Statement of Significant Scholarly/Artistic Work
Department of Mathematics, Statistics and Computer Science
St. Olaf College 2016

Introduction

The Department of Mathematics, Statistics, and Computer Science (MSCS) believes its faculty should be active and engaged scholars, connected to their profession, and active in a sustainable program of scholarly activity. Since we recognize that scholarly careers evolve over time and that diversity of scholarly work contributes to a robust department, we identify the following general principles for the professional activity of MSCS faculty.

1. The department recognizes that an active program of scholarly work keeps faculty connected with their professions throughout their careers. The department recommends that such activity include *engagement with a community of scholars* beyond St. Olaf College.
2. The department endorses a *wide range of scholarly work* as appropriate and worthwhile. Some activities apply more to one discipline than to another. Examples appear below.
3. Faculty scholarship should include activities that are *public* and *peer--reviewed*. The highest standard by which mathematicians, statisticians, and computer scientists across the country are evaluated is through peer-reviewed, publicly available publications and presentations. A portion of the faculty member's scholarship should result in professional assessment by disciplinary peers.
4. The department strongly supports and values *undergraduate research* as scholarly work. Engaging students in research projects of their own stimulates their interest in mathematics, statistics and computer science, provides a culminating undergraduate academic experience, and prepares them for careers and graduate school. We encourage faculty to support undergraduate research, especially through activities that result in public and peer-reviewed presentations.

Types of scholarly work

The following list of examples illustrates, but does not exhaust, the range of scholarly work that the department considers appropriate and worthwhile. The ordering generally reflects decreasing significance, although exceptions can be made in specific cases. The relative value of talks, conference proceedings, and other activities may differ among the MSCS disciplines.

- *Peer--reviewed publications*, such as research papers, peer--reviewed proceedings, textbooks, monographs, expository articles, pedagogical articles, and reviews, whether in print or electronic media.
- *Undergraduate research mentoring and/or collaboration* consists of research work done by or with students, resulting in public and/or peer--reviewed dissemination by students or by faculty/student teams.
- *Grant proposals*. Proposals may exhibit substantial intellectual merit even when they are not funded. We note that some grant solicitations by agencies such as the NSF require an extensive and rigorous peer -review process, resulting in funding of 25% or less of submitted proposals.

- *Talks, panels, and posters*, which may be invited (especially valued) or contributed. Peer-reviewed and invited talks vary in prestige across the MSCS disciplines. In some of our fields, peer--reviewed presentations at leading conferences carry more prestige than do most journal publications.
- *Disciplinary leadership activities*, including national offices in professional organizations, participation in disciplinary committees and task forces, and conference committees.
- *Developing and presenting workshops*, whether at professional meetings or as separate events.
- *Software development* that is a primary or integral component of research. Software development often carries this role in Computer Science, whatever the subfield, and plays similar roles in some scholarly activities in other MSCS disciplines.
- *Interdisciplinary research collaborations and consulting activities* that typically continue over a period of time. These indicate scholarly breadth, involve intellectual creativity in one's own discipline, and advance knowledge in a collaborating discipline.
- *Posing or solving published problems*. Publishing significant problems, conjectures, or their solutions has particular scholarly significance in Mathematics and Mathematics Education, and in the most mathematical aspects of other MSCS fields.
- *Refereeing papers and proposals*. Refereeing is an essential contribution to the field and typically requires insight and scholarly reflection on new material.

Determination of significance

Scholarly work: The significance of scholarly work in the MSCS department is determined by the extent of peer review required for publication, presentation, or participation; the academic prestige of the sponsoring institution (publisher, granting agency, etc.); honors or awards received for the activity; other indicators of importance in the discipline or in public life.

Collaborative work: Collaborative work is not assumed to be less significant than work prepared by a single author. The significance of a faculty member's contribution to a specific collaboration depends on the nature of that contribution.

Undergraduate research:
The scholarly significance of a faculty member's role in undergraduate research projects depends on both the type of public dissemination and the degree of collaboration or mentorship. For example, peer-reviewed published papers are valued more than posters, and co-authorship is typically valued more than student-only authorship.

Expectations for accomplishment

MSCS departmental expectations for significant scholarly work at various ranks differ by *degree of accomplishment* and *scope of influence*. A faculty member should provide evidence of consistent engagement in scholarly activity throughout his or her appointment.

1. **Assistant Professor in the fourth year (or equivalent).** By the time a faculty member is reviewed in the fourth year we expect scholarly accomplishment beyond the dissertation and progress towards the level of Associate. This accomplishment is part of a scholarly career trajectory and should give evidence of progress towards dissemination.

2. **Associate Professor.** By the time a faculty member is reviewed for tenure and promotion to Associate Professor, we expect a record of accomplishments having an impact beyond St. Olaf, as described above, with the promise of continued accomplishments and the potential for broader impact. Such accomplishments may take various forms, depending on the candidate and his or her field, but are expected to include peer-reviewed publication (see list above for examples). Examples of other valued activities, all with elements of peer review, may include presentations (such as talks, panels, or posters) at professional meetings; and grant proposals submitted to major funding agencies.

3. **Professor.** By the time a faculty member is reviewed for promotion to Professor, we expect a substantial and continuing record of accomplishments and a recognized presence among peers in one's disciplinary community. Such accomplishment may take various forms, depending on the candidate and on her or his field. Examples include a record of publication that identifies the candidate in a professional community; invited talks or presentations at professional meetings; successful grant proposals; leadership in professional organizations; development and presentation of professional workshops.