1. Composition of the external review team
   - The external review team should consist of at least five members. The recommended number for RCEAS is eight members.
   - The candidate may suggest a list of outside evaluators from which the department chair should select a subset.
   - At least two outside reviewers should be chosen independently from the candidates suggested list. The department chair in consultation with the department faculty will select the two reviewers.
   - The candidate is encouraged to include one member in the external review team who is intimately familiar with the candidate’s research area and served in the capacity of co-author, co-editor, or co-principal investigator. However, the remainder of the evaluators must follow the university guideline, which states that “... evaluators must be individuals who have no vested interest in a candidate’s success or failure, usually co-authors, co-researchers, co-editors, former professors or advisors are not acceptable reviewers. However, a department chair may discuss with the dean an exception. Only the dean may approve an exception to the requirement.”
   - The final list of external evaluators will be discussed and approved by the dean.

2. When a candidate has been active in interdisciplinary research, that research should be given the same weight as disciplinary research. In this case, having an external reviewer from the interdisciplinary research area should be encouraged. Evaluations from Lehigh department chairs in areas of a candidate's interdisciplinary research should be encouraged. In any case, the breadth as well as depth of a candidate's scholarly impacts should be considered.

3. Evidence of scholarly impact is a primary consideration for tenure and promotion.
   - It is important that scholarly impact is measured in a multi-faceted, multi-dimensional manner so as to minimize bias toward a specific discipline or research area.
   - Archival publications. Archival publications provide an important indicator for the candidate’s scholarly impact. To assess the quality of
various publication outlets, the university guideline requires: “Background information concerning the stature of different journals, book publishers, performance/exhibit venues, etc. that can be used to evaluate the candidate’s scholarship shall be provided by the Department. Appropriate indicators of journal quality (e.g., rejection rate, quality of editorial review board members, and articles evaluating journals) shall be included.” The establishment and maintenance of lists of leading disciplinary publication outlets by each Department could prove helpful and is strongly encouraged.

- **Citation and Peer Recognition**: Number of citations for a candidate’s publication is highly variable and time sensitive, thus should *not* be used as an explicit measure for tenure evaluation. Other evidence of scholarship such as journal editorship, invited seminar presentations at other universities, invited conference presentations, organizing professional conference, conference sessions, workshops, tutorial sessions, and professional awards and recognitions should be used to measure the candidate’s recognition in his/her research community.

- **Research Funding**: While funded research is an important measure of the candidate’s scholarly impact, it should be recognized that high funding level does not always translate into high scholarly impact. When evaluating the candidate’s funded research activities, quality, not quantity, should be the primary criterion. Successes in peer reviewed research-funding proposals and in competitive industrial funding, which supports graduate research, is a relevant measure of scholarship and external recognition. Moreover, the *use* of research funding should be evaluated explicitly. Supporting graduate and undergraduate student research, enhancing integration between research and education, and contribution to university infrastructure through ICR, equipment, and tuition payment should be strongly encouraged.

- **Joint Work and Co-Authorship**: Co-PI on research projects as well as Co-authorship on publications should be given proper interpretation during the tenure and promotion review. Since it is difficult for an outside party to determine how much work each collaborator did, the candidate should clearly delineate his/her contributions to the research and/or publication with written comments. The department chair should also provide comments in the summary letter to address this issue.

- **Graduate Student Research Supervision**: Accomplishments in graduate student research supervision should serve as a strong indicator of scholarly impact. Here, research supervision is referring to the supervision of doctoral dissertation, or master’s thesis which lead to clear scholarly outcomes. The following information may be provided as evidence of the candidate’s performance in research supervision:
- doctoral dissertation committee or master’s thesis chaired
- doctoral committees participated which lead to joint publications or funded research projects
- masters or doctoral students who have achieved distinction in academe, industry, or government
- scholarly output of masters or doctoral students (e.g., publications, conference presentations, colloquiums, awards, etc.)
- other evidence (e.g., letters from former students) may be provided to testify the quality and impact of the candidate’s research supervision

  - Other Measures: Other evidence of scholarly impact should be provided, this may include: inventions, engineering designs, products, software systems, or algorithms which result in patents, industrial adoptions, or other recognition by the press or the research community at large.

