Computer Science Department P&T Guidelines

Adopted May 5, 2011

This document provides guidelines for promotion and tenure in terms of teaching (Section I), research (Section II), and service (Section III). The primary philosophy underlying the guidelines for promotion from assistant to associate professor with tenure is that the candidate should show evidence of effective teaching and continuous research productivity. For promotion from associate to full professor, the candidate should show leadership in research and/or teaching.

I. Evidence of commitment to and effectiveness in teaching

There are many types of teaching-related activities that should be considered in assessing a faculty member’s commitment to and effectiveness in teaching. The following list illustrates activities in five main categories. For category T1, subjective evaluations are used as evidence. In categories T2 and T3, the quantity and breadth of reported activities mainly serve as evidence, although letters may be provided commending exemplary service. In categories T4 and T5, for some activities quantity may serve as evidence and for others, indicators of quality such as those used in assessing quality of research may be more appropriate.

Faculty at all ranks must demonstrate adequate commitment to and effectiveness in category T1. In addition, faculty should show evidence in the other categories, but there are different expectations for different ranks, as shown in the following table. In the table below, ‘any’ means that anything in the given secondary category strengthens the evidence, but is not expected.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Primary (expected) activities</th>
<th>Secondary activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion to associate professor with tenure</td>
<td>T1: all</td>
<td>T3: any</td>
</tr>
<tr>
<td></td>
<td>T2: a and/or b</td>
<td></td>
</tr>
<tr>
<td>Promotion to full professor</td>
<td>T1: all</td>
<td>T2: any others</td>
</tr>
<tr>
<td></td>
<td>T2: a</td>
<td>T3: any</td>
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<tr>
<td></td>
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<td>T4: any</td>
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<td>T5: any</td>
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</table>

T1. Instruction of courses (regular and independent or directed study)

a. Peer (higher than current rank) evaluations of teaching portfolio and other class materials (e.g. materials posted on BlackBoard or web)

b. Peer (higher rank than current rank) evaluations of classroom teaching performance (adequacy of preparation, clarity of communication, appropriateness and currency of material, and adequacy of responses to student questions)

c. Student evaluations: end-of-course surveys and letters from current and former students (solicited and unsolicited)

T2. Promoting student research

a. Supervision/co-supervision of student’s CS or multidisciplinary research for degree requirement in our department, other UNCG departments/programs, or
another university; the research may be at any level: Senior Project, Masters Project/ Capstone/Thesis, Ph.D. Dissertation, etc.
b. Membership on committee for any of the above
c. Supervision of other undergraduate or graduate research assistants
d. Supervision of research meetings in faculty’s lab
e. Review of research papers/presentations authored/co-authored by students
f. Writing grant proposals targeted for student research (e.g. UNCG Undergraduate Research Assistantship)
g. Promoting student interest in faculty’s research via lab open-house, lectures on research interests, web pages, fliers, etc.

T3. Other local teaching-related activities
a. Development of course materials shared with other faculty in department (syllabus, lecture notes, problem sets, etc.)
b. Proposing/implementing new or redesigned courses, on-line courses, etc.
c. Proposing/implementing changes in degree program (degree requirements, new concentrations, etc.)
d. Comprehensive exam for M.S. (writing, grading, etc.)
e. Promoting professional training and careers for students (supervision of internships, providing job references, etc.)
f. Promoting advanced degrees in CS or other majors for students (writing letters of recommendation to graduate schools, organizing student travel to conferences, etc.)
g. Advising student academic activities (programming contests, Honor Society, Student ACM, etc.)
h. Academic advising (both for individuals and programs for groups of students)
i. Informal tutoring/mentoring of individual students beyond that expected for courses
j. Supervision/participation in informal academic activities (e.g. reading/discussion group)
k. Supervision of graduate assistants in non-research related activities (database administrator, etc.)
l. Supervision of teaching assistants
m. University teaching awards
n. Attendance at teaching enhancement workshops.

