

Iowa State University
of Science and Technology
Aerospace Engineering and Engineering Mechanics
2019 Black Engineering Building
Ames, IA 50011
May 8, 1997

Dear Engineering Educator:

This letter describes an NSF sponsored activity entitled "Civil and Mechanical Systems Workshop for the Advancement and Retention of Underrepresented and Minority Engineer Educators". This workshop is being sponsored by the Civil and Mechanical Systems Division of the NSF Directorate for Engineering. The workshop is designed to encourage retention and advancement of women, minority, and disabled engineering educators who work in the field of civil and mechanical systems. Areas of research in the programs within this division include:

1. Dynamic Systems and Control
2. Structures, Geomechanics, and Building Systems
3. Surface Engineering and Tribology
4. Mechanics and Materials
5. Earthquake Hazard Mitigation
6. Natural and Technological Hazard Mitigation

The purpose of this letter is to provide some background information about the project and to ask that you respond on the enclosed self-nomination form should you wish to be considered for an invitation to this workshop, which is scheduled for September 24-26, 1997, at the Arlington Hilton Hotel (adjacent to NSF headquarters) in Arlington, VA. The enclosed schedule of workshop activities provides a summary of the specific activities planned for the workshop. Funding will be provided by the NSF to pay for participants' travel expenses (travel expenses of up to \$500, hotel, food, etc.). Please do not submit the form unless you are able to stay for the entire duration of the workshop, which will run from 8:00 AM on Wednesday, September 24 to 3:30 PM on Friday, September 26, 1997.

Participants will be underrepresented or minority faculty (70 participants) and faculty candidates (30 participants). Faculty participants will currently be employed in tenure track teaching and research faculty positions. Sixty (60) will be in the first four years of their academic careers and will be actively trying to develop research programs in areas emphasized by the civil and mechanical systems division. Ten (10) will be senior tenured faculty, with a minimum of six years of experience; more experience preferred. Ph.D. candidate participants will be in the final year of their Ph.D. program and planning to pursue tenure track faculty positions.

Specific workshop goals are to:

1. Foster technical and intellectual exchange among underrepresented and minority engineers who work in the area of civil and mechanical systems.
2. Instill in its participants the sense of a technical community in which they can thrive and to which they can contribute.
3. Increase participant awareness of educational, research, and funding opportunities.

The envisioned short-term benefits of participation in the workshop are as follows:

1. Increased funding opportunities and knowledge about conditions required for succeeding in academe (teaching, publishing, outreach, etc.).

2. Enhancement of the scope of participants' research program goals.
3. Development of a network of mentors and peers within academe and specifically in fields related to civil and mechanical systems research and education.

The envisioned long-term benefits of the program are as follows:

1. Increased retention of underrepresented and minority engineers as active researchers, mentors, and instructors in fields related to civil and mechanical systems.
2. Development of an infrastructure of colleagues working on civil and mechanical systems research that has a rich diversity.

Names of individuals who will receive this letter have been collected from a variety of sources. We are asking everyone who is interested in being considered for an invitation to the workshop to fill out and return the enclosed self-nomination form along with a two page resume. Forms must be **RECEIVED by Monday, June 16, 1997** (via fax, email, or mail). The final list of invitees, which will represent an appropriate cross-section of the civil and mechanical systems underrepresented community, will be mailed out during August. If you have any questions, please contact me at 515/294-0094 (telephone), 515/294-8584 (fax) or abf@iastate.edu (e-mail).

Sincerely,

Alison Flatau
Workshop organizer

Enclosures:

Workshop schedule of activities
Participant self-nomination form

**NSF CIVIL & MECHANICAL SYSTEMS DIVISION WORKSHOP
SCHEDULE OF ACTIVITIES**

Arlington, VA Hilton Hotel
9/24/97 - 9/26/97 (Tentative: 3/30/97)

Tuesday Evening 9/23/97

8:30-10:00 PM - Arrival and Registration - pick up workshop proceedings and evaluation forms

Wednesday 9/24/97

8:00 AM - 8:15 - Opening Remarks and Welcome

8:15 AM - 12:00 PM - Session 1: Education, Research & Funding Opportunities. The workshop will open with a presentation in which integration of research and education will be emphasized. A speaker such as Dr. Joseph Bordogna, deputy director of the NSF will be invited to make the opening presentation. This will be followed with detailed presentations on funding opportunities from technical program managers in agencies such as NSF, ARO, AFOSR, ONR, DARPA, and NASA. Topics will include but are not limited to discussions of a. characteristics that distinguish strong proposals from others; b. directions that program managers consider to be important growth areas; c. funding opportunities.

