

**CRITERIA AND PROCEDURES FOR**  
**RESEARCH SCIENTIST APPOINTMENTS,**  
**EVALUATIONS, AND PROMOTIONS**

**in**

**IIHR--Hydroscience & Engineering**  
**College of Engineering**  
**THE UNIVERSITY OF IOWA**

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## TABLE OF CONTENTS

	Page
I. Introduction .....	3
II. Appointments .....	3
A. Assistant Research Scientist .....	3
B. Associate Research Scientist .....	4
C. Research Scientist.....	4
III. Terms of Employment of IIHR Research Scientist .....	4
A. Salary Support .....	4
B. Vacation and Other Leave .....	4
C. Adjunct Faculty Appointments.....	4
IV. Evaluations .....	5
A. Annual Evaluation.....	5
B. Evaluation by Peer Group.....	5
C. Review and Evaluation Procedure.....	5
Appendix A. APG Evaluation Elements.....	8
A. Evaluation of Scholarship .....	8
B. Evaluation of Research Activity.....	8
C. Evaluation of Professional Service .....	9
D. Evaluation of Teaching.....	9
E. Evaluation of Impact .....	10
F. Summary .....	10

## I. INTRODUCTION

This document provides details on the criteria and procedures for IIHR research scientist appointments, evaluations, and promotions.

### General Definition

Research scientists (RS) 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 scientists are not eligible for tenure. They can qualify for awards and can compete for internal research grants.

Research scientists devote almost all of their time to performing externally supported research. They may submit grants and contracts primarily in support of larger programs under the direction of a research engineer or faculty affiliate. Research scientists 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 scientists may be assigned to teach courses, but teaching is not mandatory.

## II. APPOINTMENTS

Research scientists are initially appointed to term positions for one to three years depending on the initial funding available. They are evaluated near the conclusion of the initial appointment as described in section IV. Assistant RSs 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 RSs serve at-will.\*\* (As at-will employees, associate and full RSs may be dismissed at any time, based on failure to meet the research expectations of their assigned research project(s), the 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 RS, associate RS, and full RS. Assistant RSs may be eligible for promotion to associate RS after six years. Associate RSs may be eligible for promotion to full RS 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)), but in no case will promotion be considered prior to the 3-year re-appointment.

#### **A. Assistant Research Scientist**

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 scientists and 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.

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 Scientist**

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

**C. Research Scientist**

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

**III. TERMS OF EMPLOYMENT OF IIHR RESEARCH SCIENTISTS**

Salary Support

Research scientists are appointed to a fiscal-year (12-month) appointment for an initial specified term of one to three years. Their supervisor recommends his or her salary to the IIHR Director for the Director's approval during the annual budget cycle. Their supervisor also has primary responsibility for securing salary support for RSs in their program. One hundred percent of RS salary is expected to be covered by external funding.

Vacation and other Leave

Computation of vacation, sick leave, and other absences follow University of Iowa guidelines for P&S employees as outlined in the Human Resources chapter of The University of Iowa Operations Manual.

Adjunct Faculty Appointments

The IIHR Director may assist RSs to be appointed as adjunct faculty in appropriate academic departments. While such appointments would enable RSs 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.

## Professional Development

Professional development of the RS is the responsibility of his/her supervisor.

### **IV. EVALUATIONS**

Evaluations of the performance of RSs are of three types.

#### 1. Annual Evaluation

Research scientists are evaluated annually by their supervisor, 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.

#### 2. Re-appointment Review by Director

Research scientists who are up for reappointment after completion of their first term may be renewed under the recommendation of his/her supervisor. The RS is also highly encouraged to schedule a meeting with the Director of IIHR at the time of reappointment, *but no less than every three years*, to discuss his/her position, career objectives, professional development, etc.

#### 3. Evaluation by Peer Group for Promotion

Research scientists wishing to be considered for promotion should consult with their supervisor. With the supervisor's support, the RS may submit a letter to the Director of IIHR requesting review for promotion. The Director will forward his/her request to an appropriate committee of their peers for a peer review.

The Appropriate Peer Group (APG) participating in the review and evaluation process is a standing committee of research engineers and scientists, 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 (the APG will normally include research engineers/scientists and faculty affiliated with IIHR of higher rank to the individual under review for promotion.) The Director may attend the meetings of the APG.

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

All evaluations of RS 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 research scientist contributions are outlined in Appendix A.)

### Review and Evaluation Procedure

#### 1. General

- (a) All RSs requesting promotion will undergo a review by the APG. Such evaluations shall be completed by a date designated by the Director.
- (b) An RS may make a written request to the Director for a review for promotion in any calendar year following the initial three-year re-appointment review at the current rank. The APG will review the RS's promotion file and make a recommendation to the Director. The Director will also seek input from the RS's immediate supervisor.
- (c) If the Director disagrees with the APG, s/he will meet with the committee to explain his/her decision and inform the RS of the decision.
- (d) If the APG does not recommend promotion for an RS, and the Director agrees with the APG recommendation, the RS may request reconsideration for promotion no sooner than one year after the previous request. At that time, the Director will review the APG's previous professional development recommendations/goals and the RS's progress toward meeting those goals. The Director may approve the request for promotion, deny the request, or request a new review by the APG.

#### 2. It shall be 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 RS's promotion, after taking into account the recommendations of the APG and after consulting with the RS's supervisor.
- (e) Consider and adjust the RS's salary as appropriate and with input from the RSs supervisor.
- (f) Convey the research scientist's continuation, promotion (if relevant), and salary to the individual.
- (g) Work with College of Engineering human resources representative to update the research scientist'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 research scientist'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).
4. During the review for promotion, the APG should consider the RS's professional development activities and, if appropriate, offer suggestions to the RS and his/her supervisor regarding future professional development activities.
5. 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.
6. 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 a research scientist's scholarship are quality and productivity. Evidence must be presented to demonstrate high quality and continuous productivity in scholarship with growth in research leadership as a research scientist progresses to higher ranks. There should be documented evidence that the research scientist's research 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 a research scientist'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 Research Engineer/Scientist Activity Summary (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 research scientist 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 administrative 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 a research scientist, 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, research scientists 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 research engineers/scientists, 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/scientific problems and in the formulation of public policy.

### **D. Evaluation of Teaching**

Although teaching is not the primary function of research scientists, 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 scientists 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/documented 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 research scientist 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 research scientists. 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 research scientist requires that the candidate shows promise of ultimately attaining the rank of research scientist.

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.