Reappointment, Promotion and Tenure Document for the Department of Computer Science College of Engineering and Applied Science Approved by Provost August 15, 2019

Introduction:

Standards and processes for reappointment, promotion, and tenure of the faculty are governed by Regent Law Article 5. These processes and requirements are further delineated in Regent Policy, University of Colorado Administrative Policy Statements, and the "Faculty Statement of Principles of Professional and Ethical Responsibilities" approved in 2008 by the University of Colorado faculty. Campus guidance is supplied in UCCS Policy # 200-001. The Department of Computer Science incorporates the above processes and requirements into its departmental criteria, which are to be used throughout the review process.

These criteria are to be considered essential for the general review of candidates for reappointment, promotion, and tenure in the Department of Computer Science at the University of Colorado Colorado Springs. The department is committed to quality teaching, strong research/creative work, and effective service to the university, the profession, and the community. The criteria are based on appropriate and current standards of professional performance in our discipline. Each candidate's case will be reviewed and judged on its individual merits and circumstances. The evaluation process assumes: possession of an appropriate terminal degree; competent education and training in the discipline(s); conduct which reflects the professional and academic standards for generating, validating, disputing, and transmitting knowledge; and an appreciation of and respect for the rights, duties, and privileges associated with academic freedom and collegial responsibilities.

When these criteria are applied to faculty who were granted time toward tenure, the work performed during the years granted toward tenure shall be considered equivalent to work performed at UCCS. While a faculty member's career record will be considered in personnel actions described here, the main emphasis of evaluation will be on work performed at UCCS and, in particular, progress since the last review.

The Computer Science Department has decided to recognize and reward scholarly activity and creative work related to the field of computer science such as peer-reviewed video games and peer-reviewed computer-generated graphics and films, but will not credit such activity towards promotion or tenure. Therefore, such activities will be restricted only to tenured faculty. Such activity will count towards workload, annual evaluation, and post-tenure review but not towards tenure or promotion.

Candidate faculty dossiers shall include a copy of the candidate's Google-scholar page or the equivalent list of all works with citations, with only their papers and the citations counts to those papers; the candidate will place this copy in their research summary. The criteria detailed below can be amended by majority vote of the department faculty subject to approval by the Dean of the College of Engineering and Applied Science and the Executive Vice-Chancellor for Academic Affairs.

Definitions:

A *refereed publication* is a paper that receives multiple formal written reviews provided before acceptance and publication and is not viewed by the primary unit committee as a predatory publisher. A candidate can request a faculty vote on if a publisher is predatory before submitting a publication. The reviews shall be included in the dossier.

Significant publications are those that are more likely to have long term impact or have demonstrated significance by their level of citations. We define Significant publications to include journal, conference, workshop and other papers, which meet either of the following two properties:

1. Refereed paper in a venue from top 20 listed Google Scholar Engineering and Computer Science subcategory or a venue with a Google metric h-index of at least 20. The portfolio should include supporting data. As the metrics can change candidates shall capture the metrics in the year when the paper is published/submitted. Ideally capture the metrics in the year when the paper is submitted.

OR

2. Any paper with at least 30 non-self-citations in Google Scholar. The candidate will need to list the citations in the dossier. Papers with higher citation numbers can be considered very significant papers, which may be counted as more than regular papers with each 30 non-self-citations counting as an added non-significant paper.

The department values multi-author publications and does not place any difference on the weight on papers based on author ordering on publications.

A *significant proposal/grant* is defined as a competitively reviewed external proposal/grant in which the candidate is the PI and is responsible for the funding of at least \$150,000. Reviews of the significant proposal shall be included in the dossier. REU grants and funding for developing or deployed MOOCS or other creative works can be counted as research or teaching (i.e. not both) and must be clearly specified how they are to be counted.

For total grant funding, the "responsible" share of grant by a candidate is computed based on the workload allocation form associated with the grant, e.g as specified via the workload and ICR agreement (https://www.uccs.edu/eas/sites/eas/files/inline-files/Workload and ICR distribution agreement.pdf).

