT VALID</th>
<th>VERY VALID</th>
</tr>
</thead>
<tbody>
<tr>
<td>A single discipline</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Q15. To what extent do you consider the following to be useful sources of information regarding relative contribution of faculty members in co-authored articles?

<table>
<thead>
<tr>
<th>Source</th>
<th>NOT AT ALL USEFUL</th>
<th>SLIGHTLY USEFUL</th>
<th>SOMEWHAT USEFUL</th>
<th>EXTREMELY USEFUL</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Candidate’s statement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. Order of listing of authors</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c. PI information on supporting grants</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>d. Anecdotal evidence from other faculty</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>e. First level peer review reports</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>f. Letters of reference</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>g. Other (specify): _______________________</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Q16. To what extent do you perceive that outside letters of reference are influential in the tenure and promotion evaluation process at Georgia Tech? [circle one choice]

1  2  3  4
Not at all  Strongly Influential
Influential

Q17. To what extent do you understand the tenure and promotion evaluation process at Georgia Tech? [circle one choice]

1  2  3  4
Do not understand  Understand very
At all  Well

Q18. To what extent do you believe untenured faculty engagement in interdisciplinary research to be “wise” or “prudent” in terms of implications for successful tenure and promotion outcomes? [circle 1, 2, 3 or 4]

1  2  3  4
Highly  Highly
Imprudent  Prudent
Q19. To what extent do you think that interdisciplinary work with faculty in units other than one’s own is evaluated in a consistent manner in tenure and promotion decisions within the home school or unit? [circle 1, 2, 3 or 4]

1 2 3 4

Highly Inconsistent

Highly Consistent

Q20. To what extent do you think that interdisciplinary collaboration is valued in your home school or unit? [circle 1, 2, 3 or 4]

1 2 3 4

Not at all Highly Valued

Valued

Q21. To what extent do you think that faculty in your home school or unit value entrepreneurial activities that are consistent with professional practice (such as startup company ventures, outside business development activities, consulting, etc.)? [circle 1, 2, 3 or 4]

1 2 3 4

Not at all Highly Valued

Valued

Q22. To what extent do you consider the following to encourage entrepreneurial activities at Georgia Tech?

<table>
<thead>
<tr>
<th></th>
<th>STRONGLY DISCOURAGES</th>
<th>SOMEWHAT DISCOURAGES</th>
<th>SOMEWHAT ENCOURAGES</th>
<th>STRONGLY ENCOURAGES</th>
</tr>
</thead>
</table>
a. Administrative support | 1                      | 2                    | 3                   | 4                   |
b. Contract/licensing support | 1                      | 2                    | 3                   | 4                   |
c. Intellectual environment | 1                      | 2                    | 3                   | 4                   |
d. Availability of collaborators | 1                      | 2                    | 3                   | 4                   |
e. Promotion and tenure reviews | 1                      | 2                    | 3                   | 4                   |
f. Other (specify): | 1                      | 2                    | 3                   | 4                   |

Q23. What kind of entrepreneurial activities have you been involved with while on the faculty at Georgia Tech? [check all that apply]

___ None
___ Consulting
___ Other professional practice
___ Serving on the Board of Directors of a company
___ Starting a company
___ Other: please describe ________________________________
Q24. To what extent do you favor/or prefer the following times of day for research meetings with colleagues?

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>NOT AT ALL PREFERRED</th>
<th>SLIGHTLY PREFERRED</th>
<th>SOMEWHAT PREFERRED</th>
<th>STRONGLY PREFERRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. early morning</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. mid/late morning</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c. early afternoon</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>d. late afternoon</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>e. evening</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>f. weekends</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Q25. Have you ever felt harassed at Georgia Tech by comments of faculty regarding personal appearance or attire?

___ Yes
___ No
___ Unsure

Q26. To what extent do you consider the following factors to contribute to a positive environment for intellectual achievement in teaching and research?

<table>
<thead>
<tr>
<th>Factor</th>
<th>DO NOT CONTRIBUTE</th>
<th>SLIGHTLY CONTRIBUTE</th>
<th>SOMEWHAT CONTRIBUTE</th>
<th>GREATLY CONTRIBUTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Flexible workhours</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. Use of internet, telecommuting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c. Internet course offerings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>d. Workplace informality</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>e. Collegiality</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>f. Faculty gathering place</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>g. Integrated faculty/student spaces</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>h. Office space</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>i. Classroom space</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Q27. How do you perceive that the culture/environment of Georgia Tech compares with peer institutions in being progressive with regard to the following factors?

<table>
<thead>
<tr>
<th>Factor</th>
<th>Georgia Tech is...</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FAR BEHIND</td>
</tr>
<tr>
<td>a. Equity of women faculty</td>
<td>1</td>
</tr>
<tr>
<td>b. Equity of minority faculty</td>
<td>1</td>
</tr>
<tr>
<td>c. Faculty development</td>
<td>1</td>
</tr>
<tr>
<td>d. Balance of work and family</td>
<td>1</td>
</tr>
<tr>
<td>e. Time to reflect and write</td>
<td>1</td>
</tr>
<tr>
<td>f. Staff and infrastructure support</td>
<td>1</td>
</tr>
<tr>
<td>g. Campus collegiality</td>
<td>1</td>
</tr>
<tr>
<td>h. Respect for staff</td>
<td>1</td>
</tr>
</tbody>
</table>
Questions 28-34 provide additional information for purposes of more meaningful data correlation. Please answer if you are comfortable doing so.

Q28. What is your rank and tenure-status? [circle one choice]
   a. Untenured assistant professor
   b. Tenured associate professor
   c. Tenured full professor
   d. Untenured Associate or Full Professor, recently hired
   e. Other (please specify): ____________________________

Q29. Do you have 50% or greater administrative appointment in a unit or within several units?
   ___ Yes
   ___ No

Q30. If you are comfortable doing so, please indicate your racial/ethnic group within these NSF classifications: [circle one]
   1 Asian
   2 Black
   3 Hispanic
   4 Native American
   5 White
   6 Other (specify):

Q31. What is your gender? [circle one]
   1 Male
   2 Female

Q32. What is your responsibility as a family/household member? [circle one]
   1 Single, never married
   2 Single, divorced or widowed
   3 Married, no children or other dependents
   4 Married, 1-2 children or other dependents
   5 Married, more than 2 children or other dependents

Q33. With what college at Georgia Tech are you primarily affiliated? [circle one]
   1 College of Architecture
   2 College of Computing
   3 College of Engineering
   4 College of Sciences
   5 Dupree College of Management
   6 Ivan Allen College

Q34. How many years have you been at Georgia Tech in a tenure-track position? [circle one]
   1 0-3
   2 4-6
   3 7-12
   4 13-19
   5 20 or more
ADDENDUM

