

# Strategy for Improving Diversity What Works?

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**Barbara Bogue**, *Associate Professor, Engineering Science and Mechanics Department and Women in Engineering, Director of the AWE Project, Pennsylvania State University*

**Joseph Beaman**, *Professor and Department Chair, Mechanical Engineering Department, The University of Texas at Austin*

**Derek Dunn-Rankin**, *Professor and Department Chair, Mechanical and Aerospace Engineering, University of California, Irvine*

**Nadine Aubry**, *Raymond J. Lane Distinguished Professor and Department Head, Mechanical Engineering Department, Carnegie Mellon University*

## **Describing Mechanical Engineering: Devising a Strategy for Recruiting Underrepresented Students**

*Karen A. Thole*, Professor and Department Head, Mechanical and Nuclear Engineering  
Department, The Pennsylvania State University

## **Summaries of NAE Grand Challenges and ASME 2028 Vision for ME**

*Alice Agogino*, Professor, University of California at Berkeley

## **Changing the Conversations**

*Don Giddens*, Dean at Georgia Tech and co-author of the book *Changing the Conversation*

## **Mechanical Engineering Curriculum Change for Diversity Improvement: the DEEP Project Status Report**

*Ilene Busch-Vishniac*, Provost and Vice-President Academic, McMaster University,

*Patricia B. Campbell*, Campbell-Kibler Associates, Inc.

*Tom Kibler*, Campbell-Kibler Associates, Inc.

### Special efforts for recruitment

- **Outreach to High Schools (some 4 – 6 grades)**
  - Inviting high school students to visit the department
  - Special events targeted at engineering awareness
  - Using women or minorities as ambassadors (including faculty, graduate, and undergraduate students)
  - Other outreach such as summer programs or links with organizations such as Girl Scouts
- Make use of women role models
- Recruitment materials designed to target minorities or females
- Use targeted scholarships for females or minorities

### Special efforts for retention

- **Encourage students to participate in SWE, NSBE, and SHPE**
- Mentorship programs with other female students or mentors from industry
- Female socials or luncheons
- Special resources for females (such as lounges)
- Networking activities
- Targeted scholarships
- Tutoring
- Showcasing female faculty in first-year seminars
- Humanitarian projects
- Special advising or support
- Encouraging welcoming departmental climate
- Grouping females in specific course sections

### Anticipated changes to efforts

- Changes to marketing materials used by the departments
- Change the language used in marketing materials to focus on describing ME in a new manner
- Changing their curriculum in such a way that projects would focus on topics more likely to be of interest to women and minorities.
- Increase personal involvement with female faculty during the application process
- Build stronger relationships with area schools
- Participation in climate survey
- Recruit more female faculty

**What we know about what works: Warming the climate  
for underrepresented students**

Barbara Bogue

**Proactive Tactics for the Recruitment and Retention of  
Women in Mechanical Engineering**

Joseph Beaman

**Diversity in Engineering: Leveraging Alliances for  
Minority Participation**

Derek Dunn-Rankin

**Recruiting Women into Mechanical Engineering**

Nadine Aubry

1:30 – 1:40	Introduction
1:40 – 2:00	What we know about what works: Warming the climate for underrepresented students
2:00 – 2:20	Proactive Tactics for the Recruitment and Retention of Women in Mechanical Engineering
2:20 – 2:35	Q&A
2:35 – 3:00	Breakout session #1
3:00 – 3:15	Afternoon break
3:20 – 3:40	Diversity in Engineering: Leveraging Alliances for Minority Participation
3:40 – 4:00	Recruiting Women into Mechanical Engineering
4:00 – 4:15	Q&A
4:15 – 4:40	Breakout session #2
4:40 – 5:00	Report out



1. Discuss current successes and (not successes) at your school for recruitment and retention of students.
2. Discuss the challenges you face.
3. Discuss tactics you have used to motivate faculty, change culture.
4. Discuss how you assess the impact of your strategies.
5. What is your goal? Increase number of students, increase quality of students? How much?

1. Discuss why you want to increase diversity.
2. Discuss the value proposition of having a more diverse student body.
3. Discuss the issues inhibiting achievement of a more diverse student body.
4. Discuss how you will prioritize efforts to increase diversity.
5. Discuss ideas for raising resources to support your efforts.