<u>Teaching Metrics</u>: The candidate's teaching shall be evaluated by multiple means, which may include:

- Faculty Course Questionnaires ("FCQ") (required documentation)
- Teaching load (required documentation)
- Letters from candidate-selected students
- Faculty peer reviews of teaching
- Letters from Primary Unit Committee-selected students
- The candidate's work with students outside of the classroom as a mentor, research advisor, independent study director, intern supervisor, and similar activities shall be considered
- Candidate demonstration that their courses are coherently organized and thoughtfully presented
- Candidate demonstration of their commitment to teaching, evidence of which will be good interaction with students, concern with curriculum, and satisfactory development of skills in presenting material
- Teaching above required load or course to support department teaching needs
- Improvement and innovations in teaching methods and in curriculum development and contribution to the department will be taken into consideration
- Developing and updating course notes and writing books are important facets of teaching and will be taken into consideration
- Developing web support for teaching
- Curriculum and Scholarship Grants
- Student Mentoring (including independent student research projects)
- Curriculum Development (including textbook authoring).
- Curriculum, Scholarship Grants
- REU grants can be counted as research or teaching (i.e. not both)
- Funding to create MOOCs and funding that comes to the campus from MOOCs can be counted as research or teaching (i.e. not both)
- Teaching awards
- Textbooks adopted by other institutions¹
- Evaluation data from MOOCs¹
- Letters from mentored students/faculty/instructors from other institution/departments¹
- Refereed publications on computer science education, which can be counted as research or teaching (i.e. not both)

The FCQ analysis for any review will use the specified number of terms before review and compares the candidates FCQ scores compared to the per term average over the full set of comparable courses on the FCQ questions that address:

- 1. The course increasing knowledge
- 2. The instructor's role on explaining course ideas
- 3. The instructor's role in encouraging interest
- 4. The instructor's role in demonstrating interest in student learning

The analysis can be restricted to FCQs from a full set of departmental classes of comparable size, level and "required" status. The candidate is expected to provide a

¹ This measure counts as a measure of impact beyond the instructional setting.

spreadsheet with the analysis which should include the list of courses used in the analysis and why they are the full set of comparable courses. The primary unit should verify the computation including the list of courses.

A positive peer review of teaching can be included in the evaluation, and the portfolio may combine it with above standard performance on other items. The department chair or committee must approve faculty providing "peer" reviews.

Initial Reappointment Review

The candidate's total record, including teaching, research, and service, shall be evaluated. No specific rating in each area is required, but the record must show sufficient potential for future success to justify reappointment.

<u>Teaching:</u> In addition to a demonstration of quality via the Teaching Metrics defined above, the candidate shall:

- 1. Teach the requisite number of credit hours for the approved workload.
 - a. Note: Thirty accumulated thesis/project credit hours, not used for buying out of a course, count as a three-credit hour class when calculating the number of credit hours taught.
- 2. Achieve a two-term FCQ analysis of not more than one standard deviation below the department or the evaluation of comparable classes for the FCQ questions listed above. If using a comparable list, it is the candidate's responsibility to provide a spreadsheet with the computation.

For initial reappointment review, a positive peer review of teaching can be included in the evaluation. The department chair must approve faculty providing "peer" reviews.

Research and Creative Work: The department recognizes that scholarship can take many forms. Our department emphasizes fundamental discovery, scholarly work which integrates existing knowledge, and applied research. We recognize scholarly study of teaching and learning issues in our field as a form of research and creative works, including MOOCs and textbooks, which can be counted as research and creative work or teaching but not both. The candidate is expected to demonstrate a well-designed research plan and the potential for continued development as a researcher and progress toward publication. This might include drafts of work in progress, presentations at professional meetings, and/or articles submitted for publication.

<u>Service</u>: The department recognizes service to the campus, community and to our profession. At this stage, the candidate is expected to be involved in departmental meetings and activities supporting the department programs overall. The candidate will document each such activity.

Comprehensive Review

The candidate's record in teaching, research, and service will each be evaluated separately as below expectations, meritorious, or excellent. The candidate must demonstrate sufficient progress toward tenure to justify reappointment. This will typically be a rating of at least meritorious in all three areas. The review may also take into account issues of material bearing such as strategic goals of the department, college, and campus.

Per campus policy, the department will solicit letters from respected scholars in the candidate's field(s) of research.

For a comprehensive review, proposal and grant activity can include both PI and Co-PI roles as long as the candidate has responsibility for a reasonable part of the effort. REU grants can be counted toward either teaching or research but not both.

Teaching: The teaching reviews based on the teaching metrics given above form the basis of the teaching evaluation at the comprehensive review.

Meritorious: Teaching is meritorious if the candidate meets all of the following criteria:

- 1. Teaches the requisite number of credit hours for the approved workload.
- 2. For the last three terms in the evaluation period, an FCQ analysis for the FCQ questions listed above that is not more than 1 standard deviation below the department average or comparable classes. If using a comparable list, it is the candidate's responsibility to provide a spreadsheet with the computation.
- 3. Overall positive evaluation on at least two other teaching metrics from the list in the definitions section.