DESCRIPTIVE STATISTICS

PTAC SURVEY 2003
### Resource Allocation and Success

<table>
<thead>
<tr>
<th>Question</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help provided by starting package in career progression</td>
<td>259</td>
<td>1</td>
<td>4</td>
<td>3.46</td>
<td>0.859</td>
</tr>
<tr>
<td>Help provided by quality of office space in career progression</td>
<td>319</td>
<td>1</td>
<td>4</td>
<td>2.82</td>
<td>0.915</td>
</tr>
<tr>
<td>Help provided by quality of lab space in career progression</td>
<td>238</td>
<td>1</td>
<td>4</td>
<td>3.25</td>
<td>0.921</td>
</tr>
<tr>
<td>Help provided by quality of graduate students in career progression</td>
<td>296</td>
<td>1</td>
<td>4</td>
<td>3.38</td>
<td>0.855</td>
</tr>
<tr>
<td>Help provided by time to think, reflect in career progression</td>
<td>255</td>
<td>1</td>
<td>4</td>
<td>3.30</td>
<td>0.922</td>
</tr>
<tr>
<td>Help provided by having a mentor in career progression</td>
<td>214</td>
<td>1</td>
<td>4</td>
<td>2.71</td>
<td>1.075</td>
</tr>
<tr>
<td>Help provided by quality of colleagues in career progression</td>
<td>320</td>
<td>1</td>
<td>4</td>
<td>3.24</td>
<td>0.829</td>
</tr>
<tr>
<td>Help provided by collegial environment in career progression</td>
<td>314</td>
<td>1</td>
<td>4</td>
<td>3.15</td>
<td>0.917</td>
</tr>
<tr>
<td>Help provided by parking in career progression</td>
<td>313</td>
<td>1</td>
<td>4</td>
<td>2.20</td>
<td>0.984</td>
</tr>
<tr>
<td>Help provided by teaching resources in career progression</td>
<td>305</td>
<td>1</td>
<td>4</td>
<td>2.55</td>
<td>0.888</td>
</tr>
<tr>
<td>Help provided by administrative support staff in career progression</td>
<td>312</td>
<td>1</td>
<td>4</td>
<td>2.72</td>
<td>0.936</td>
</tr>
<tr>
<td>Help provided by other aspects in career progression</td>
<td>21</td>
<td>1</td>
<td>4</td>
<td>3.19</td>
<td>1.209</td>
</tr>
<tr>
<td>Importance of graduate student support as a component in a hiring package for faculty</td>
<td>321</td>
<td>1</td>
<td>4</td>
<td>3.58</td>
<td>0.703</td>
</tr>
<tr>
<td>Importance of summer salary support as a component in a hiring package for faculty</td>
<td>322</td>
<td>1</td>
<td>4</td>
<td>3.59</td>
<td>0.675</td>
</tr>
<tr>
<td>Importance of equipment, space as a component in a hiring package for faculty</td>
<td>322</td>
<td>1</td>
<td>4</td>
<td>3.61</td>
<td>0.632</td>
</tr>
<tr>
<td>Importance of flexibility of funds as a component in a hiring package for faculty</td>
<td>319</td>
<td>1</td>
<td>4</td>
<td>3.41</td>
<td>0.708</td>
</tr>
<tr>
<td>Importance of travel support as a component in a hiring package for faculty</td>
<td>321</td>
<td>1</td>
<td>4</td>
<td>3.28</td>
<td>0.725</td>
</tr>
<tr>
<td>Importance of reduced teaching load as a component in a hiring package for faculty</td>
<td>321</td>
<td>1</td>
<td>4</td>
<td>3.53</td>
<td>0.671</td>
</tr>
<tr>
<td>Importance of other components in a hiring package for faculty</td>
<td>22</td>
<td>3</td>
<td>4</td>
<td>3.91</td>
<td>0.294</td>
</tr>
<tr>
<td>Criticality of laboratory/ research space in performance as faculty member</td>
<td>320</td>
<td>1</td>
<td>4</td>
<td>3.10</td>
<td>1.158</td>
</tr>
<tr>
<td>Criticality of office for self in performance as faculty member</td>
<td>322</td>
<td>2</td>
<td>4</td>
<td>3.50</td>
<td>0.694</td>
</tr>
<tr>
<td>Question</td>
<td>N</td>
<td>Min.</td>
<td>Max.</td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>-----</td>
<td>------</td>
<td>------</td>
<td>-------</td>
<td>----------------</td>
</tr>
<tr>
<td>Criticality of office for visiting scholars in performance as faculty member</td>
<td>319</td>
<td>1</td>
<td>4</td>
<td>2.06</td>
<td>0.901</td>
</tr>
<tr>
<td>Criticality of office for graduate students in performance as faculty member</td>
<td>321</td>
<td>1</td>
<td>4</td>
<td>2.94</td>
<td>0.903</td>
</tr>
<tr>
<td>Criticality of quality classroom space in performance as faculty member</td>
<td>320</td>
<td>1</td>
<td>4</td>
<td>2.86</td>
<td>0.869</td>
</tr>
<tr>
<td>Criticality of communal areas for faculty in performance as faculty member</td>
<td>319</td>
<td>1</td>
<td>4</td>
<td>2.31</td>
<td>0.952</td>
</tr>
<tr>
<td>Criticality of other spaces in performance as faculty member</td>
<td>24</td>
<td>1</td>
<td>4</td>
<td>3.33</td>
<td>0.816</td>
</tr>
<tr>
<td>Extent to which computing resources were used</td>
<td>322</td>
<td>1</td>
<td>4</td>
<td>2.75</td>
<td>0.899</td>
</tr>
<tr>
<td>Extent to which multimedia assistance resources were used</td>
<td>322</td>
<td>1</td>
<td>4</td>
<td>1.88</td>
<td>0.767</td>
</tr>
<tr>
<td>Extent to which teaching development resources were used</td>
<td>322</td>
<td>1</td>
<td>4</td>
<td>1.87</td>
<td>0.772</td>
</tr>
<tr>
<td>Extent to which proposal preparation resources were used</td>
<td>322</td>
<td>1</td>
<td>4</td>
<td>1.99</td>
<td>0.877</td>
</tr>
<tr>
<td>Extent to which faculty leave programs resources were used</td>
<td>319</td>
<td>1</td>
<td>4</td>
<td>1.65</td>
<td>0.863</td>
</tr>
<tr>
<td>Extent to which continuing education resources were used</td>
<td>322</td>
<td>1</td>
<td>4</td>
<td>1.43</td>
<td>0.699</td>
</tr>
<tr>
<td>Extent to which International programs resources were used</td>
<td>319</td>
<td>1</td>
<td>4</td>
<td>1.66</td>
<td>0.896</td>
</tr>
<tr>
<td>Extent to which Family support programs resources were used</td>
<td>320</td>
<td>1</td>
<td>4</td>
<td>1.29</td>
<td>0.639</td>
</tr>
<tr>
<td>Extent to which On-line course software resources were used</td>
<td>321</td>
<td>1</td>
<td>4</td>
<td>1.84</td>
<td>0.990</td>
</tr>
<tr>
<td>Extent to which Entrepreneurial support resources were used</td>
<td>320</td>
<td>1</td>
<td>4</td>
<td>1.48</td>
<td>0.755</td>
</tr>
<tr>
<td>Extent to which personal research is self assessed to be equipment intensive</td>
<td>322</td>
<td>1</td>
<td>4</td>
<td>2.83</td>
<td>1.087</td>
</tr>
<tr>
<td>Belief that assignment and service opportunities among the faculty at Georgia Tech are equally allocated and rotated</td>
<td>317</td>
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**Chapter-4: Mentoring and Networking**

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### Chapter-5: Perception of Evaluative Methods and Procedures

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## Chapter –6: Interdisciplinary Collaboration

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### Chapter 7: Entrepreneurship

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Appendix C. ADEPT Tool with P&T Case Studies

ADEPT Web-Based Tool Design and Development Team

Carol A. Colatrella, Associate Professor, School of Literature, Communication and Culture, Ivan Allen College
and Co-Director, Center for the Study of Women, Science, and Technology
Laura Ferguson, Software Engineer
Meghna Krishnan, Graduate Student, School of Literature, Communication, and Culture, Ivan Allen College
David L. McDowell, Regents’ Professor and Carter N. Paden, Jr. Distinguished Chair in Metals Processing,
School of Mechanical Engineering, School of Materials Science and Engineering, College of Engineering
Janet H. Murray, Professor and Director of Graduate Studies, School of Literature, Communication and Culture,
Ivan Allen College
Maryann I. Westfall, IDT candidate, School of Literature, Communication & Culture, Ivan Allen College

ADEPT Bibliography
Mary Frank Fox’s ADVANCE survey research team: Kendall Deas, Carolyn Fonseca, Christi Lurie, Oanh Lu,
Jessica Ports, Ben Shackleford

