

Promotion and Tenure Guidelines of the Department of Human-Centered Computing Indiana University School of Informatics and Computing – Indianapolis

Approved and adopted by the HCC faculty on March 23, 2015

Scope of these Guidelines¹

The Department of Human-Centered Computing (HCC) adheres to the guidelines for Promotion and Tenure (P&T) of the Indiana University School of Informatics and Computing – Indianapolis, and to the P&T IUPUI campus guidelines. Department standards supersede School and Campus standards, only insofar as they require a higher or more substantial level of academic achievement than the School and Campus guidelines do.

All candidates for academic advancement are advised to study the School and Campus guidelines to understand the many quantitative and qualitative ways candidates may document and substantiate their achievement. It is the candidate's responsibility to prepare for reviewers a dossier that accurately documents and explains the candidate's academic achievement.

In the HCC Department, candidates for tenure and promotion to associate professor are expected to base their dossier on excellence in research or teaching. Candidates for advancement to full rank may base their dossier on excellence in research, teaching or service/engagement, or the balanced case. In the HCC Department, candidates for advancement to other ranks, including senior lecturer, must base their dossier on the area of scholarship recognized by the School and campus as appropriate to that rank. Advancement to senior lecturer must be based on excellence in teaching. The balanced case is not an option for non-tenure track candidates.

In all reviews for advancement, the HCC Department recognizes that scholarly work often may be based in, or impact, more than one of the traditional three areas of academic achievement (research, teaching, service/engagement). In all dossiers for advancement, it is the responsibility of the candidate to explain the categorization, nature and significance of academic achievements.

¹ These guidelines have also been developed in consultation with School administrators, by studying other guidelines adopted by departments on campus, and with language adapted from the IU School of Medicine Standards of Excellence for Promotion and Tenure, 2007-2014.

Standards of Achievement

Candidates for Tenure and Promotion to Associate Professor

A tenure-track candidate seeking to establish excellence in research as the basis for tenure and promotion to associate professor will normally be expected to have developed an independent, innovative and high-impact research program supported by external research funding and producing significant peer-reviewed publications or other scholarly output.

The department is also supportive of productive collaborative research and recognizes that research in human-centered computing may require integrated projects in which faculty from different disciplines and with different expertise work as a team. Therefore, an individual may also achieve excellence in research through contributions that have helped shape collaborative projects, as long as the candidate shows evidence of an emerging national reputation for excellence based on his or her unique intellectual contribution (and corresponding funding support) to those projects and the scholarship they generate. Candidates who are members of collaborative research teams should carefully and persuasively document the nature and impact of their scholarly role in such collaborations and demonstrate that this scholarly activity reaches a level comparable to that for faculty directing an independent research program. (Explanatory letters from collaborators may be included as part of that documentation.) Importantly, an individual can achieve excellence in research as an essential contributor to successful collaborative projects, but must meet the requirement of having a clear focus and overarching theme of scholarly trajectory.

Satisfactory Research

Tenure-track faculty who are advancing based on excellence in teaching must also provide evidence of satisfactory research in the form of peer-reviewed publications or other scholarly output. Involvement in grants is also highly valued. Criteria for evaluating research as satisfactory are similar in principle to those for excellence but with less rigorous standards regarding independence, recognition, productivity and impact. Intellectual input into research can be made by providing an essential expertise or by contributing to the design of the project as a member of a research team. For individuals advancing based on teaching as an area of excellence, research activity that also relates to the area of excellence helps form a focused portfolio of scholarship.

Excellence in Research

Publication Record. A critical element in establishing excellence in research or scholarly activity is a record of retrievable scholarly accomplishments, which is the publication of original and creative articles in conference proceedings and journals that utilize peer review. Peer-reviewed articles are those that have undergone anonymous review by objective experts in the field usually selected by an editor of the journal or the program chairs (or his/her delegates) of a conference. In evaluating a publication record, several factors will be considered.

- i. *Quantity, Quality and Impact of publications.* Volume of publications, which is easily quantifiable, cannot be ignored but is not the only index of excellence and contribution to the disciplines. It is recognized that faculty generally seek to publish as often as possible and in the best possible conference proceedings and journals. Still, the stature of the conference proceedings and journals in which a candidate publishes is important and can be difficult to assess. Publication in the premiere peer-reviewed, high-impact conference proceedings and journals is a clear demonstration of peer appreciation of the published work. Publication in the “top tier” conferences and journals of a candidate’s discipline is a significant indicator of the quality of a candidate’s work and an expectation of the department. It is also appreciated that valid and significant publications will appear in what are generally viewed as less important conference proceedings and journals and credit will be accorded; however, publication in lesser journals will count less in the evaluation of the candidate’s publication record. Typically, candidates for tenure are expected to identify their best 3-5 papers in rank, and the reviews should be mainly based on evaluation of these papers. The candidate is expected to provide evidence of the impact of publications generated in rank by drawing on impact criteria typically recognized in the field. Examples of impact indicators include bibliographical indexes (e.g., citation indexes); journal impact factors; selectivity (e.g., acceptance rate), and prestige of the publication venue; use of the findings of the publications in the work of others; documented impact of the scholarly work on the activities of scholars, organizations, or institutions; public references to or demonstrations of the work in prestigious venues or events; and discussions generated by the work in the media or the public sphere (including social media). It is the candidate’s responsibility to explain the significance of any such evidence.
- ii. *Published abstracts* are not generally accorded the weight of peer-reviewed papers. Nonetheless, it is acknowledged that having abstracts accepted to certain large meetings is through a competitive process and is subject to significant peer review. The candidate should document whether any abstracts listed fall into this category. The candidate should also highlight abstracts in their curriculum vitae (CV) selected for oral or selected poster presentations at national or international meetings, as these are generally considered more prestigious.
- iii. *Non peer-reviewed publications* are judged on a case-by-case basis. For example, an article published in a premiere professional magazine (non peer-reviewed) may be considered an indicator of broad dissemination of scholarship, but would normally be considered less important than a peer-reviewed article.
- iv. *Being senior or lead author* is important. It is essential for establishing independence in research to be the senior or lead author on a number of publications; yet it is understood

