

CRITERIA AND PROCEDURES FOR
RESEARCH ENGINEER APPOINTMENTS,
EVALUATIONS, AND PROMOTIONS

in

IIHR – Hydroscience & Engineering
College of Engineering
THE UNIVERSITY OF IOWA

Adopted by IIHR Research Staff

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I. INTRODUCTION

This document provides details on the criteria and procedures for IIHR research engineer appointments, evaluations, and promotions. These guidelines pertain only to research engineers with their *primary* appointment with IIHR.

General Definition

Research engineers (RE) contribute primarily to the research mission of the University, College, and IIHR, and may hold faculty rank as adjunct assistant professor, associate professor, or professor. Research engineers are not eligible for tenure. They can qualify for awards and can compete for internal research grants.

Research engineers devote almost all of their time to performing externally supported research. They submit grants and contract in support of their own program and are also encouraged to participate in larger initiatives within IIHR, across campus, and with external partners. Research engineers may serve on graduate student committees with the approval of the Graduate College, and as co-chairs of graduate student committees along with regular Graduate College faculty. Research engineers may be assigned to teach courses, but teaching is not mandatory.

II. APPOINTMENTS

Research engineers are initially appointed to term positions for one to three years as determined by the Director. They are evaluated near the conclusion of the initial appointment as described in section IV. Assistant REs may enter career status after serving six years in term status, except as provided for in the University of Iowa Operations Manual, Chapter III-3.1, f(1)(c)*; associate and full REs serve at-will.** (As at-will employees, REs may be dismissed at any time after the conclusion of their initial appointment, based on failure to meet the funding and research expectations of their rank as detailed below and/or the availability of funding.)

Ranks

The information below outlines the required qualifications for appointment at, or promotion to, the ranks of assistant RE, associate RE, and full RE. Assistant REs may be eligible for promotion to associate RE after six years. Associate REs may be eligible for promotion to full RE after six years. Promotion may be considered earlier if the qualifications and promise of the individual concerned warrant such action (as determined by the Director and Appropriate Peer Group (see section IV. Evaluations)). The Director of IIHR will not approve career advancement requests by REs who have not first completed IIHR's internal peer-review process in association with their career advancement.

A. Assistant Research Engineer

1. Ph.D. in engineering or equivalent experience in the required research area.
2. Potential for productive scholarship supported by previous research publications or the equivalent.

*Assistant research scientists having career status prior to the new P&S compensation and classification system implemented by UI in 2011 retain career status while in their current position.

**Associate research engineers and research engineers having career status prior to the new P&S compensation and classification system implemented by UI in 2011 retain career status while in their current position.

3. Promise of making significant contributions to existing research programs and/or developing an independent area of research.
4. Potential for significant impact on the academic and research missions of IIHR, the College, and the University.

B. Associate Research Engineer

1. Ph.D. in engineering or equivalent experience in the required research area.
2. A record of success in research and development projects.
3. Established record in productive scholarship supported by substantial publications or the equivalent.
4. Evidence of recognition by peers at the national and international levels.
5. Experience in technical management of large and/or multiple projects requiring coordination of personnel and facilities.
6. Evidence of significant contributions to existing research programs and/or development of an independent area of research.
7. Evidence of significant impact on the academic and research missions of IIHR, the College, and the University.

C. Research Engineer

1. Ph.D. in engineering or equivalent experience in the required research area.
2. A record of success in research and development projects.
3. Established record in productive scholarship supported by substantial publications or the equivalent.
4. Unmistakable evidence of recognition by peers at the national and international levels.
5. Established record in research supported by significant project funds and strong links to industrial and government organizations.
6. Experience in technical management of large and/or multiple projects requiring coordination of personnel and facilities.
7. Significant contributions to existing research programs and/or established an independent area of research.
8. Significant impact on the academic and research missions of IIHR, the College, and the University.

III. TERMS OF EMPLOYMENT OF IIHR RESEARCH ENGINEERS

Salary Support

Research engineers are appointed to an academic-year (9 month) appointment and paid on a fiscal-year (12-month) basis. The director recommends his or her salary during the annual budget cycle. Computation of salary and absences follow for University of Iowa guidelines as outlined in the Human Resources chapter of The University of Iowa Operations Manual.