Excellent: Teaching is excellent if all the criteria of meritorious are met and if the candidate meets at least one of the following three criteria:

Teaches on load more than the requisite number of hours (including the
accumulated thesis/project hours) and
FCQ analysis is at least ¼ standard deviation above the department or comparable
classes for the FCQ questions listed above

OR

2. Achieves FCQ ratings detailed above with at least ¾ standard deviation above the student evaluations in comparable classes

OF

3. Wins one significant external grant for curriculum or student scholarship.

Research and Creative Work: The department recognizes that scholarship can take many forms. Our department emphasizes fundamental discovery, scholarly work which integrates existing knowledge and applied research. Such research is expected to be published in peer-reviewed venues. We recognize scholarly study of teaching and learning issues in our field as a form of research.

Meritorious: A rating of meritorious requires a candidate to show reasonable progress toward tenure as demonstrated by both six external proposals submitted and five refereed papers accepted for publication.

- 1. Excellent: Under Regent Policy 5.D.2.(B), requirements for tenure appointment, a recommendation of tenure based on excellence in scholarly/creative work shall include evidence of impact beyond the institution. For comprehensive evaluation, a rating of excellent requires a candidate to show reasonable progress toward tenure as demonstrated by satisfaction of all the following three criteria:
 - 1. Seven total refereed publications, including at least one significant paper, and
 - 2. Either being responsible for more than 100K in external research grant funding or submitting 10 total external proposals, and
 - 3. Receiving overall positive external peer review letters.

Each of 1, 2 and 3 are viewed as providing evidence of impact beyond the institution, and combined they show excellence.

The above criteria provide sufficient but not necessary conditions for evaluation of meritorious or excellence in research. The committee can also consider the overall research dossier of the candidate, including the external letters, in making its recommendation, e.g., external recognition of the research impact or exceeding the stated criteria in one category can make up for minor shortfalls in another category.

<u>Service</u>: The department recognizes service to the campus, community and to our profession. A rating of meritorious requires meeting service responsibilities within the department and some service to the college, campus, community or profession. A rating of excellent requires meeting service responsibilities within the department and multiple service contributions to the college, campus, community, or profession. In evaluating service, both the quality and quantity of service contributions will be considered.

Promotion to Associate Professor and Awarding of Tenure

Computer science is a field that, because of its very rapid pace and its focus on computer technology, has developed a set of standards for pursuing and disseminating research that is not the same as other fields. While we include all of the standard "components," we also have less traditional items, such as web-only publications and the impact of software that is shared with others. More significantly, as has been well documented, computer science places a much stronger emphasis on *selective* conferences, which are often more selective and have a greater impact than journals. This is discussed in The Computer Research Associations Best practice guide to tenure and promotion in computer science, developed by a Blue ribbon committee, http://www.cra.org/reports/tenure_review.html. The department guidelines proposed herein are in keeping with that seminal guide, which we anticipate will be included with each folder for promotion and/or tenure of a CS faculty.

For tenure and promotion review, proposal and grant activity can include both PI and Co-PI roles, with funding levels pro-rated according to the grant workload agreement. REU grants can be counted toward either teaching or research but not both. Faculty hired from other institutions may have time and funding levels counted toward tenure, with the details discussed by the primary unit tenure and promotion committee and specified in the hiring offer.

The candidate's record in teaching, research, and service will each be evaluated separately as below expectations, meritorious, or excellent. The candidate must be rated as, at least, meritorious in all three areas and must receive a rating of excellent in either teaching or research.

The department will solicit letters from respected scholars in the candidate's field(s) of research per campus policy.

<u>Teaching</u>: The department defined teaching metrics in the definitions section above.

Meritorious: Teaching is meritorious if the candidate meets all of the following criteria:

- 1. Teaches the requisite number of credit hours for the approved workload.
- 2. Achieves a three term FCQ analysis that is not more than 1 standard deviation below comparable classes for the FCQ questions listed above.
- 3. Receives overall positive evaluation on at least two other teaching metrics from the list in the definitions section.

Excellent: Teaching is excellent if all the criteria of meritorious are met, if the candidate has demonstrated impact beyond the instructional setting, and if the candidate meets at least one of the following criteria:

- 1. Teaches on load more than the requisite number of hours (including the accumulated thesis/project hours) and FCQ analysis is at least ¼ standard deviation above comparable classes for the FCQ questions listed above OR
- 2. Achieves FCQ ratings detailed above with at least ¾ standard deviation above the student evaluations in comparable classes
- 3. Wins one *significant external* grant for curriculum or student scholarship

Under Regent Policy 5.D.2.(B), a recommendation for tenure based on excellence in teaching shall include multiple measures of teaching evaluation and demonstrated achievement at the campus, local, national and/or international level which furthers the practice and/or scholarship of teaching and learning beyond one's immediate instructional setting. The department's list of metrics in the definition section identifies items which are measures of impact beyond the instructional settings, but that list is not exhaustive, and other such measures may be identified by faculty and validated by the primary unit in a particular case.