4. **Teaching effectiveness** should be examined in a broad context.
   - Student evaluation should be interpreted carefully by department faculty and department chair, taking into consideration the difficulty of the material, popularity of the subject area, required or elective courses, etc.
   - Developing new courses or new curriculum (both at the graduate and undergraduate level), and various forms of teaching innovation should be strongly encouraged and used as a metric for teaching performance.
   - Some form of peer input on teaching should be provided. This may be given in the context of team teaching, in-class observations, or other forms of peer interaction.
   - For further description on teaching evaluation, please refer to the *RCEAS guideline on Teaching Evaluation.*

5. **Service** should be examined in terms of its long-term impact to the university community and to the profession.
   - Long-term impact to the university should be evident when evaluating faculty service activities. Significant service activities are too numerous to list, but examples may include: the development of innovative programs or curricula, the development and renewal of laboratories, assuming key responsibilities in graduate and undergraduate student advising, student club and/or honor society advising, etc. The impact of these activities should be assessed and evaluated by a multitude of methods.
   - Long-term impact to the profession should be evident when evaluating faculty service activities. Examples of high-impact professional service may include: serving on national panels, serving in key offices or as the regional representative for professional societies, organizing professional conferences, workshops, etc.
   - **Junior faculty should recognize that while providing service is important, it should be properly balanced with other activities in scholarship and teaching.**
P.C. Rossin College of Engineering and Applied Science
Lehigh University
Guideline for Promotion to Full Professor

(Document served as an addendum to the University Promotion and Tenure Portfolios and Tenure and Promotion Checklist)

Passed by the RCEAS Faculty at the College's Faculty meeting held on May 15, 2002.

1. Composition of the external review team
   - The external review team should consist of at least six members. The recommended number for RCEAS is ten members.
   - The candidate may suggest a list of outside evaluators from which the department chair should select a subset.
   - At least three outside reviewers should be chosen independently from the candidates suggested list. The department chair in consultation with the department faculty will select the three reviewers.
   - The candidate is encouraged to include one member in the external review committee who is intimately familiar with the candidate’s research area and served in the capacity of co-author, co-editor, or co-principal investigator. However, the remainder of the evaluators must follow the university guideline, which states that “… evaluators must be individuals who have no vested interest in a candidate’s success or failure, usually co-authors, co-researchers, co-editors, former professors or advisors are not acceptable reviewers. However, a department chair may discuss with the dean an exception. Only the dean may approve an exception to the requirement.”
   - The final list of external evaluators will be discussed and approved by the dean.

2. When a candidate has been active in interdisciplinary research, that research should be given the same weight as disciplinary research. In this case, having an external reviewer from the interdisciplinary research area should be encouraged. Evaluations from Lehigh department chairs in areas of a candidate's interdisciplinary research should be encouraged. In any case, the breadth as well as depth of a candidate's scholarly impacts should be considered.

3. Evidence of scholarly and professional leadership in one’s field is a primary consideration for the promotion to full professor.
   - Strong evidence of scholarly and professional leadership may be provided through activities such as journal editorship, best paper awards, invited lectures at other institutions, invited or keynote presentation at professional conferences and symposiums, chairing professional conferences and/or workshops, chairing national panels, etc. In general, the evidence of leadership should be demonstrated by external recognition of the candidate’s achievement and professional stature.
Archival publications. The caliber of the candidate’s publication should provide evidence for scholarly leadership. The candidate’s publications should focus on high-quality, high-impact outlets. To assess the quality of various publication outlets, the university guideline requires: “Background information concerning the stature of different journals, book publishers, performance/exhibit venues, etc. that can be used to evaluate the candidate’s scholarship shall be provided by the Department. Appropriate indicators of journal quality (e.g., rejection rate, quality of editorial review board members, and articles evaluating journals) shall be included.” The establishment and maintenance of lists of leading disciplinary publication outlets by each Department could prove helpful and is strongly encouraged.

