Funding Opportunities
At the NSF

Credit: Top Row: John C. Phillips photo/ASU Research Magazine; Microsoft; Microsoft; Microsoft; Microsoft; Microsoft; Microsoft. Middle Row: Microsoft; Microsoft; Kellar Autumn, Lewis and Clark College; Microsoft; NASA. Bottom Row: Raymond A. Adomaitis, University of Maryland - College Park; Microsoft; Kalinichev, A.G. and Kirkpatrick, R.J., University of Illinois at Urbana-Champaign; Microsoft; Microsoft.
Proposals must address NSF goals

- Discovery
- Learning
- Research infrastructure
- Stewardship

Funding may be found in ENG and crosscutting/interdisciplinary programs
Funding Opportunities

- **Core programs**
- Exploratory research
- Collaborative/interdisciplinary areas
- Crosscutting and NSF-wide programs
ENG Core Programs

- ENG divisions
- Faculty Early Career Development (CAREER)
- Broadening Participation
Proposals to ENG Divisions

- Proposals may be unsolicited or in response to a solicitations
- Submission windows and processes vary by division
- Awards are typically $240-300K for three years
Faculty Early Career Development (CAREER) Program

- Supports junior faculty who exemplify the role of teacher-scholars through:
  - outstanding research
  - excellent education
  - integration of education and research
- Encourages women, members of under-represented minority groups, and persons with disabilities to apply
- $80M invested each year for 425 new awards
- ENG awards are ≤$400K for 5 years
- Deadlines vary by directorate; ENG proposals due July 21, 2010

ENG Contact
Sharon Middledorf

Directorate for Engineering
Broadening Participation

- Broadening Participation Research Initiation Grants in Engineering (BRIGE)
- ADVANCE: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers
- Graduate Research Fellowships for Women
- Graduate Research Supplements
Funding Opportunities

- Core programs
- Exploratory and urgent research
- Collaborative/interdisciplinary areas
- Crosscutting and NSF-wide programs
Early-Concept Grants for Exploratory Research (EAGER)

Grants for Rapid Response Research (RAPID)

Emerging Frontiers in Research and Innovation (EFRI)
Funding Opportunities

- Core programs
- Exploratory research
- **Collaborative/interdisciplinary areas**
- Crosscutting and NSF-wide programs
ENG Collaborative and Interdisciplinary Research

- ENG interdisciplinary research (IDR)
- Engineering Education and Centers
- Industrial Innovation and Partnerships
Addresses educational goals of the engineering community

Supports focused efforts that integrate research into advances in undergraduate and PhD engineering education, and partner with K–12 pipeline innovators
Innovations in Engineering Education, Curriculum, and Infrastructure

- FY 2010 awards will be made in the following topic areas:
  - Innovations in Teaching and Learning
  - Translation of Engineering Education Research into our Classrooms
  - Implementation of Programs for Students Supported by the GI Bill
- ~$8.5M for 35–40 awards
- Full proposals due Jan. 20, 2010, in area 1, and March 31, 2010, in areas 2 and 3

ENG Contact
Sue Kemnitzer
Ethics Education for Science and Engineering

- Invests in research and education projects to improve ethics education in all of the fields of science and engineering that NSF supports, especially in interdisciplinary or inter-institutional contexts.
- Focuses on improving ethics education for graduate students, although proposed programs may benefit undergraduates as well.
- ~$2.4M for 6–12 awards.
- Full proposals due March 1, 2010.

ENG Contact
Sue Kemnitzer
NSF-wide Education Programs

- Integrative Graduate Education and Research Traineeship (IGERT)
  - ~20 awards each year
  - Pre-proposals due in March, full proposals due in Sept.

- Graduate Teaching Fellows in K-12 Education (GK-12)
  - ~20 awards each year
  - Letters of Intent due in May, full proposals due in June

- Graduate Research Fellowships (GRF)
  - ~1000 fellowships awarded each year
  - Engineering and interdisciplinary proposals due in Nov. each year
Human Resource Development

- Research Experiences for Undergraduates (REU)
  - Supports the involvement of undergraduates in meaningful ways in ongoing research programs or in research projects specifically-designed for the REU program
  - $10M/year available for engineering
  - Deadline for site proposals in Aug. each year

- Research Experiences for Teachers (RET) in Engineering
  - Supports the active involvement of K-12 teachers and community college faculty in engineering research in order to bring knowledge of engineering and technological innovation into their classrooms
  - $4M/year available
  - Deadline in Nov. each year
Funding Opportunities

- Core programs
- Exploratory research
- Collaborative/interdisciplinary areas
- Crosscutting and NSF-wide programs
Crosscutting and NSF-wide Opportunities

- Building Engineered Complex Systems
- Cyber-Enabled Discovery and Innovation (CDI)
- Cyber-Physical Systems (CPS)
- Domestic Nuclear Detection Office/NSF Academic Research Initiative (ARI)
- Major Research Instrumentation (MRI) Program
- Pan-American Advanced Studies Institutes Program (PASI)
- Partnerships for International Research and Education (PIRE)
Successful Proposals

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First Steps

- Begin with
  - Dialog with program officer
  - White paper
  - Short biography
- Get involved with NSF reviews
What Do Reviewers Look For?

- Proposals that address one or more NSF goals:
  - Discovery
  - Learning
  - Research infrastructure
  - Stewardship
- Intellectual merit
- Broader impact