T4. Contributions to CS education outside of UNCG
a. Writing textbook, contributing chapter to textbook, or reviewing textbook
b. Publications and conference presentations on CS education
c. Development/evaluation of educational software for CS education
d. Development/evaluation of educational approaches for CS education
e. Attending conferences on CS education
f. Awards for contributions to CS education
T5. Special programs to encourage STEM Diversity/Recruitment/Retention (at UNCG or outside UNCG)
   a. Writing grant proposals for these special programs
   b. Development/evaluation of these special programs

II. Evidence of research productivity

As discussed in the 1999 CRA Best Practices Memo: Evaluating Computer Scientists and Engineers for Promotion and Tenure, assessment of research productivity should include both written works (R1) and artifacts (R2). The following table summarizes the types of research activities within these two categories that are expected for promotion, as well as other types of research activities that may be considered. In the table, ‘any’ under Primary activities means that anything in the given primary category satisfies the requirement, while ‘any’ under Secondary activities means that anything in the given secondary category strengthens the evidence, but is not expected. Community-engaged research and scholarship as mentioned in the university and college tenure and promotion documents consists of Computer Science research with community impact. We encourage, but do not require, community-engaged research and scholarship. Community-engaged research and scholarship may result in either written works (R1) or artifacts (R2).

In addition, the table includes quantity guidelines with the understanding that they may be superceded by an exceptionally high-quality research publication history. As stated in the College Promotion and Tenure Guidelines, “High quality, originality, and significance of contribution are more important than either volume or type of scholarship represented.” Note that, with the approval of the Dean and the Provost, for promotion to associate professor with tenure, publications and grant proposals from previous tenure-track positions may be included in the assessment of the candidate’s research productivity.

<table>
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<th>Rank</th>
<th>Primary (expected) activities (with quantity)</th>
<th>Secondary activities</th>
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<tbody>
<tr>
<td>Promotion to associate professor with tenure</td>
<td>R1: a (on average 1.5 per year during the probationary period) R1: b (by the 5th year, PI* of 4 external proposals or PI* with external funding through the year of application for tenure)</td>
<td>R1: any others R2: any</td>
</tr>
<tr>
<td>Promotion to full professor</td>
<td>R1: a and b (sustained productivity at the rate described for promotion to associate professor, with a body of work after promotion to associate professor equivalent to 5 years productivity, and with an obligation to clearly document quality and impact of accumulated work)</td>
<td>R1: any others R2: any</td>
</tr>
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*Note: In cases of collaborative proposals with other faculty at UNCG or faculty at other universities, the candidate should be the leading PI at UNCG.

R1. Written works

Assessing the quality of written works using simple metrics is complicated by the following factors.

- In comparison to some other disciplines, computer science conference (alternatively referred to as symposium, etc.) publication is often rigorously peer-reviewed and may be preferred to journal publication due to faster time to publication. Also, unlike some other disciplines, computer science has embraced electronic media, e.g., certain on-line publications have standards comparable to those of print publications.

- Multiple authorship: there is no single convention for assessing an individual’s contribution to a multiply-authored paper. For example, the authors may be listed (1) in alphabetical order, (2) with primary contributors listed at the beginning of the list in alphabetical order or in order of relative contribution, followed by others who contributed to the research, (3) with thesis advisor first or last, (4) with the name of the person who wrote the paper first, etc. Therefore, order is not necessarily indicative of the extent of an author’s contribution.

- Multiple authorship is common and multiply authored work should not be considered, as it would in some disciplines, less significant.

- The outlet: some outlets have higher status than others. However, high status is not a reliable indicator of worth of the research. Although high status may be associated with selectivity, there are acknowledged problems in the fairness of the selection process. Peer reviews may discriminate on the basis of authorship or academic affiliation (e.g. routinely rejecting submissions not from a few prestigious universities), research methods (e.g. some approaches may be in or out of favor, regardless of merit), or topic (e.g. certain worthy topics may be of interest to a small audience). Also, in Computer Science, some research is more suited to publication in multidisciplinary outlets than traditional “pure” computer science outlets. A related issue is that in newer areas of research, it may be important to publish in a highly specialized conference to be visible to other researchers currently working in the same area. If instead one published in a “higher-status”, more traditional outlet, the work would not be visible to the researcher’s true peers.