1:00-2:00 PM - Session 2: Academic Career Issues. A working session on academic career issues, with the senior faculty participants acting as discussion facilitators. In addition to knowledge gained through discussions and participants getting to know one-another through small group interactions, this session is designed to provide a common foundation to all participants for the deans' presentations and panel discussion which follows.

2:00-3:15 PM - Session 3: Dean's Panel on Academic Career Issues. Deans will discuss their perspectives on reasonable career expectations and demands. This panel will be set up to include discussion of issues related to tenure, teaching, research, publications, funding, outreach *and* a rewarding personal life along the career path of an engineering educator.

3:30-5:30 PM - Session 4: Student Technical Presentations. Each student participant will give a brief summary of their current research interests (4 minutes with a 3 viewgraph maximum). This will increase fellow participants' awareness of the diversity of related opportunities for involvement in research activities, and provide exposure of outstanding faculty candidates to fellow participants and the deans who happened to participate in the previous session.

6:30-9:00 PM. - Reception/Dinner Banquet and Evening Speaker. Funding for this event will be arranged through either workshop organizing committee fund raising activities or a nominal participant registration fee.

Thursday 9/25/97

7:30 AM-9:45, 10:00-12:00 PM and 1:00-3:00 PM - Sessions 5-7: Invited Speaker and Participant Presentations. The morning and early afternoon sessions will alternate between invited speaker presentations and faculty participant presentations. The invited speakers will be role models selected based on their outstanding technical abilities and successful careers. Invited speaker will make 20 minute technical presentations, blended with personal and professional insights, followed by 10 minutes of discussion. For the participant presentations,

faculty will present a brief summary of their current research interests (4 minutes with a 3 viewgraph maximum), increasing fellow participants' awareness of the diversity of related opportunities for involvement in civil and mechanical systems research.

3:15-5:30 PM - Session 8: Working Sessions. Participants will each attend three different small group discussions on topics of their choice. The three sequential sessions will consist of 45 minutes of discussion in groups of ten participants each. The more senior participants will be given guidance on acting as discussion facilitators. Discussions will focus on identifying obstacles to success and providing recommendations for improving retention rates among fellow underrepresented and minority engineers. These sessions (a total of thirty) will promote the exchange of ideas and concerns between underrepresented and minority colleagues. Multiple sessions for discussion of topics of broader interest will be offered, including up to ten sessions focusing on preparation of successful proposals. Potential working session topics include:

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|--------------------------------------|--|
| 1. Diversity Issues | 6. Interdisciplinary Research Funding |
| 2. Teaching, Research and Tenure | 7. Juggling Family and Academia |
| 3. Collaborative Research | 8. What Makes a Good Engineering Educator |
| 4. Mentoring | 9. Skills for Preparing Successful Proposals |
| 5. Industrial Interaction/Networking | 10. Workshop Outcomes Assessment |

6:30-8:30 PM - Social Hour/Dinner: The day concludes with time for socializing at a restaurant near the workshop hotel, where a room will be reserved for a social hour and dinner.

Friday 9/26/97

7:30 AM-12:00 PM - Session 9: Working Sessions and Tours. Participants will be given the option of either attending a series of small group discussion working sessions as an extension of the previous afternoon's activities or selecting from one of two tours of experimental test facilities and on-site visits with program managers from government research laboratories (possibly NASA Goddard, David Taylor Naval Basin or NIST facilities). Working session topics will include ideas for generation of an workshop outcomes assessment and a workshop recommendations statement.

1:00-3:15 PM - Session 10: Discussion on Goals and Recommendations. All participants will reconvene for panel presentations and group discussion. The first panel will consist of the working session facilitators. Each facilitator will provide a brief summary of topics covered in their smaller group discussions. The floor will then be opened for discussion on recommendations and comments related to topics discussed within smaller groups. This will be followed by a panel of the invited speakers, who will present their perspectives on a workshop outcome assessment. They will open the floor to general discussion on goals and recommendations for improved advancement and retention of underrepresented/minorities in Civil and Mechanical Systems related educational and research activities.

3:15-3:30 PM - Closing remarks

1997 NSF CMS Division Workshop Self-nomination Form
(Due by June 16, 1997)

**CMS Workshop for the Advancement and Retention of Underrepresented
and Minority Engineering Educators**

Please attach a 1-2 page resume and return to Alison Flatau, Iowa State University, Aerospace Engineering & Engineering Mechanics, 2019 Black Engineering Building, Ames, IA. 50011 (fax: 515-294-8584, email: abf@iastate.edu).

Name: _____

Address: _____

Town: _____ State: _____ Zip Code: _____

Phone: _____ FAX: _____

E-Mail: _____

Web Address: _____

Year of PhD: _____ Dissertation Topic: _____

Years of teaching experience: _____ Years of industry experience: _____

Please briefly indicate what motivates you to apply for participation in the workshop.

Please briefly indicate current areas of research and education