Department of Computer Science
Scholarly Expectations for Faculty Evaluation
Prepared Fall 2010

The Department of Computer Science is committed to scholarship as a vital part of the intellectual discovery that is critical to faculty and students alike. We believe that an effective teacher must be actively engaged in the discipline and that this engagement should result in periodic dissemination of the learning so gained. In this way, the faculty are continually invigorated, serve as great role models for the students, and will even be able to provide avenues through which students can conduct intellectual endeavors of their own. In addition, such engagement helps to ensure that the department is aware of the latest developments in the field and can periodically adjust its curriculum accordingly.

The department supports the general guidelines outlined in the most recently approved by-laws of the Committee on Recommendations (available at http://senate.sbu.edu/20100910.pdf), but wishes to make note of several interpretations which may or may not be unique to its field.

Historically, archival journals have had significant publishing backlogs. In some technical fields these backlogs were so large that it became necessary for journals to record when the paper was received as part of the publication – just so claims of "first-to-discover" could be adjudicated. In a field that changes as rapidly as computer science in the late twentieth century, these backlogs were slowing down publication to a degree that was harming the field. The result was that much computer science research began being published in conferences. These conferences were peer reviewed; papers submitted to them for consideration were generally already in camera ready form (i.e., were completed work, not proposals to write on a subject); the papers were read by four to eight reviewers before a decision was made on them; and acceptance rates were low – anywhere from 15-50%, depending upon the conference. Each conference would produce bound copies of the proceedings, i.e. all of the papers presented; only keynote or invited speakers were exempt from these requirements. These proceedings were available for purchase by libraries, and indeed the professional societies associated with computer science offered institutional memberships that guaranteed that the institutional library would get all of these proceedings. In this sense, the proceedings were arguably archival journals. Within academe, starting at the highest level and working down to other schools, these "conference papers" became accepted as equivalent to journal papers. To this day, many (paper-based) journal articles will feature bibliographies in which 75% or more of the citations are to such conference papers.

In the past few years, these proceedings have ceased to be published in a traditional, paper-based, sense, but are now most frequently distributed on CD-ROM at the conference. Institutions no longer get bound copies of the proceedings; rather they subscribe to the ACM-Digital Library, an online repository of research (present and past) in the field. This online library is readily searchable by author, topic, citation, etc. in the same sense that codices of journals are in other fields.

With this background in mind, we interpret the guidelines of the By-Laws in the following manner.

At the level of Assistant Professor (applying for tenure)

The department prefers that Assistant Professors applying for tenure concurrently apply for promotion to Associate Professor, but as the Faculty Status and Welfare Handbook (FSWH) does not require this, we concur with the statement in the By-Laws that there be evidence "that one is on track to have a sufficient record of scholarship to merit promotion to Associate Professor within a reasonable period of time after tenure (e.g. within approximately the next two years)." Although the By-Laws do not require it, it is the department's preference to have outside evaluators comment on the candidate's case in a manner similar to that outlined for promotion to Full Professor, although at this level all of the letters might be solicited by the candidate.

At the level of Associate Professor

The By-Laws state that the minimum expectation is "2 respected, peer-reviewed journal publications or their equivalent, plus other complementary evidence of ongoing scholarly activity and accomplishments". We concur with this subject to the understanding that "peer-reviewed journal publications" is understood to include peer-reviewed conference publications as well as publications that may be disseminated only in electronic form. We recognize the concern that should be raised about the quality of these conference publications and address that below. We also give an incomplete, but exemplar list of items that could be considered as "ongoing scholarly activity and accomplishment". Again, although the By-Laws do not require it, it is the department's preference to have outside evaluators comment on the candidate's case in a manner similar to that outlined for promotion to Full Professor, although at this level all of the letters might be solicited by the candidate.

At the level of (Full) Professor

The department is in agreement with the By-Laws and does not see any areas in which it has unique circumstances.

A general requirement

As computer science is a very broad and diverse field, it is the requirement of the candidate to cast his or her scholarship in the appropriate light. In particular, it is the job of the candidate to make the case for the degree to which any individual piece of scholarship rises to the standards outlined here. The department will verify that the candidate's claims are correct, but it is the candidate's job to acquire the evidence.

Regarding "peer-reviewed" and "respected"

As noted above, most professional conferences solicit completed papers by a deadline. They send these papers out to reviewers who, in turn, send their reviews back to the program committee by a second deadline. Summary reviews are sometimes written and sent back to the reviewers for comment; at other times this step is omitted. Reviews and ratings are generally shared among the reviewers so that reviewers may learn to better critique work. Reviews are also shared with authors – whether or not the work is accepted. The department views this process as the standard by which conferences are to be considered peer-reviewed. Conferences which short-cut this process will be considered to be "lightly reviewed" or "not reviewed at all". Conferences which solicit incomplete papers for review will not be considered to be peer-reviewed.

"Respect" for most journals and conferences is, of course, a product of the quality of the work presented therein. Nonetheless, there are other markers of respect that can be used for outsiders to judge the value of the venue. The first is the sponsoring body. Within computer science, most conferences are sponsored, at least in part, by either the Association for Computing Machinery (ACM) or the Institute for Electrical and Electronic Engineers (IEEE). The latter often does so through its IEEE Computer Society. These societies only place their names on journals and conferences when they can assume a modicum of control over the content and quality of work. The department will consider any journal or conference so sponsored to be worthy of "respect". We note that there are other publishing houses (e.g. Elsevier) that also merit this degree of respect. We also note that there are vanity presses and semi-professional organizations which sponsor conferences which do not rise to this standard.