- Grant funding: a grant proposal may be worthy of funding (as indicated by favorable reviews) but still not be funded.

- Multiple papers on a single research project: a research project of sufficient duration and complexity may result in a number of papers. For example, it is likely that a student’s dissertation research may result in multiple conference and journal publications. Although background material provided may overlap to some extent, most journals and conferences attempt to enforce the policy that a paper should include substantial original work not published elsewhere. While it is possible for someone to republish the same work in more than one outlet, it is getting harder to do so. Thus, multiple papers from a single research project should not be discredited in assessing productivity.
Because of the difficulty in assessing quality using the above metrics, the comments of external reviewers will play a significant role in evaluation of research quality. Additional documentation of significance could include standard publication metrics such as number of citations.

Though not necessarily of equal significance, all of the following should be considered in assessment of faculty research productivity:

a. Peer-reviewed full-length academic conference and journal papers on original research. Note that in our discipline, it is not unusual for collaborations to continue for many years and for extensions to one’s research to constitute original research; i.e., such work should not be considered less than original.
b. Grant proposals (if not funded, favorable reviews of proposals may be considered)
c. Peer-reviewed academic conference “short”-papers or full papers accepted on the basis of peer-reviewed abstracts
d. Survey article published as book chapters and journal papers
e. Books or book chapters on original research
f. Book publication of doctoral dissertation
g. Other publications (e.g., book review, introduction to guest-edited journal issue)
h. Department technical reports not published elsewhere (papers presented at conference that did not publish archival proceedings, manuals, etc.)
i. Self-published information on web to supplement published paper (e.g. experimental data and materials, full proof)
j. Invited participation (guest speaker at conference, panel chair, etc.)
k. Letters/awards attesting to significance of any of above

R2. Artifacts

a. Development of software (prototype, open-source, or marketed)
b. Experimental evaluation of software (performance analysis, usability study, etc.)
c. Grant proposal (e.g. SBIR/STTR) for product development or technology transfer
d. Patent applications/awards
e. Technical consulting
f. Letters/awards attesting to significance of any of above

III. Evidence of service

Service-related activities include service at various level within the university (S1), to the profession (S2) and beyond (S3). Faculty expectations for different ranks are shown in the following table. In the table, ‘any’ under Primary activities means that anything in the given primary category satisfies the requirement, while ‘any’ under Secondary activities means that anything in the given secondary category strengthens the evidence, but is not expected.

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S2: a |                      |
| Promotion to full professor | S1: any  
S2: any | S3: any |
S1. **Institution** (Department-, College-, or University-level)
   a. Membership in or leadership of committees or other bodies (e.g. Faculty Senate)
   b. Liaison (e.g. Department liaison to Library or Honors College)
   c. Miscellaneous tasks on behalf of department (drafting documents, organizing speaker series, hosting academic speakers and other visitors, answering questions from prospective students or parents, providing information for university publications or outside media)
   d. Administrative duties as Director of Undergraduate Studies, Director of Graduate Studies, Director of REU site, etc.
   e. Program accreditation work (SACS, WEAVE, etc.)
   f. Participation or leadership in college and university programs for recruitment, orientation, advising, outreach, etc. (SOAR, Phone-a-thon, Fast Forward, Ashby Dialogue, etc.)
   g. Letters of commendation or UNCG Service awards

S2. **Profession**
   a. Reviewer of journal paper, proceedings paper, book, or book chapter
   b. Editor or guest-editor of journal, book, or proceedings
   c. For national/international funding agency: ad hoc reviewer, review panel member or panel head, written replies to requests from agencies for programmatic feedback, participation in funding agency events
   d. Organizer/co-organizer of academic conferences or sessions at conferences
   e. Leadership roles in professional societies
   f. Letters of commendation or professional service awards

S3. **Community/Society**
   a. Consultation with organizations, businesses, and public agencies (not covered under technical consulting)
   b. Outreach programs to disseminate or apply faculty member’s research or technology
   c. Participation in partnerships (such as internships) that enrich academic programs and/or promote student leadership and service to society
   d. Letters of commendation or awards for community/society service