Learning Goals

As part of the design process, learning goals of the potential users of the ADEPT Tool were identified. Reappointment, Promotion and Tenure (RPT) Committee members and Promotion & Tenure (P&T) Candidates have different learning goals. The ADEPT RPT Simulation instrument described below is specifically directed to address Committee Member learning goals although it also addresses some Candidate learning goals. The ADEPT Web Component described below addresses learning goals for both committee members and candidates. The learning goals were identified as follows:

RPT Committee member learning goals
- to emulate best practices in processes of establishing committees and making P&T evaluations
- to be mindful of appropriate steps/actions in process in communicating opinions/decisions within and beyond the committee
- to recognize potential for bias in others & self
- to avoid bias to the degree possible in their own decisions and in contributions to committee deliberations
- to respond constructively to evidence of or potential for bias in others
- to become familiar with research on various forms of bias, including those that are subtle and some not so subtle
- to appreciate institutional goals of maintaining high standards, fairly applied

Candidate learning goals
- to learn the components of a dossier
- to understand the nuances of an "information rich" dossier
- to understand the process of selecting top five intellectual products and describing contributions clearly
- to understand cultivation of references for future P&T evaluations
- to become familiar with the schedule of the P&T process
ADEPT Tool Overview

The ADEPT Tool is divided into a web component and a downloadable ‘social simulation’ involving a fictitious RPT Committee meeting. In the simulation the learner has the opportunity to sit on a RPT committee and participate in a review of a fictional candidate's case. The web component's main function is to serve as an introduction to issues of bias and procedure in the P&T process.

The web component is organized into a section for RPT Committee members and a section for P&T candidates. The site includes an annotated bibliography, links to Georgia Tech and external resources, and a download area where users can download the ADEPT RPT Simulation.

The ADEPT RPT Simulation allows learners to participate in a simulated RPT Committee meeting. After choosing a case to work on, the learner is assigned to a RPT Committee evaluating a candidate's case for promotion and/or tenure. The learner can review background information about the candidate, read reference materials on bias and proper procedures, and has opportunities during the simulation to influence the evaluation process.

When the meeting ends, the learner is asked to analyze the conversation in terms of potential bias and procedural errors by selecting a statement from the transcript, and selecting or bookmarking its relevant bibliographic entries.

Design and Implementation of ADEPT RPT Committee Simulation

The interface was designed to immerse the user in the simulated meeting of a unit-level RPT Committee engaged in P&T evaluations. In the analysis phase, following the meeting, the user has the opportunity to review the transcript and read related references for incidents involving bias and procedural error.

The meeting simulation takes the user on one path through a branching conversation. Simulations of human interactions, such as this one, are often called social simulations. A more complex social simulation might model the emotions of the other meeting participants. In this case, driven by our learning goals and resource constraints we have limited the conversational paths. Statements and reactions of animated members are pre-scripted, but the user can choose from optional statements to reflect his/her participation in the meeting.

Despite the narrow options, there are sufficient paths through the simulation to allow adequate learning opportunities for user. Realism of the simulation is enhanced by animating meeting character reactions and offering realistic statements.

The conversation proceeds linearly until the user is presented with a choice. When the user makes a choice, the conversation then follows that branch linearly until the next user choice or
the end of the conversation. The user can always see the previous statement, since most
individuals will have auditory memories of recent statements. However, the user cannot see the
full transcript until the end of the meeting. At that point, the user is directed to the analysis
portion. During the simulation, the learner may access the “Library” at any time. Each
simulation will typically have three decision points.

- User-controlled advance button
- Analysis starts at end of first pass
- Analysis

The process of analysis starts at end of the first pass through the complete meeting. When the
user enters the Analysis screen, the transcript from the meeting is displayed. The user may click
any statement to see a brief description of issues with that statement and a few bibliographic
references that the learner can review immediately or bookmark for later reference. At the end of
the analysis phase, the learner can save or send this list of bookmarks for later perusal.

Components of the Analysis include:

- Transcript from simulated RPT Committee meeting
- Selections from the bibliography
- Questions (for simulated and non-simulated cases)
- List of bookmarked references in scholarship and Georgia Tech ADVANCE reports and
  surveys
- Library

  During the simulated meeting, the user can enter up the library at any time. The
  Library that is included in the application is contains much of the same content of the
  library that is included in the online references. However, the content is specifically
  organized to be useful during the simulated meeting. The components of the library
  may include:

  - The Annotated Bibliography
  - Georgia Tech Resources
  - Case study resources for the simulated candidate
  - Case summary

**Implementation Details**

The ADEPT RPT Simulation is implemented in Macromedia Director, Lingo, Flash and XML.
The simulation engine is written in Director and Lingo. The engine interprets an XML script
that drives the conversation and lists bibliographic links for use in the Analysis phase. The
engine animates the current speaker (with a Flash animation) and displays the text of their
comments. Depending on the script, other meeting attendees may react to the speakers’
statements. Thus, the engine may also trigger animated Flash reactions for any of these
attendees. When it is the user's turn, the engine prompts the user with up to four choices of what
to say. All statements are stored in a transcript that is later used in the analysis portion of the
ADEPT application.
The Analysis phase is implemented in Director, Lingo, and HTML. As necessary, external calls are made to send email and bring up browsers as requested by the user. The user is presented a transcript of the meeting. Clicking on a statement from the transcript triggers the lookup-reference behavior. This behavior considers the relevant statement object. Statement objects contain lists of relevant references. This list is composed of links to the reference list used by the library. The analysis engine retrieves these references from the reference list and displays it on the screen. When a reference has a URL it is made clickable. Clicking on links in the reference list will bring up an external browser showing the linked website reference. Simple bibliographic references are displayed as text. The user may bookmark references he/she wants e-mailed to them at the end of the Analysis phase.

The Library is implemented in Director, Lingo and HTML as a Movie in a Window (MIAW). Links to HTML will bring up an external browser. A content analyst organized and annotated the references into categories of bias and procedural issues. The resulting annotated list of references is stored in an XML file. In the library, Director and Lingo are used to organize and display the list of categories and the relevant bibliographic elements.
PTAC CASES for ADEPT

The promotion and tenure cases described in this instrument are fictional composites developed to illustrate issues deemed significant by the Promotion and Tenure ADVANCE committee chaired by David L. McDowell at Georgia Tech in 2002-2003. Case narratives and issues have been outlined by David McDowell and Carol Colatrella in collaboration with committee members Douglas Allen, Willie Belton, Paul Benkeser, Mostafa El-Sayed, Dana Randall, Carlos Santamarina, Ronald Schafer, Marie Thursby, Jeannette Yen, and ADVANCE liaisons Tabitha Barnette and Mary Hunt. Although the premises and issues discussed in the cases and narrative scenarios reflect what can happen, no case is based on any real individual at Georgia Tech or elsewhere.

Rationale

Clarity and communication of standards regarding evaluation assists university candidates and members of review, promotion, and tenure committees. Discussing plausible narratives of fictional candidates offers the opportunity for individuals to explore and analyze the norms used in developing careers and evaluating colleagues. These fictional narratives and accompanying questions can be used to calibrate standards of unit-level committee members and to advise candidates about likely expectations. Some cases also provide the bases for interactive narrative games developing scenarios of fictional committee meetings.