Each RE is expected to support, on a continuing basis, at least 75 percent of his or her academic-year salary from external contracts and grants with Facilities & Administration (F&A) charges. University, College, Departmental, or IIHR research and development projects or teaching assignments, or any other activity for which designated internal funds are committed but do not have F&A charges associated with them, may count toward this

expectation provided prior approval is obtained from the IIHR Director. If external salary support with F&A charges greater than 75 percent is obtained during a fiscal year, the excess salary funds may be made available to the RE during the following year for discretionary use. (However, only an amount equal to or less than 12.5% of the RE's academic year salary may be carried forward to the next fiscal year.)

IIHR may cover up to 25 percent of the RE's annual salary. This internal support is intended to underpin the future growth of research in the RE's area by pursuing activities such as:

1. Development of research proposals for external funding;
2. Development of experimental or numerical tools expected to lead to new externally funded grants or contracts;
3. Preparation of scholarly contributions to the archived literature;
4. Visits to potential research partners and funding agencies;
5. Attendance at conferences for the presentation of research results and promotion of IIHR activity; and
6. Service in professional societies.

Research engineers may also receive up to two, and on occasion three, months of additional summer support based on externally funded grants and contracts. The first two months may include 25% funding from IIHR; the third month of summer salary must be entirely covered by external funding. (The third month of summer salary is allowed only in rare instances and requires additional approval, even if funding is available.)

Vacation and other Leave

Research engineers have an academic year appointment, and thus do not accrue paid vacation. They are expected to follow The University of Iowa Operations Manual regarding absences during the academic year.

Adjunct Faculty Appointments

The IIHR Director will assist REs to be appointed as adjunct faculty in appropriate academic departments. While such appointments would enable REs to co-advise graduate students and occasionally teach a course in their area of specialization, this activity should not interfere with normal duties in IIHR.

IV. EVALUATIONS

Evaluations of the performance of REs are of two types.

Annual Evaluation

Research engineers are evaluated annually by the IIHR Director, as per UI guidelines for all P&S staff, for the purpose of: recommending salary increments; establishing annual research goals and objectives and long-term career development; assigning IIHR responsibilities; and allocating IIHR research and service support.

The evaluations shall be based on the latest RE Activity Summary (RAS) and any additional material the RE believes is appropriate. Deadlines for updating the RAS and submitting additional material shall be established by the Director.

Evaluation by Peer Group

Research engineers receive a full evaluation every three years by an appropriate committee of their peers (or prior to three years if a promotion is contemplated). This process is initiated by a letter from the RE to the Director of IIHR and should specify whether requesting a continuation at current rank, or a continuation with promotion.

The Appropriate Peer Group (APG) participating in the review and evaluation process is a standing committee of REs, including faculty affiliates, determined by the Director. The individuals from the APG committee participating in a specific review depend upon the rank and status of the individual being reviewed and the purpose of the review (The APG will normally include REs and faculty affiliated with IIHR of equal or higher rank to the individual under review). The Director may attend the meetings of the APG.

This review should take into account the RE's effectiveness in fulfilling the research mission of the University, College, and IIHR and the ability of the RE to obtain and sustain external salary support. It also should include an evaluation of the departmental, collegiate, and University research goals and the likely role of the RE in the future in helping to achieve those goals.

All evaluations of the RE's performance will be based on documented evidence of contributions in the areas of scholarly productivity, research, service, teaching, and impact. Contributions in scholarly productivity and research will be the major factors in determining the outcome of each evaluation; service and teaching, although important, will not carry the same weight. (The specific elements of evaluation of RE contributions are outlined in Appendix A.)

Review and Evaluation Procedure

1. General

- (a) Evaluations for continuation are mandatory for all RE levels. Such evaluations shall be undertaken every three years for assistant and associate REs and every five years for full REs, the completion date designated by the Director.
- (b) An RE may make a written request to the Director for a non-mandatory review of his or her promotion in any academic year (including the year of a mandatory review for continuation). In such cases, the APG, after conducting a preliminary review of the RE's contributions, shall inform the candidate whether or not a full review is, in its opinion, warranted. Regardless of this opinion, the candidate has the right, through written notification to the Director, to request that the full non-mandatory review be either continued or discontinued in that academic year. The Director may grant or refuse the request. Full non-mandatory reviews shall be governed by the same procedures as those specified herein for a mandatory review.