4. Evidence of scholarly impact is another primary consideration for the promotion to full professor.

- It is important that scholarly impact is measured in a multi-faceted, multi-dimensional manner so as to minimize bias toward a specific discipline or research area.

- Citation and Peer Recognition: It should be recognized that the number of citations for a candidate’s publication is highly variable, time sensitive, and potentially biased toward papers focusing on reviews and surveys, and papers rich on technical data. If citation is to be used, it should be interpreted with great caution, taking into account the size of the research community, the nature of the articles being cited, the convention in the discipline, etc.

- Research Funding: While funded research is an important measure of the candidate’s scholarly impact, it should be recognized that high funding level does not always translate into high scholarly impact. When evaluating the candidate’s funded research activities, quality, not quantity, should be the primary criterion. Successes in peer reviewed research-funding proposals and in competitive industrial funding, which supports graduate research, is a relevant measure of scholarship and external recognition. Moreover, the use of research funding should be evaluated explicitly. Supporting graduate and undergraduate student research, enhancing integration between research and education, and contribution to university infrastructure through ICR, equipment, and tuition payment should be strongly encouraged.

- Joint Work and Co-Authorship. Co-PI on research projects as well as Co-authorship on publications should be given proper interpretation during the promotion review. Since it is difficult for an outside party to determine how much work each collaborator did, the candidate should clearly delineate his/her contributions to the research and/or publication with
written comments. The department chair should also provide comments in the summary letter to address this issue.

- **Graduate Student Research Supervision:** Accomplishments in graduate student research supervision should serve as a strong indicator of scholarly impact. Here, research supervision is referring to the supervision of doctoral dissertation, or master’s thesis which lead to clear scholarly outcomes. The following information may be provided as evidence of the candidate’s **performance in research supervision:**
  - doctoral dissertation committee or master’s thesis chaired
  - doctoral committees participated which lead to joint publications or funded research projects
  - masters or doctoral students who have achieved distinction in academe, industry, or government
  - scholarly output of masters or doctoral students (e.g., publications, conference presentations, colloquiums, awards, etc.)
  - other evidence (e.g., letters from former students) may be provided to testify the quality and impact of the candidate’s research supervision

- **Other Measures:** Other evidence of scholarly impact should be provided, this may include: inventions, engineering designs, products, software systems, or algorithms which result in patents, industrial adoptions, or other recognition by the press or the research community at large.

5. **Teaching effectiveness** should be examined in a broad context.
   - Student evaluation should be interpreted carefully by department faculty and department chair, taking into consideration the difficulty of the material, popularity of the subject area, required or elective courses, etc.
   - Developing new courses or new curriculum (both at the graduate and undergraduate level), and various forms of teaching innovation should be strongly encouraged and used as a metric for teaching performance.
   - Some form of peer input on teaching should be provided. This may be given in the context of team teaching, in-class observations, or other forms of peer interaction.
   - For further description on teaching evaluation, please refer to the *RCEAS guideline on Teaching Evaluation.*

6. **Service** should be examined in terms of its long-term impact to the university community and to the profession.
   - Long-term impact to the university should be evident when evaluating faculty service activities. Significant service activities are too numerous to list, but examples may include: the development of innovative programs or curricula, the development and renewal of laboratories, assuming key
responsibilities in graduate and undergraduate student advising, student club and/or honor society advising, etc. The impact of these activities should be assessed and evaluated by a multitude of methods.

- Long-term impact to the profession should be evident when evaluating faculty service activities. Examples of high-impact professional service may include: serving on national panels, serving in key offices or as the regional representative for professional societies, organizing professional conferences, workshops, etc.