List of Cases/Issues: (cases with narrative games are noted with *)

*Samia Mansour, Chemistry: letters of reference, what kind of service counts

*Jamie Perez, Materials Science and Engineering: collaborative research, constraints regarding courses/lab equipment, graduate students

*Patty Shen, Biomedical Engineering: fluctuating productivity, leave of absence in probationary period

*Carl Anders, Computer Science: disability, change of department administration, teaching schedule

Sophia Richards, Science and Technology Studies: how technology gets evaluated in social sciences, promotion to full, age

Robert Sorel, Aerospace and Mechanical Engineering: soft vs. hard research, joint appointment, advanced assistant professor

Arthur Stevens, Mechanical Engineering: publication venues, order of listing of authors, contribution to articles

Pam Lee, Economics: fluctuating productivity of a maturing scholar, ethnic/cultural differences

Helen Clemens, Mathematics: international reputation and spousal concerns
General Questions for Discussion of Cases:

1. What aspect of promotion and tenure evaluation is at issue in the case and is it adequately outlined? (e.g. interdisciplinary research, collegiality, fluctuating productivity, leave of absence, letters of reference, web publications, order of authors, collaborative research, graduate students, etc.)?

2. Does the case clarify general standards of the discipline regarding scholarly output, teaching, and service? Are more specific stated norms or particular documents needed to consider the candidate's record? (i.e., how many articles does someone in this field usually write before tenure?) What else would you like to see to facilitate your decision-making?

3. Do the evaluation issues and situations in the case fit other disciplines? (All disciplines?) How does studying the case help individuals better understand the evaluation issues?

4. What bias issues appear in the case? (race, ethnicity, sexism, disability, personal, subfield, etc.) Does the case plausibly indicate the status of bias in relation to evaluation of the candidate? Does the case suggest ways to identify bias and/or to reduce its effect in decision-making?

5. Has the candidate received appropriate resources, including mentoring? What else could have been done? By whom? Would these additional elements demand infra-structural changes/support?

6. Does this case suggest negative criticism of what should NOT be done by any candidate, unit, or committee? What problems do you see? Does the case outline or suggest any positive modes of actions undertaken by the candidate, unit, or committee?

7. Given the circumstances outlined in the case, how should committee members be disposed to view the candidate?

8. What emotions and perceptions are evoked in reading through the case that influence your evaluation?

9. How should committees weigh past performance on a bet of future performance with regard to the tenure decision?

Further Questions for Cases:

These issues and questions for facilitators supplement the general questions printed with the cases and are intended to prompt participants to discuss more specific aspects of bias in evaluation.
**Samia Mansour:**

What role does Mansour’s gender play in developing her past and future performance? What advantages or disadvantages related to her gender accrue to her during her career?

Consider the role of service to the university and to the profession in evaluating Mansour’s case. How much (and in what way) should her efforts to promote women in science be counted?

How might considerations related to gender have affected arguments presented by her reviewers? Identify positive and negative considerations.

What considerations related to gender affect perceptions of Mansour’s performance? Identify positive and negative considerations.

Consider the roles of the unit promotion and tenure committee and of the chair in advising Mansour about when to come up for promotion and tenure. What responsibilities (if any) do these parties have to guide Mansour’s case toward a positive outcome?

Assume that a tenure decision is essentially a “bet” on the academic potential of an individual based on past performance within a given context. What information would you like to see in Mansour’s case that would help you make this decision?

What assumptions related to gender influenced your reading of Mansour’s case?

**Jamie Perez:**

Discuss the impact of resources and resource allocation (including office and lab space) on the careers of young faculty. Identify positive and negative aspects of resource availability and constraints.

Discuss the feedback provided by the chair in annual reviews. Consider: validity, pertinence, impact.

Mentors: do young faculty need mentors? when? who? how? why? what kind? What kind of variation can you envision in both the receptivity of mentoring and guidance offered?

Collaborators: Identify the advantages and disadvantages to collaborating. In particular, address difficulties related to the assessment of collaboration at the time of tenure and promotion. What alternative approaches to evaluating collaboration might be appropriate?

Graduate students: Identify means of measuring impact on graduate students. Consider number, retention, quality, graduation rate, post-graduate success, satisfaction and appropriate mechanisms measuring these.
What would you like to see in Perez’s record (including letters) that would help you decide on tenure and promotion?

How did assumptions about Perez’s ethnicity influence your reading of his case? Assume that Perez is of Hispanic origin. How could minority status have affected the evolution of his education and of his career? Identify positive and negative aspects.

How might Perez’s minority status have affected the tenure and promotion committee and the chair’s evaluation of his case? Identify positive and negative aspects.

Patty Shen:

What consideration should the promotion and tenure committee give to Shen’s leave of absence? Her term of modified duties? Her post-childbirth medical issues?

Discuss how variations in performance over a period ought to be considered in tenure and promotion decisions. Which aspects should be considered in making this judgment?

- Productivity over a particular period and/or average annual productivity?
- Achievements during one’s career and/or one’s employment at the university?
- Cumulative achievements?
- Individual productivity related to comparable peers at the university and/or in the discipline?
- High productivity in the 1-2 year period just before the decision?

What assumptions related to Shen’s parental status influenced your reading of this case?

How might considerations related to parental status have affected arguments presented by Shen’s reviewers? Identify positive and negative considerations.

Do you consider that gender and family responsibilities are coupled? In other words, is there a difference between considering family responsibilities for cases of male and female faculty members? If so, how do they differ?

What considerations related to parental status affected perceptions of Shen’s performance? Identify positive and negative considerations.

Consider the chair’s role in advising Shen about when to come up for promotion and tenure. What responsibilities (if any) does the chair have to guide Shen’s case toward a positive outcome?

Mentors: do young faculty need mentors? when? who? how? why? what kind? What kind of variation can you envision in both the receptivity of mentoring and guidance offered?

Carl Anders:
What role does Anders’ disability play in developing his past and future performance profile? What advantages or disadvantages related to his disability accrue during his career?

Discuss the impact of teaching schedule on careers of young faculty. Identify positive and negative aspects of teaching schedule (schedule, not load).

Discuss how a change of administrator can affect faculty development. Consider how the different principles articulated by each of Anders’ chairs regarding teaching schedule and faculty accessibility can impact the individual and the department.

Consider the role of service to the university and to the profession in evaluating Anders’ case. How much (and in what way) should his research and service on behalf of the disabled be counted?

What assumptions related to disability influenced your reading of Anders’ case?

How might considerations related to disability have affected arguments presented by his reviewers? Identify positive and negative considerations.

What considerations related to disability affect perceptions of Anders’ performance? Identify positive and negative considerations.

Assume that a tenure decision is essentially a “bet” on the academic potential of an individual based on past performance within a given context. What information would you like to see in Anders’ case that would help you make this decision?

CASES

[Issues: significance of letters of reference and what kind of service counts]

Samia Mansour, Ph.D. in Biochemistry from the Johns Hopkins University, was hired as an assistant professor by the Department of Physical Sciences at a prestigious research university. Mansour’s research field has long been central to the university; she joined a number of colleagues who do similar and complementary work in the same field. Her start-up package was slightly better than average; she had four offers to consider at leading universities. Mansour was immediately asked to participate in a campus committee charged to study why so few women are employed in science during her first year. In her second and third years, she was invited to serve on two similar committees at the university level.

During her first three years at the university, Mansour produced an extraordinary number of publications in the top-ranked journals in her field, including one prize-winning paper. She wrote most of her papers with a small group of faculty and graduate students, but some represented collaborations with just one or two individuals, typically graduate students.

Mansour’s funding level as an assistant professor was within the average range for her field and slightly higher than the departmental average. She was able to secure a lab budget based on a
National Science Foundation (NSF) grant for new faculty in her area as well as some training grants for individual graduate students. She also partnered with colleagues in developing novel methods of drug delivery on a moderate grant from a pharmaceutical company.

In her third year, she won an NSF Faculty Early Career Development Award, largely for writing one paper that garnered much national attention for its novel approach to a particular problem. [She also won a Presidential Early Career Award; or is this too much?]