2. It is the responsibility of the Director to:
 - (a) Establish a timetable for the review;
 - (b) Arrange for the development of a promotion file for each person being considered for promotion, with each person given the opportunity to submit whatever he/she considers relevant to the established criteria. Materials that could not have been available at the time of preparation of this file may be added at a later date by the candidate through the Director. Where the availability of this material prior to the completion of the deliberations of the APG can be anticipated, the expected additions should be identified at the time the file is submitted, and the new material should be added to the file as it becomes available;
 - (c) Convene the APG and appoint a chairperson to conduct the meeting or meetings at which the group considers what action to recommend concerning reappointment;
 - (d) Make the final decision regarding the RE's continuation and/or promotion, after taking into account the recommendations of the APG and after consulting, if feasible, with other IIHR research staff who did not participate in a review of the promotion file and/or the meeting of the APG when the final recommendation was made.
 - (e) Consider and adjust the RE's salary as appropriate.
 - (f) Convey the RE's continuation, promotion (if relevant), and salary to the individual.
 - (g) Work with IIHR's human resources representative to update the RE's P&S classification and salary.
3. The APG may appoint individual members or committees to collect all pertinent information on each candidate and shall meet as often as necessary to review and evaluate the RE's research and service contributions. If appropriate, the APG will request that the candidate's contributions to teaching be evaluated by the Department Executive Officer(s) [DEO(s)] of the relevant academic department(s). If the review is for promotion, the APG may solicit external letters of review to establish the level of external recognition by peers.
4. A closed ballot vote of the APG attending the group meeting shall be taken, with the votes counted at the meeting. A written report of the APG's activities and evaluation shall be drafted by the group chairperson, modified as necessary and approved by the group, and submitted by the group chairperson to the director. Minority reports, if applicable, may be appended to and submitted as part of the written report.
5. If the recommendation of the Director differs from the judgment of a majority of the APG, the Director shall report this fact to them together with the reason or reasons for the recommendation made.

APPENDIX A

Appropriate Peer Group (APG) Evaluation Elements

A. Evaluation of Scholarship

The criteria employed to evaluate an RE's scholarship are quality and productivity. Evidence must be presented to demonstrate high quality, independence, and continuous productivity in scholarship with growth in research leadership as an RE progresses to higher ranks. There should be documented evidence that the RE's research program has achieved or is achieving national recognition.

Quality of scholarship is difficult to determine in absolute terms, but an evaluation and acceptance by knowledgeable peers is an essential component. Publications in rigorously refereed archival journals with a national and international readership are the best indicators of an RE's scholarly accomplishments. However, publication of technical reports, monographs, manuals, and books, as well as presentations at conferences etc., can provide valuable evidence of research quality and scholarly productivity.

Material to be used in the evaluation of scholarship should be drawn principally from the RAS a document that is updated at least once a year. It is important that items listed contain complete citations. Evidence for the evaluation of scholarship should be organized into the following categories.

1. Research monographs and books which represent a major scholarly effort. Edited books, in which the RE conceptualized the project, contributed in a substantial way to the included papers, and wrote important portions of the book, also indicate a high level of scholarship and recognition by peers.
2. Papers published or accepted for publication in technical journals and proceedings with rigorous peer review procedures.
3. Papers published in proceedings lacking rigorous review procedures, and presentations at conferences.
4. Technical reports and manuals, which are effective media for rapid dissemination of research results.
5. Other publications (e.g., articles in books, articles in popular magazines, etc.) that are effective media for the dissemination of research results.
6. Awards that recognize special professional accomplishments.