that the relative importance of the position in the list of authors in multi-author papers may depend on the practice of the specific research community. For example, being first author is a clear sign of leadership in the work, although being last author also has great significance if all other co-authors are students, mentees or senior collaborators led by the candidate. Oftentimes, a mature researcher will often place students or post-doctoral fellows as first author, placing his or her name last. The value of middle authorship is often hard to evaluate. A key principle is that the candidate should document the candidate's role in important publications. This is particularly important in team science; thus candidates are advised to describe their role in such collaborative projects in the dossier in such places as annotations on their CV, descriptions in the personal statement, etc. Including letters from collaborators, co-authors, or senior research team members can further clarify and strengthen the candidate's role. Clear documentation of one's role is essential for faculty whose research portfolio is mostly team science based. Junior faculty seeking to establish independence from senior faculty or mentors with whom they continue to publish should also document their specific role in the research project using similar letters.

- v. Faculty members are increasingly publishing or documenting scholarships by producing or engineering various forms of media, including digital artifacts, web-based, interactive applications, prototypes, or systems. Appropriate credit will be given to such creative activity using the same criteria as discussed above for conventional publications; that is, to count as peer-reviewed scholarly contribution, it is essential that the activity is disseminated, retrievable, and shows evidence of peer-review. The peer-reviewed nature of the material must be clearly documented. Non peer-reviewed materials are weighed less than items that undergo peer review. The role of the candidate must be documented. Since the usual standards of peer-review may not be apparent, the onus is on the candidate to provide objective documentation.

External Funding. Securing external (i.e., extramural) funding, which is important to facilitate research and increase impact, is expected. Significant funding from competitive peer-reviewed sources additionally indicates objective recognition of a faculty member's research program. It is expected that a faculty member seeking tenure and promotion to associate professor based on excellence in research will have had success in securing significant external funding as Principal Investigator (PI) or Co-PI.

- i. Peer-reviewed grants from national agencies (e.g. National Institutes of Health, National Science Foundation, and U.S. Department of Defense) have the greatest prestige. Securing competitive grants from major foundations or corporations are also noteworthy achievements.
- ii. A faculty member achieving excellence in research is expected to have served as PI on a substantial part of the candidate's funding. If funding from grants on which the candidate

is not PI is to be considered in making the case for excellence in research (for example, if the candidate is an essential member of a collaborative research team), it is imperative that the nature and significance of the candidate's contribution be carefully documented by the candidate, collaborators and other evaluators.

Intellectual Property. Given the nature of the field of human-centered computing, the department is supportive of faculty who protect and profit from intellectual property developed at Indiana University by filing or licensing patents.

- i. Patents. A patent award is recognized as evidence of creative activity and the contribution of new knowledge to the field. Although patent applications require intellectual effort and are subject to stringent review by the U.S. Patent Office, such review focuses primarily on the novelty of the invention rather than its scholarly or intellectual significance or its impact in the field or marketplace. Although a patent is a potential indicator of a successful research program, it is also recognized that, some are never licensed and effectively used whereas others may generate revenue for the university, school and department. Also, as with traditional publications, the onus is placed on the applicant to document, if necessary through letters from co-inventors, an individual's role in a patent application. Minimally, the candidate must be listed as a co-inventor.
- ii. Licensing/Royalties. Intellectual resources deriving from a faculty member's research, though not patentable, may be marketable. Included might be the licensing of materials available from the research program in exchange for a flat fee or for royalties based on sales. Licensing of products or the award of royalties does not have the weight of peer-reviewed appreciation of a research program, but does indicate recognition and value.

Candidates for Promotion to Full Rank

A candidate seeking to establish excellence in research (or teaching or service) as the basis for promotion to full rank will normally be expected to have demonstrated a sustained national reputation based on an ongoing record of scholarly achievements throughout his/her career and particularly in rank. Promotion to full rank would normally require a sustained record of external funding at associate rank and a sustained production of selective, peer-reviewed publications or other scholarly output at associate rank. Although promotion to full rank often is normally expected within 5-10 years after attaining tenure and associate rank, there is no set timetable for promotion to full rank. Similarly, although promotion to full rank generally is based on the same area of scholarly work (research, teaching or service) in which the candidate earned tenure, it is not unusual for a candidate to shift the focus of his/her academic career over time and seek promotion in a different area.