Her undergraduate and graduate students generally awarded her good teaching scores. Evaluations for the intro-level undergraduate course earned some negative comments from a few students about her casual attire; as a result, Mansour upgraded her wardrobe and began to wear tailored clothing. She attracted excellent graduate students to her lab, encouraging some undergraduates to continue graduate study at the university and welcoming new graduate students. At the end of her third year, she was nominated for a college teaching award by the undergraduate coordinator with a recommendation from the graduate director who cited her “dedication” and “long hours of working in her lab along with graduate students.”

In addition to her work on women’s issues, Mansour was appointed to a number of unit and college committees concerning visiting speakers, honors, and searches. She became especially active in a professional society and in her college’s network for junior faculty in sciences, for which she helped organize a session on grant-writing for new faculty. Issues concerning women in her unit, and to some extent in sciences more generally, fell on her shoulders, as manifested by numerous invitations by chairs and deans at her university to address student and alumni groups.

During her fourth year, Mansour consulted with her chair about coming up for an early decision on promotion and tenure. As she had established a body of work and a set of achievements comparable to others in her field, she and her chair were confident of her chances to be promoted and receive tenure on this accelerated schedule. He had found her agreeable to serve in a broad range of roles at his request and considered this along with her PECASE as indicative of well-balanced roles.

At the beginning of her fifth year, Mansour’s case came up for review in her department. The letters of reference in her promotion and tenure dossier were generally good, except for one taking issue with her celebrated paper. The one negative review avoided addressing Mansour’s entire scholarly output; instead, the reviewer took an extremely hostile approach to the argument of the celebrated paper. One member of the promotion and tenure committee noted that this review was so detailed that it could have been published as an oppositional argument in a journal along with Mansour’s paper. This reviewer also commented negatively about Mansour’s style of presenting papers at meetings of a professional society, raising some suspicions of a personal grudge. Another reviewer commented as much on the value of Mansour’s service to the profession, especially for women in her field, as on the value of her scholarly research.

The unit promotion and tenure committee is split about whether to emphasize the negative review or the one privileging service and whether Mansour’s case should be forwarded to the next level. One member expresses the view that her case should be eliminated from further consideration this year, ideally by having the chair of the department speak with Mansour about
As a member of the unit-level promotion and tenure committee, what consideration would you give these reviews in evaluating Mansour’s scholarship and career? What would you suggest regarding whether Mansour’s case ought to be considered early or during the next year?

[Issues: evaluation of collaborative research, constraints regarding courses/lab equipment, graduate students]

Jamie Perez, Ph.D. in Materials Science and Engineering from MIT, joins a prestigious research university as a tenure-track assistant professor after completing post-docs at Berkeley and Northwestern. At the time of hiring, the search committee notes a one-year gap between post-docs, a time when Perez studied as a Fulbright Scholar at a European university. Support for his faculty slot is earmarked from the Dean’s office for the first two years of the appointment by virtue of an underrepresented faculty hiring initiative.

Perez’s start-up package was average for faculty in that unit, but there are some glitches in finding adequate lab space and equipment. While he had been verbally assured during his negotiations that he could share the lab of a senior professor, Perez is told upon arrival by the senior faculty member in his interest group that the senior faculty member’s group has priority, and he has limited Perez and his students to two hours per week in that lab. The chair then sent an e-mail to Perez about a change of plans, suggesting that he share a lab with another entering assistant professor until the following year, when the senior colleague moved to a new building on campus. Although somewhat constraining to the research programs of both individuals, this logistical arrangement encouraged the two new colleagues to collaborate on a small research project with some industry funding while also continuing their individual research agendas. The chair recommended at the first annual review that Perez “pay greater attention to research funding in areas more closely linked to the unit’s focus” and “try harder” to attract graduate students.

In year 2 Perez established a functioning independent lab, attracting a small number of graduate students, and published a paper in a journal about teaching undergraduates and one (with two collaborators) in a significant journal. The small amount of industry funding for collaborative research continued, and Perez was again counseled by his chair during the annual review to pursue more funding. In year 3 Perez coauthored papers in two important journals and worked as the sole materials science and engineering faculty member on a multidisciplinary project with four other faculty members from different engineering and science units. The collaborative, five-year project attracted $5 million funding from the National Science Foundation and supported one post doc and three graduate students in Perez’s lab. During this period Perez taught only relatively large undergraduate service classes, as senior professors in his interest group claimed the specialty and advanced courses in his area.
The third-year review of Perez’s work resulted in a somewhat mixed evaluation. The school chair counseled Perez to “keep up the good work with teaching and service” but expressed his concern that Perez had not been able to secure more than a minimum amount of individual funding despite a very reasonable record of publication in top quality journals. The chair was also concerned that Perez had trouble retaining the more marginal graduate students assigned him (the more promising students were assigned to the most senior faculty in the same interest group). During his review meeting, Perez requested that his chair exercise leadership over the interest group so that he can teach graduate courses in his field and therefore attract more and better graduate students. The chair suggested that perhaps Perez “instead ought to consider devoting more time to individual research, especially in an area more closely related” to the unit’s interests and strategic plans to supplement his collaborative work. The chair also expressed concern that Perez was not playing a leadership role in the interaction with other departments on the large NSF grant.

By the time of tenure review, it is clear that Perez did not emphasize pursuing any individual grant funding, as his chair suggested. Perez remained a popular teacher, according to evaluations of MSE majors, and a valued advisor as attested by some graduate students. He was somewhat more inclined than other faculty members in the unit to take on certain advising and other committee responsibilities. Although he attracted little individual funding, Perez was able to keep up a moderately active and fairly well funded research program in an area not well developed in the unit because of the multi-disciplinary collaboration.

In the unit promotion and tenure committee, questions are raised regarding Perez’s future funding potential as an individual researcher, as a teacher of graduate students, and the value of his area of research for the unit. As a member of the committee, how would you respond to these concerns and ensure that Perez receive a fair hearing?

[Issues: fluctuating productivity, leave of absence in probationary period]

Patty Shen, Ph.D. in Computational and Neural Systems from the California Institute of Technology, entered a prestigious research university as an assistant professor. She specialized in distributed computing and computation in neural and biological systems within the biomedical engineering group. Her start-up package was higher than average as her field was relatively new and required the purchase of some fairly expensive parallel computing and visualization equipment. Because Shen considered a competing offer, the department engaged in a bidding war to induce her to accept the appointment. Three other assistant professors in closely related areas were hired in the same year with packages not as generous as Shen’s. At the end of Shen’s first year, her chair complimented her on establishing “a good rapport” with her graduate students and for her success in publishing two papers based on her group’s work, with two more in press.

Publishing additional papers in Nature, Neuron, The Journal of Computational Biology, Current Biology, and elsewhere, Shen continued her steady publication record through her next two years. She also took on responsibility for teaching one of the core courses for the undergraduate program and for introducing a key new graduate course in her area, earning above average and
excellent evaluation scores from students. Exit interviews of seniors conducted by the chair indicated that all students appreciated Shen’s thorough approach and that many, especially women, found her to be a valuable role model.

In her third year, Shen won an NSF Faculty Early Career Award. In addition, during her probationary period, Shen and two junior colleagues, along with two senior professors, developed a new center in biocognitive processing that was nurtured by the university before attracting a good deal of National Science Foundation funding.

Anticipating the birth of a child during the summer following her third academic year at the university, Shen requested during the prior spring two considerations: to receive an unpaid leave of absence during the subsequent fall term and to be released from teaching duties during the following spring under provisions of the university’s Active Services Modified Duties Procedure. In lieu of teaching responsibilities in the spring, she proposed to design a new elective for upper-division students in her field and to continue working with the center that she helped develop. Her requests were granted, thereby stopping her tenure clock for one year.

During the year of her leave of absence and modified duties, Shen laid out plans for the new course and published two papers that had been in process. Unanticipated post-childbirth medical complications necessitated a long period of medical therapy, and she was unable to devote much time to her research during the time away from teaching as she was also coping with the demands of an infant. A private person, Shen did not share information about her medical condition with her colleagues, excepting her chair and dean whose confidence was requested because Shen needed them to support her need for a particular schedule and for a limited set of service responsibilities.