B. Evaluation of Research Activity

Material to be used in the evaluation of research should be drawn principally from the RAS. Evidence for the evaluation of research should be organized into the following categories:

1. Effective and efficient technical and business management of internally and externally funded research projects, including staff selection and assignment, scheduling, coordination of data generation and analysis, identification, acquisition, and use of equipment and facilities, adherence to budget and time constraints, timely reporting, etc.
2. Development of new proposals for research and acquisition of support for new and/or continuing research activities. The number and breadth of proposals submitted

- by an RE, both independently and as co-investigator, is an important indicator of his or her engagement in the IIHR research enterprise.
3. Success in attracting research funding.
 4. Maintenance of liaisons with sponsoring agencies and organizations as well as with other research and educational institutions.
 5. Training of students, junior investigators, potential investigators and support personnel, and conduct of continuing education for research personnel at all levels.
 6. Participation in IIHR's educational programs through preparation and presentations of seminars, mentoring and guiding of research students, etc.
 7. Demonstration of the ability to work effectively with colleagues in team efforts, when and where appropriate.

C. Evaluation of Professional Service

In addition to research contributions, REs routinely are expected to provide service at various levels within and outside IIHR. It is very difficult, and perhaps unnecessary, to place a higher value on one type of service activity than on another. However, factors that are paramount in the evaluation of overall service contributions are (a) successful discharge of IIHR and collegiate responsibilities, (b) growth in the scope of service with advancement in rank, and (c) contribution to the enhancement of the reputation of IIHR, the College, and the University. The types of activities to be considered in such an evaluation of service involve the following:

1. IIHR, College and University. Carrying out committee responsibilities in a thorough and timely manner is essential for a favorable evaluation. Other activities include advising student organizations, providing peer support through review of proposals and articles written by colleagues and, for more experienced REs, taking a leadership role in IIHR review and development, and in securing external support for the general activities and infrastructure of IIHR.
2. Professional organizations. Important forms of service in this category include: committee membership and leadership; organization of conferences or sessions at conferences; presentation of short courses and workshops; membership on accreditation boards or agencies; reviewing of journal articles and research grant proposals; editorship of journals; presentation of seminars at universities, research laboratories, and other organizations; etc.
3. Governmental agencies and community groups. These include membership on state and national boards, and professional advising of government organizations in the solution of engineering problems and in the formulation of public policy.

D. Evaluation of Teaching

Although teaching is not the primary function of REs, they are expected to participate in the educational missions of IIHR and its associated academic programs where appropriate and needed. This includes training of staff, teaching of students (classroom and extra-classroom), and advising/co-advising of undergraduate and graduate students on research and thesis projects. To the extent that such involvement in teaching is equivalent to that expected of academic faculty, the APG should obtain an evaluation of teaching from the

DEO(s) of appropriate academic department(s). This evaluation should be based on student responses through the ACE system and peer evaluation as expected of the department's regular faculty.

E. Evaluation of Impact

Research engineers may have an impact on the mission of IIHR, the College and its Departments, and/or the engineering and scientific profession that is not explicitly recognized in Scholarship, Research, and Service. For the purposes of evaluation, such impact must be truly exceptional and demonstrated/documentated through supporting evidence from peers and/or the media. As defined herein, Impact is not to be construed as a substitute or replacement for contributions in Scholarship, Research, and Service. However the APG should recognize extraordinary Impact as a strong complement to Scholarship, Research, Teaching, and Service in a final assessment of its evaluation.

Examples of Impact include, but are not limited to, the following:

1. Development and dissemination of techniques, programs, or devices that have been recognized and adopted by the profession as standard and/or indispensable tools.
2. Indispensable contributions to, including leadership of, team efforts in IIHR's academic and research missions.
3. Extraordinary mentorship and advising of students.
4. Contributions to the archived literature, including books, of seminal importance and widely recognized value.

F. Summary

In identifying the important elements in the evaluation of the RE's performance, no attempt has been made to distinguish between criteria applicable to different ranks. The same general types of activities are normally pursued by all REs. The evaluations are, however, to be based on the differences in qualifications and conditions noted in Section II of this document. In particular, promotion to, or appointment at, the rank of Associate RE requires that the candidate show promise of ultimately attaining the rank of RE.

Evidence of peer recognition at the national level may include national honors for outstanding research, adoption by other institutions of research methodologies and concepts developed by the candidate, a substantial record of publication in widely-read refereed professional journals, awards of distinction from professional societies for research, presentation of keynote addresses or research reviews at national and international meetings, appointments to prestigious national or international committees, membership on editorial boards of journals, and invitations to render unique professional services to industry and government agencies.