The second measure of respect for a venue is its acceptance rate. As the cultural shift described earlier in this document took place, it became common for conferences to make their acceptance rates public (either on a specific-to-the-year or a rolling-average basis). To be worthy of the highest level of respect, the acceptance rate should be below 40%; this rate is in line with the rate at ACM conferences with national/international audiences. Conferences which regularly accept papers at a higher rate will be considered in much the same way as "lesser respected journals" as outlined in the By-Laws. For those rare conferences that do not publish acceptance rates, other measures of exclusivity will necessarily be used.

Regarding types of conference presentations

The comments above are meant to cover conference "papers". Most conferences also offer other forms of dissemination, including panel presentations, special sessions, tutorials, poster sessions, birds-of-a-feather sessions, etc. It is possible that, in unusual circumstances, work presented in one of these forums would be worthy of consideration as a paper. Typically, however, such work will be considered in the category of "complementary evidence of scholarly activity". If a candidate wishes such work to be valued more highly, then the case must be made (by the candidate) that such an evaluation is appropriate.

The department does, however, value student research quite highly. Even as it does so, it understands that when student-faculty research is presented by the student, it is often at a "lesser forum" than if the faculty member wrote and presented the work. Such a case would be an example of a time when a "complementary" forum might be more highly valued.

Regarding Pedagogical Research

The April 30, 1991 report of the Faculty Committee on Recommendations formally recognizes that pedagogical research may be considered to be as valuable as research within a given field. This viewpoint was echoed in Vice President for Academic Affairs Ed Eckert's address and memo to the faculty in 1995. His report at the time was incorporated into the Governing Documents (through Faculty Senate action) although portions of it have since been excised without any apparent legislation so authorizing. Thus, it appears that there is no legislative sense as to this issue.

More informally, several different administrators have stated that this is/was their understanding of the evaluation process. This has been stated both orally and in at least administrative responses to faculty self-evaluations.

Within the Computer Science Department, we explicitly endorse this belief.

One question that arises with such discussions is how to determine the difference between a colleague "thinking about his courses" and then using what has been so gleaned to improve those courses. Taken to the extreme, one could argue that reviewing one's course evaluations (based upon "newly gathered data") and changing things constituted "pedagogical research".

The computer science department is guided by two principles in evaluating pedagogical research. The first concerns the dissemination. Analysis, thought, work, and even writing that improves an instructor's individual courses (or even courses only at St. Bonaventure) is part of the ongoing process of one's responsibility as a teacher. It is commendable, but should not be considered as scholarship. When the dissemination is such that the work is changing the way computer science is taught at other schools, then that work represents the creation of new (pedagogical) knowledge and can be considered as scholarship.

Dissemination of pedagogical work can be tricky, however, and the second principle is that this dissemination is to be held to the same standards as more traditional scholarship. Thus, materials that are published on an instructor's website and downloaded (even many times) have not been peer-reviewed and would not be considered as such. Materials published in an external clearinghouse would be more highly valued. Materials (including papers) that have undergone peer-review and been disseminated through respected (as defined above) venues would be considered to be "completely scholarly" and would not be less highly valued simply due to their pedagogical nature.

Complementary Scholarly Work

Below are some examples that the department considers complementary scholarly work that go beyond the brief descriptions in the By-Laws.

Invited presentations
Invited presentations given based upon a faculty member's previous work are important scholarly contributions. The degree of importance should be gleaned by the forum at which the presentation is given. (For example, a keynote address at an international conference is obviously better than a colloquium given at one's alma mater and needs to be evaluated accordingly.)

Presentations at regional/local conferences
Again, each work and venue must be evaluated on its own merits, but participation in such conferences is beneficial to both the faculty member and the university and should be so evaluated.

Software systems
The crafting of software systems is recognized as a respected form of scholarly activity in computer science. A software system that advances the field of knowledge would fall under the heading of traditional scholarship; often, however, a software system will more closely resemble pedagogical research as described earlier. Most commonly such work would be described in a journal article or an article submitted to a respected conference, but software systems lend themselves to less formal methods of dissemination. In such a case the merit of the work would be evaluated in the same manner as other forms of research and could potentially reach the standard of "completely scholarly". The individual faculty member would need to make the case for reaching the higher standard.

Textbooks, "review" books and chapters within such books
Each would be evaluated individually keeping in mind the traditions of academe, e.g. invited chapters in collections of research results would be more valued than a "…for Dummies" book.

Review work
The culture of conferences and reviewing is such that any professional who regularly submits to a conference should also be serving (periodically, at least) as a reviewer for that conference. Such work benefits both the individual and the field and should be so recognized. Reviews done for publishers, e.g. of textbooks, course materials, should also be recognized.

Research outside of field
Research outside the field of computer science can be valuable, especially to the degree that it enhances the faculty member's skill set. Candidates for tenure and/or promotion should not base their case solely on such research, however.

Grants
Grant activity is a valuable and recognized professional activity. The department recognizes grant activity as a form of scholarship. Grant writing can range from individual grants to support a scholarly agenda to large institutional grants written by a committee. Faculty members engaged in grant activity should take care in explaining the grant activity.

Programmatic reviews
Serving on accreditation panels and/or departmental review boards for other schools is a valuable service to the field. Such invitations are indicative of the respect held by others for the faculty member and are to be considered evidence of scholarly achievement.

Sent to Dean A&S 10/27/2010