During the following year, Shen’s official fourth year of service, she returned to teaching and earned speaking invitations at European and Asian seminars. It is in this year (the year after her child is born) that her publication record revealed a demonstrable gap: she had not submitted any publications and none were published in that year. Her own medical problems diminished her ability to mount focused technical efforts in the year following her leave.

By her official fifth year, Shen’s medical problems abated, and she was able to accelerate her research productivity. In this year, she published and prepared more papers than any other professor in her unit and she received excellent evaluations from her undergraduate and graduate students, although she was able to contribute only minimal service efforts to her department given her family schedule. As her tenure clock was stopped for one year, Shen would have come up for tenure in her official fifth year. Because of the earlier gap in her publication, her chair advised her instead to wait until the following year (her official sixth) to come up for promotion and tenure evaluation. Somewhat reluctantly, Shen agreed.

By the time she came up for tenure (in her official sixth year and seven years after entering the university), her rate of publication dramatically increases, and her total record—in terms of the quantity and the quality of scholarly papers, her teaching evaluations and contributions, and her service—resembles those of the other assistant professors coming up for evaluation at the same time. Letters from reviewers indicated that Shen has a strong scholarly reputation and that her
work has key significance for her field. One reviewer mentioned Shen’s medical difficulties following childbirth, an admission surprising the committee members who had not been previously informed. Some committee members had noted in earlier, initial committee discussions that Shen seemed to “appear and disappear” on the scene through the years, recalling lengthy periods in which she was not in attendance at faculty meetings and retreats. Her involvement in faculty committees was minimal as well.

Her original cohort had already earned promotion and tenure, but Shen’s stopping of the tenure clock for one year and her decision to wait until her second opportunity delayed her case another year. As a member of her school promotion and tenure committee, how would you respond to concerns raised by another member that Shen has taken too much time to get to the same place as others under evaluation that year, that she may have accelerated her productivity over the past 12-14 months simply to be more competitive in the tenure process, and that she might not be able to sustain such productivity in the future?

[Issues: disability, change of department administration, and teaching schedule]

Carl Anders, Ph.D. in Computer Science from Indiana University, accepted an appointment as an assistant professor in the Department of Computer Science of a prestigious research university after a two-year post-doctoral appointment at the University of Illinois at Urbana-Champaign. Anders negotiated carefully with the university regarding specific needs based on his disability, a cervical spinal cord injury limiting arm function. He used a power wheelchair for mobility and could not drive so he remained dependent on public (bus) and paratransit (private) transportation. Anders had recurrent pressure ulcers that he managed by limiting his sitting time. Because he could not transfer independently, Anders avoided sitting more than 8 hours at a time. Because his bus commute was 45 minutes, he limited his on-campus time to 6 ½ hours per day. At home, he was able to work from his bed to which he could transfer by using a ceiling-mounted lift. This permitted him to work longer hours at home than he could work on campus.

The department chair hiring Anders assured him that the university's computer science department had great flexibility regarding course schedules and that the size of the faculty permitted the scheduler to meet individual needs regarding day/time of course meetings. Anders insisted on having a clause in his contract indicating the department would do all in its power to reasonably accommodate Anders' disability by scheduling courses within the period of 10 am-4 pm, preferably on a two-day schedule. This schedule assured that Anders would be able to travel efficiently via public transportation by avoiding a longer rush hour commute that would take a physical toll on him.

During his first three years at the university, the department scheduled Anders for a graduate course and an undergraduate course, within his preferred time period and generally according to a two-day schedule, but sometimes with the graduate course scheduled for a third day. In this time, Anders published more than the average faculty member each year, eventually producing 35 papers, co-authoring a book with a colleague from another university, and organizing program committees for significant conferences. He also partnered with his collaborator on an industry grant to work on accessible computing interfaces for the legally blind. Anders' teaching evaluations were excellent; students reported that he frequently met with them on-campus on his
teaching days, and encouraged them to use email, to phone, or to visit him at his home office by
appointment on other days. He served in his second year on a departmental search committee and
in his third year on the university's Presidential Commission for the Disabled.

Anders' work schedule did not cause any controversy during the period prior to his third-year
review. He generally spent three days working on campus. His office and lab were made
accessible for a power wheelchair and only minor computer equipment purchases were needed to
permit Anders to use them effectively. The other two weekdays (plus weekends) he worked from
his home office 10 miles from campus. On occasion (perhaps three or four times each term) he
would come to special department, interest group, and committee meetings and other events
outside of his normal schedule, scheduling paratransit at his own expense.

Anders' third-year critical review garnered him a very favorable evaluation from the
departmental committee and praise from his outgoing chair. His colleagues remarked on the
originality of his research, his dedication to his students, and his continuing, fruitful
collaboration with his colleague, which was expected to lead to the creation of a university center
on adaptive technologies for human-machine interfaces.

During Anders' fourth year at the university, the department welcomed a new chair, hired from
outside the institution. Facing a period of budget problems dominated by the need to save
money and use resources wisely, the new chair did not feel bound to honor any previous
commitments made to individual faculty, and pronounced a "clean slate" on policies and
procedures. As a result, the department scheduler was instructed to make sure the classrooms
were used efficiently and to treat the faculty the same. Under the new protocol, faculty would
alternate two-day and three-day teaching schedules depending on the term. In addition, all
faculty members were enjoined to work from their department offices except during periods of
vacation or professional travel to better serve the mission of on-campus instruction and
advisement. Anders immediately set an appointment to discuss his needs and request for
reasonable accommodation with the new chair. He was assured by the chair that although she
understood the difficulties of his situation and was supportive of his arrangement to work from
home occasionally, "it would not be right" for the department to accommodate his needs to teach
on specific days on a permanent basis and that he would need to make his requests each term.
Anders consulted with the campus office on disability; the human resources representative
accordingly spoke with Anders' chair to explain that the department ought to do all it could to
accommodate Anders' need for a restricted schedule, even if it meant that other faculty (i.e. those
without disabilities) might not have their scheduling preferences met. This negotiation improved
Anders' schedule, but caused his chair to be less cordial with him.

By the time of promotion and tenure, Anders' record looked more erratic than it had at the time
of critical review. Letters of reference indicated that his work, especially the earlier papers, were
highly regarded and even "inspirational" for others in his field. His overall publishing
productivity was below average, as his productivity had diminished significantly in the last two
years. The center (which he co-directed) garnered some funding from industry affiliates and
alumni, but not extensive levels. His teaching scores had also dipped. In terms when he was on
a three-day schedule with classes offered early in the morning or later at night, students reported
that Anders was often late or had to leave early and appeared clipped and brusque, encouraging
students to use email to correspond rather than to meet with him outside of class. Some members of the committee had heard Anders complain about the change of departmental leadership in terms of a breach of agreement, but consultation with the unit chair did not bear out any substance to this line of argument – she indicated that he received special considerations of schedule flexibility and office hours compared with other faculty.

At the promotion and tenure committee meeting, one member notes that some graduate students had complained about Anders’ lack of accessibility. Others recall that the chair had commented on Anders not attending a number of departmental lunches and other events related to his areas of research and that he was not often in his office.

As a member of the promotion and tenure committee evaluating Anders, how would you respond to the concern that his record demonstrates diminished productivity and that he was not a team player in the departmental efforts to achieve excellence?

[Issues: how technology gets evaluated in social sciences, promotion to full, age]

Sophia Richards, having earned her Ph.D. in Science and Technology Studies from Rensselaer Polytechnic Institute, joined a prestigious research university after spending six years doing development work with the Carnegie Foundation. Her research described how changing electronic technologies affected the formation of world markets; her particular specialization concerned electronic bank interfaces in southeastern Asian economies. By the time she joined the university, she had established a body of research (in terms of quantity and quality) equivalent to that of an associate professor, so her initial university appointment was made at that level, but she was a decade older than the typical beginning associate professor.

