What is Needed from the Engineering Community
and
How to Drive Change

Dr. Cora B. Marrett, Deputy Director
National Science Foundation

2014 NAE-AAES Convocation of the Professional Engineering Societies

April 28, 2014
Doctorates Awarded by U.S. Colleges and Universities, by Field of Study: 1958 - 2012

Science fields
Non-science & engineering fields
Engineering fields

SOURCE: Doctorate Recipients from U.S. Universities 2012

NATIONAL SCIENCE FOUNDATION
Percent of Doctorates Awarded to Underrepresented Minorities, by Field of Study: 1992-2012

SOURCE: Doctorate Recipients from U.S. Universities 2012

SOURCE: Doctorate Recipients from U.S. Universities 2012
Doctorates Awarded, by Sex and Field of Study: 1992 - 2012

SOURCE: Doctorate Recipients from U.S. Universities 2012
Postdoc Rate, by Field of Study: 1992 - 2012

Science fields

Engineering fields

Non-science & engineering fields

SOURCE: Doctorate Recipients from U.S. Universities 2012

Percent of engineering doctorates with commitments for employed position in U.S.

- Industry
- Academe
- Government
- Other

SOURCE: Doctorate Recipients from U.S. Universities 2012
Median Basic Salary of Doctorate Recipient with Definite U.S. Commitments, by Position Type and Field of Study: 2012

SOURCE: Doctorate Recipients from U.S. Universities 2012
“Linear” Path for Engineers

- Freshman
- Sophomore
- Junior
- Senior

- MS Degree
- Industry
- PhD Degree

“The Core”
“Non-Linear” Path for Engineers
Continuing Engineer Development

- PhD Degree
- MS Degree

- Public Values
- Industry
- Other Employment Sectors
- Community Colleges
- Maker Spaces

- Faculty Development
- Research-to-Practice
- Internships

- "The Core"
- Junior
- Sophomore

- Senior

- Freshman

- K-12
What is Needed from the Engineering Community and How to Drive Change

Dr. Cora B. Marrett, Deputy Director
National Science Foundation

2014 NAE-AAES Convocation of the Professional Engineering Societies

April 28, 2014