Candidates for Promotion to Senior Lecturers

Non-tenure track candidates (lecturers) seeking promotion to senior lecturers are expected to have a sustained record of excellence in teaching, as demonstrated by some combination of the following factors:

- Evidence of consistently high quality teaching practice through course evaluations, peer reviews, student learning outcomes, and student testimonials.
- Evidence of scholarly and innovative activities in teaching. Evidence includes scholarly knowledge published in educational journals or presented in local, regional or national/international teaching conferences, textbooks, novel teaching tools that have been reviewed by peers external to the department or school, and successful internal or external grant proposals.
- Evidence of active curriculum development and teaching services. This includes course development, creation of technological artifacts for teaching (e.g., online course materials), student advising, and recruitment activities.

The HCC department adheres to the standards of achievements for scholarship of teaching described in the IUPUI campus P&T Guidelines. In general, candidates are expected to demonstrate a record of publicly disseminated, retrievable, peer-reviewed artifacts documenting intellectual contributions to the theory and practice of teaching. Securing teaching grants or external funding supporting the development of a program of scholarship of teaching is highly valued.

Scholarship of teaching. A candidate for senior lecturer is expected to have developed an original body of knowledge about the theory or practice of teaching in his/her specific area of expertise.

The work of lecturers is crucial to the success of the School of Informatics and Computing, IUPUI. In many instances, lecturers teach courses that are most directly linked to and responsive to the rapid changes in industry practice. Every year, new software and new applications emerge in the marketplace. This requires from our lecturers a constant process of professional training and development. The SoIC recognizes and values this work, and considers it part of the overall work that leads to academic advancement.

A. To stay informed and skilled in these emerging technologies, and thus to stay relevant as teachers, lecturers can often devote significant effort and energy outside of the classroom to learning these new technologies and understanding their place in the marketplace. This can take place in formal workshops, through self-guided tutorials and through informal peer professional learning that occurs in various organizations, venues and events dedicated to advancing capacity and competence in tech-centric business and practice. The SoIC recognizes and values all of these efforts as forms of professional development necessary to teaching success.

B. Similarly, lecturers frequently devote many hours each month to sponsoring various extra-curricular student groups that focus on various applications and uses of technology, and the social contexts in which technologies are relevant. These areas include but are not limited to gaming, application development, women in technology, programming skills and entrepreneurship. The SoIC recognizes and values this faculty effort as a form of student mentoring that can supplement and enhance classroom activities and generally elevate a school-wide climate of learning. In

some cases, the activities of professional development (A) can overlap and complement the mentoring activities described in (B).

Faculty are encouraged to document any of the above activities in ways that will allow future evaluators (whether department chairs, reviewers in promotion processes, grant reviewers or committees awarding departmental, school or campus honors) to better understand the benefits and innovative contributions to the theory and/or practice of teaching and learning. Such documentation can take the form of:

- Reflective writing in published experience reports, project reports, presentations, journal articles, conference papers (peer-reviewed and disseminated) linking professional development and enhanced teaching or curriculum;
- Evidence of student success (both within and beyond the SoIC) that can be linked to these activities (e.g. a teacher may learn a new technique that is taught in class and enables a student to complete a project or secure a job);
- New course or curricular content and strategies that can be linked to external professional development and/or extracurricular mentoring;
- Other evidence that the teacher has engaged in these activities, analyzed their outcomes, applied this analysis in the classroom or in extra-curricular venues for teaching and learning, and shared the results with colleagues and peers.

Specifically, example of artifacts that demonstrate evidence of scholarship of teaching can include:

- A body of retrievable, peer-reviewed presentations, abstracts, demonstrations, papers accepted at conferences (outside the campus). To count towards scholarship of teaching, these presentations should focus on the scholarly discourse or research performed around teaching theory or practice.
- Production of non-traditional media, including digital artifacts, web-based, interactive applications, prototypes, or systems. Appropriate credit will be given to such creative activity using the same criteria as discussed above for conventional publications; that is, it is essential that the activity is disseminated, retrievable, and peer-reviewed. The peer-reviewed nature of the material must be clearly documented. Non peer-reviewed materials are weighted less than items that undergo peer review. The role of the candidate must be documented. Since the usual standards of peer-review may not be apparent, the candidate should provide objective documentation that peers value and appreciate the scholarship contribution of the candidate.
- A presentation or workshop about innovative teaching theory or practice at a professional conference attended by educational professionals or peers.
- An online presentation or posting that attracts significant attention and comment among peers.
- An outreach activity that: can be considered community-based education; leads to innovative teaching theory or practice; becomes scholarship of teaching and learning; achieves impact and advances the teaching mission of our department and school. The candidate should describe and document how any notable outreach activity has been incorporated into the candidate's teaching, as well as disseminated to peers.