Richards earned tenure in her second year at the university, as she continued her previous high rate of productivity measured by cited papers and funding. In her first four years, the number of her papers, their citations, and the amount of funding she received were among the highest in her college. She typically taught the introductory course in Asian area studies, an upper division undergraduate course in Asian microeconomics, and a graduate course on science, technology, and developing nations. Students flocked to her courses and provided her universally excellent teaching scores.

In her fifth year, Richards was awarded funding from the Rockefeller Foundation to establish a lecture series and to support some fellowships in southeast Asian economics for graduate students to collaborate with her on research. She also designated some funds to buy her out from some undergraduate teaching.

Connected with the Rockefeller project, Richards established a website to publish research on technological breakthroughs in international economies, and proceeded to develop it into the only electronic journal in the field. Although all of her previous work appeared in print journals, she began to publish about 30-40% of her papers through the website as of her fifth year at the university.
In her sixth year, Richards built on her development success with Rockefeller by securing a substantial endowment from alumnus Gregory Chan, who had never before donated to the institution. Chan was impressed with her scholarship, her coordination of the Rockefeller lecture series, and her energy and diligence in expanding the curriculum in international studies of science and technology. He designated the endowment for a distinguished chair for a scholar in technologies of markets to be named at some near future date.

During that same year, Richards became more involved with the web journal, publishing two-thirds of her papers electronically on her own web journal. Richards came up for promotion to full professor based on her new work [20 articles on the website and 10 additional papers in scholarly print journals], the Rockefeller grant, and having fostered the endowment. It is widely understood that such a promotion is necessary for her to be eligible for the Chan chair. There are rumors among faculty in her college that some sort of deal has been made with Chan that Richards should be awarded the Chan chair.

Although Richards’ record was generally regarded as within the acceptable range for a promotion to full professor, several concerns were raised by members of the promotion committee regarding whether she has relied too closely on her Carnegie contacts in receiving the Rockefeller funds, whether her scholarship has recently slipped in that much of it appeared on the website the Rockefeller project sponsors (some faculty express concerns whether those papers are properly reviewed in the context of an electronic journal that she edits), and whether she has tried to leverage the system in recruiting a large donation for a chair that seems designed for her. How would you consider such concerns in the context of evaluating whether Richards ought to be promoted to full professor?

[Issues: soft vs. hard research, joint appointment, advanced assistant professor]

Robert Sorel, PhD from Cornell in Aerospace and Mechanical Engineering, with a dissertation on computational methods for modeling ion propulsion systems for space exploration, joined the faculty of a prestigious research university as an advanced assistant professor jointly appointed to AE/ME (primary appointment in AE), after working four years in AE/ME at Princeton. Sorel moved to the new university for personal and professional reasons. He desired to move his family closer to extended family, and he wanted to collaborate more closely with the AE/ME research center on propulsion systems.

Sorel’s research field is fairly new to the university, recently attracting attention to the work of a number of highly regarded researchers from respected programs of engineering and physics. After being at the university for one year, he published a paper with two colleagues and four graduate students in a top-tier journal. After two years at his new university, Sorel and collaborators attract a great deal of funding, some from NSF and some from the aerospace industry. They published their results in three of the top journals in the field on a consistent basis. Sorel published at a rate somewhat above that of his peers in such journals, but he maintained a funding level twice the average per capita funding in the AE department over the past four years.
The youthful, exuberant Sorel and a collaborator shared an award for a paper in his second year at the new university from a division of his professional society. The focus on their work earns Sorel a number of invitations to speak at international symposia, and sometimes other team members.

The success of their modeling effort encouraged Sorel’s team to start up a company consulting with aviation manufacturers. Although Sorel requested a one-year leave of absence to develop the company, his chair refused to grant it, citing the need for Sorel to establish himself at this university. The team nevertheless manages to spin off a company, which Sorel directs in his hours off campus.

Never assigned undergraduate courses, Sorel taught only graduate students specializing in his field. He received excellent evaluations from a relatively small number of students, who comment on how much they enjoy the competitive but social atmosphere of his classes and lab. He also advised a student receiving best student paper from professional society.

Sorel served as a member of departmental speakers’ committee. Most members of his unit regarded him as a difficult person to work with and made every attempt to avoid collaborations in teaching and research. He was not appointed to any other unit committees, nor has he been appointed to higher-level committees outside the unit.

Letters of reference for Sorel provided at the time of promotion and tenure were very positive, noting his quick start in a cutting-edge field and the significance of his research. Two prominent potential referees that Sorel did not know personally declined the opportunity to send letters, citing time issues.

Discussion in the unit-level promotion and tenure committee centered on the intrinsic value of Sorel’s work, questioning whether the computer modeling he was personally credited with developing was as significant as the “hand-picked” reviewers suggest and whether this kind of research was “substantial” enough to earn tenure. One member also raised the issue of Sorel’s difficult personality as a problem affecting the scheduling of undergraduate courses and his lack of service contributions. Another member cited discomfort with Sorel’s manner of socializing with graduate students, hosting frequent social events with them, dressing casually like them, and spending considerably less times in social settings with faculty in the department, attending receptions for prominent seminar speakers, and so forth. This point was not picked up for further discussion. The committee chair recollects information he had heard at lunch about Sorel’s startup company and how it had been pursued against the wishes of the department chair; the committee chair suggested that perhaps Sorel needed to decide where he wanted to devote his interests and energy – in academia or industry. As Sorel was not involved in committee work or in undergraduate education, some committee members see him as lacking interest in the basic mission of the university.

As a member of the committee, how would you respond to concerns that Sorel’s research is perhaps too specialized and lacks novelty, that he is very difficult to work with, and that some references apparently were not interested enough for some reason to write on his behalf?
Arthur Stevens, Associate Professor in Mechanical Engineering working in the area of automatic control systems, came up for promotion to full professor after five years in grade. He published 35 articles during his 10 years at the university; 17 of these articles appeared in conference proceedings. One of his articles won a best paper award within an ASME session devoted to novel advances in control of smart structures. Stevens was almost always listed as last author of his collaborative publications, except for two papers listing him as first author. His collaborators were almost all graduate students. He never published an article, book, or conference proceeding as the sole author. He applied for one provisional patent in his sixth year, but did not pursue the full patent agreement when it came to term.

Regarded as a capable, confident teacher who offered a range of required and elective courses needed by the unit, Stevens’ teaching averages on his student evaluations ranged from 3.8 to 4.2 in undergraduate courses and from 4.3 to 4.5 in graduate courses (on a five-point scale). A number of undergraduates remark on evaluations ranging over recent years that Stevens is “very accessible” and an “interesting lecturer” who provides “wonderful illustrations and graphics” to get across his points. Although he has been nominated for his school’s teaching award, he has never received it. He carries the load in teaching courses in his area. Graduate students in his research group attest to his willingness to advise them regarding career prospects in academe and industry. Some students express amazement at his accessibility compared with other faculty.

Stevens managed to support his research group with a steady funding level of $200,000 per annum average, slightly below department norms. He was a good citizen, serving diligently and effectively on several different school-level committees. As a good deal of his research has commercial application, much of his funding has come from industrial sources.

Stevens never served on university-level committees, nor did he take leadership roles in scholarly and professional organizations, although his collaborative articles have established his international research reputation in the field; two of the five articles submitted with his promotion dossier were termed “breakthrough” and “now classic” by two external reviewers. One committee member comments that it is her understanding that his field is fairly specialized and small, so it is possible that the reviewers are too familiar with the candidate; she points out that both glowing reviews come from faculty who shared the same graduate institution as Stevens.