Research and Creative Work:

Within Research, the expectations are as follows:

- Refereed Publications:
 - Meritorious requires 10 refereed publications, of which at least two are significant. Each significant publication beyond two counts as two refereed publications toward the 10.
 - <u>Excellent</u> requires 15 refereed publications, of which at least three are significant publications. At least five of the refereed publications for excellent. must have a first author of the candidate or one of the candidate's students. Each significant publication beyond three counts as two refereed publications towards research excellence.
- AND External Competitive Funding:
 - o <u>Meritorious</u> requires the candidate being responsible for at least \$150K in funding or winning one significant grant.
 - Excellent requires the candidate being responsible for at least \$300K in funding and winning one significant grant.
 - Seminal papers in the candidate's field of research that are transformational in character can be used in lieu of some external funding. The case of transformational will require the candidate to provide quantitative justification, e.g., using h-index and citation levels, within their field and multiple external letters validating the transformational nature.
- AND overall positive evaluation on external review letters.

<u>Meritorious</u> in research is at least meritorious in both publication and funding and generally positive letters.

<u>Excellence</u> in research requires excellence in both publication and funding and overall positive letters.

Under the revised Regent Policy 5.D.2.(B), a recommendation of tenure based on excellence in scholarly/creative work shall include evidence of impact beyond the institution. External peer reviews or publications/grants, awarded of funding, citations and letter are all viewed as providing evidence of impact beyond the institution. Excellence in research requires excellence in both publication and funding and overall positive letters.

The above criteria provide sufficient but not necessary conditions for evaluation of meritorious or excellence in research. The committee can also consider the overall research dossier of the candidate, including the external letters, in making its recommendation, e.g., external recognition of the research impact or exceeding the stated criteria in one category can make up for minor shortfalls in another category.

<u>Service</u>: The department recognizes service to the campus, community and to our profession. A rating of meritorious requires meeting service responsibilities within the department and service to the college, campus, community or profession. A rating of excellent requires meeting service responsibilities within the department and multiple service contributions to the college, campus, community, or profession. In evaluating service both the quality and quantity of service contributions will be considered.

Promotion to Full Professor

Promotion to Full professor requires a national reputation with significant citations to published work. It is expected that the candidate has brought positive visibility to our department and college through their work.

Overall excellence may be demonstrated either by distinguished accomplishment in teaching or research accompanied by progress in the other areas, or by manifest strength in two areas accompanied by progress in the remaining area. Although there is no time limit associated with the promotion to Full Professor, in the research area it is expected that the candidate will have an established and on-going and successful program involving external funding since the granting of tenure and promotion to Associate Professor. As with tenure, seminal papers that are transformational in nature can be used in lieu of external funding.

The department will solicit letters from respected scholars in the candidate's field(s) of research per campus policy.

The PUC letter shall detail how the package demonstrates the national reputation and overall excellence.

Post-tenure Review:

Recognizing the many different ways in which post-tenure faculty contribute to the University, we define "meeting expectations" for purposes of post-tenure review as consisting of three elements, each of which must be met:

- 1. The candidate must achieve a rating of "meeting expectations" or higher on each of the annual merit reviews included in the time period under review,
- 2. The candidate must show documented progress toward the faculty member's current professional plan, and
- 3. The candidate must submit an acceptable professional plan for the next 5 years, which indicates an ability to achieve "meeting expectations" or higher ratings in the future.

If a faculty member is deficient in meeting these standards, the committee shall consider the total record of the faculty member during the review period to determine whether strengths in some time periods or some activities compensate for the deficiency such that a rating of "meeting expectations" is still appropriate. Ratings of "exceeding expectations" or "outstanding" will be awarded for exceeding these standards.

Promotion from Instructor to Senior Instructor:

The schedule for promotion to Senior Instructor will follow the applicable campus and college policies.

Teaching:

- 1. Demonstrated effectiveness as a classroom teacher.
- 2. Keeping courses up-to-date by incorporating new materials or by introducing new methods/approaches/technologies.
- 3. Being accessible to students and helping students outside of class.
- 4. Publications related to teaching including textbooks, new teaching methods, and aids.
- 5. Active interest and support of student activities through student clubs and organizations

Service:

- 1. Active participation in curriculum development, including assessment. This can include being an active and contributing member of the undergraduate curriculum committee.
- 2. Participation in professional training and career development both inside and outside of the university.

It is not expected that a candidate must rate highly on every point in the above items. However, high-quality work in many of these is essential

College of Engineering and Applied Science Computer Science Department RPT Policy Version History

Version 1: Initial Version

- Approved by the Computer Science Department, 7/8/2019
- Approved by the Dean of EAS, 7/8/2019
- Approved by the Provost, 8/15/2019