Some members of the school-level promotion and tenure committee endorse promoting Stevens to full professor because he is a good citizen and a “good guy.” They argue that if he does not get promoted it might upset him and there is no point of that. Others question whether his publication record is adequate for such a promotion. One member is concerned that 17 journal articles in ten years “aren’t competitive,” as many current applicants who have done post docs already have 5-10. Another member is concerned that only half of Stevens’ papers are from refereed journal articles, while yet another member argues that as the last author, Stevens had little technical input into these papers. As a member of the committee, how would you respond to these concerns and ensure that Stevens receives a fair evaluation?
Pam Lee, Ph.D. in Economics from the University of Chicago, was hired by a prestigious research university’s management program to teach econometrics. Although she is one of a dozen economists on campus, she is only the third econometrician and replaces a retiring star in the field, someone considered an anchor of a graduate program ranked in the top three in the nation. Lee’s very prominent graduate advisor highly recommended her as his best student in the past decade, indicating that her dissertation was “groundbreaking” and “revolutionary” in creating a new theoretical model for the field.

A deferential, somewhat quiet person unless probed about her research, Lee had a rocky start with her university colleagues and students. Some undergraduates complained to the undergraduate coordinator about her accent, and some graduate students reported that Lee is “too rigorous” “especially concerning statistical analysis”. Although the preponderance of faculty in the department see Lee as merely “young” and “a little shy,” two faculty members express concerns to the chair during her first term about Lee’s “inability to socialize” and “fit in.” The chair, also an Asian immigrant, regarded Lee as undergoing the typical adjustment period of a new faculty member struggling to shift from star graduate student to novice teacher while keeping up a high research profile. The chair encouraged a sympathetic senior faculty, not directly in her research area, to mentor her. After an initial lunch meeting with Lee to offer his mentoring input, the senior faculty member drifted away from the arrangement, too busy to set appointments.

During her first three years at the university, Lee presented four conference papers on sophisticated, technically rigorous statistical analysis methods, complementing the work she did in her dissertation; she also published one journal paper based on her dissertation. She improved her undergraduate and graduate teaching ratings by working with professionals at the university center for teaching and managed to attract two graduate students to work closely with her. She also expanded departmental offerings in her field and created a sequence of two undergraduate courses in econometrics.

At the time of her third-year critical review, her chair conveyed the review committee’s warning about her lack of publications. He encouraged her to stay in touch with him and to work closely with two other colleagues “to generate more papers.” After being initially taken aback by this criticism, Lee agreed with her chair that she would “appreciate some advice.” She sought out faculty her chair helped identify as her mentors, sharing two new conference papers with them and asking them for editorial criticism and guidance on improving her publication record.

Although the two mentors worked in different fields, they recognized that Lee’s papers were hampered by her awkward written English and her tendency to rely solely on complex formulas to demonstrate her argument. One suggested that Lee bone up on her grammar and general writing skills by studying an English composition text, and the other encouraged her to read The Wall Street Journal and some American novels to develop a more fluid style. They also encouraged Lee to think about applications of her theoretical models to their fields, finance and macroeconomics.
Lee worked hard to improve her English and accepted the offer to collaborate on an article with one mentor. He devoted time during the process of co-writing to show her how to put together a scholarly argument, and he helped her understand how they could manage the journal reviewers’ comments in revision. Lee’s other mentor took a less active role in improving her productivity, suggesting two applications of her theoretical method that might prove promising. She wrote one paper designated for a journal suggested by this mentor, who offered comments before she mailed it off. Benefiting from the advice and contributions of these senior scholars, Lee managed to get two articles (one collaborative) accepted in her fourth year. In her fifth year, she wrote two archival papers, one with her previous collaborator and another on her own, which were also published. Her mentors complimented her on greatly improved writing skills.

One mentor, fascinated by Lee’s application of her theories to his subfield, developed and submitted a proposal for funding based on this method to an agency, citing their joint paper as the basis for the work. However, Lee was neither consulted nor included in the development of the proposal or as a co-investigator. She was visibly upset when she learned of this from another colleague who comments that he understood that her mentor was now working in the same field; confronting her mentor, he informed her that there is no monopoly on good ideas and he was in the best position to develop this premise within his own subfield. With that, the mentoring relation ended, but Lee decided to keep the situation to herself given the fact that the department chair had recommended this mentor and was his close associate.

Three letters of reference commenting on her tenure and promotion case were very positive, indicating that her publications posit original, rigorous theoretical claims. Two others referred to further interesting applications. The sixth highly positive letter comes from a senior scholar, known for being Lee’s mentor’s first graduate student. By the time Lee comes up for promotion and tenure, she has published five scholarly articles (one in *Econometrica*, the leading journal in her field, and four applying econometric analysis to other fields), given an average number of conference papers, and participated on two department committees. A member of the promotion and tenure committee questions whether this level of productivity demonstrated largely within fields other than econometrics justifies promotion and tenure at the university. Another member cites that he has input from a former mentor that Dr. Lee is intelligent but is difficult to communicate with and to work with. As another member of the committee, how would you respond to these concerns about Lee’s productivity and collegiality?

**[Issues: international reputation and spousal concerns]**

**Helen Clemens**, Ph.D. in Mathematics from New York University, joined a prestigious research university as an assistant professor of mathematics, specializing in mathematics of differential equations related to self-organizational phenomena and chaos. She was hired the same year and in the same department as her husband Joseph Smith, an up-and-coming star in set theory and fractals who was hired after working three years as an assistant professor at Yale University.

Clemens quickly established a reputation as an excellent teacher of mathematics majors. Her upper-division course in her specialty field became one of the department’s most popular courses for majors. She also became known as an accessible graduate advisor who took great care in mentoring her students’ professional development.
Clemens was invited to give many international presentations in her area and to become a member of a significant number of conference program committees. She was also a frequent speaker at meetings of physicists interested in application of her mathematical tools to physical systems. Some of her university colleagues in other research areas suggested that her frequent invitations to participate in workshops and panel discussions reflected diversity needs rather than acknowledging her intellectual acumen. Others claimed she rode on the coattails of her husband, her sometimes collaborator. While Clemens’ international experiences were prestigious, they often required her to travel to Europe for meetings. She was consequently less accessible to colleagues than most peers. Most of her time on campus was spent teaching courses, advising students, or serving on institute-level committees.

By the time of her third year critical review, she published only five articles, albeit in important journals. Her husband collaborated on two of these; on one, Clemens was first author, and on the other he was first author. Their achievements were the subject of an article in The Chronicle of Higher Education about successful couples in the sciences. Clemens and Smith were also profiled in national newspaper articles focusing on emerging connections between biology and mathematics. Smith had established strong interactions with the biology department in applying concepts of fractals to complex hierarchical cell structures. The committee considering her third year critical review recommended warning her to accelerate publication. Her chair advises Clemens to “concentrate more on publishing and less on publicizing.”

In her next two years, Clemens worked hard to publish in significant refereed journals, producing four papers (one in tandem with her husband) and three articles in conference proceedings. In addition, she was listed as co-PI on one of his grants.

In coming up for promotion and tenure, Clemens was considered an excellent teacher by undergraduates and graduate students and an excellent mentor of women students. Her publication record was a bit below average, but her citation rate was higher than average, and she was well known in Europe, for example. Letters from reviewers, two of them prominent European mathematicians, characterized her individual work as “very good,” “substantial,” and “first-rate.” Articles written collaboratively with her husband were cited as “highly influential” and “amazing.” There are no negative reviews.

Questions arise in the unit-level promotion and tenure committee regarding whether Clemens’ record of individual productivity meets the minimum standard and whether her productivity and the impact of her work depend on her husband. One member wonders if Smith (already tenured and promoted) will leave if Clemens does not get tenure. As a member of the committee, how would you respond to these concerns?