

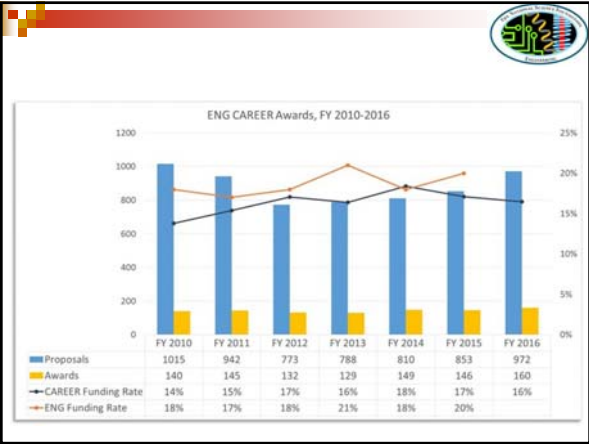
Faculty Early Career Development Program (CAREER)



NSF 15-555 FY17 Competitions

CBET	501	CMMI	426
BIOMEDICAL ENGINEERING	73	Dynamics, Control and System D	57
ENVIRONMENTAL ENGINEERING	66	Materials Eng. & Processing	56
BIOTECH, BIOCHEM & BIOMASS ENG	46	Biomechanics & Mechanobiology	45
THERMAL TRANSPORT PROCESSES	35	Service, Manufacturing, and Op	44
CATALYSIS AND BIOCATALYSIS	34	Mechanics of Materials and Str	42
FLUID DYNAMICS	30	Structural and Architectural E	35
ENVIRONMENTAL SUSTAINABILITY	30	CIVIL INFRASTRUCTURE SYSTEMS	27
PARTICULATE & MULTIPHASE PROCES	29	Engineering for Natural Hazard	27
PROCESS & REACTION ENGINEERING	26	Manufacturing Machines & Equip	27
COMBUSTION, FIRE, & PLASMA SYS	26	ENGINEERING DESIGN AND INNOVAT	20
Gen & Age Rel Disabilities Eng	20	Geotechnical Engineering and M	14
BIOPHOTONICS, IMAGING & SENSING	20	NANOMANUFACTURING	12
ENERGY FOR SUSTAINABILITY	20	INFRASTR MGMT & EXTREME EVENTS	10
CHEMICAL & BIOLOGICAL SEPAR	17	Systems Science (SYS)	6
NANO-BIOSENSING	16	Design of Eng Materials (DEMS)	4
Enviro Health & Safety of Nano	13		
EEC	23	ECCS	166
ENGINEERING EDUCATION	14	ENERGY, POWER, ADAPTIVE SYS	58
ENG DIVERSITY ACTIVITIES	9	COMMS, CIRCUITS & SENS SYS	54
		ELECT, PHOTONICS, & MAG DEVICE	50
		CDS&E	2
		CYBER-PHYSICAL SYSTEMS (CPS)	2

❖ ENG received total of 1116 CAREER proposals





FY17 CMMI CAREER Proposals


- ❖ CMMI received 426 CAREER proposals
- ❖ ~ 22% increase over FY16 submissions

FY16		FY17	
CBET	461	CBET	501
CMMI	349	CMMI	426
ECCS	140	ECCS	166
ECC	18	ECC	23
Grand Total	968	Grand Total	1116




CAREER Program Goals:

- ❖ Foundation-wide activity that offers NSF's most prestigious awards for faculty members beginning their independent careers.
- ❖ To provide stable support at a sufficient level and duration to enable awardees to develop careers as outstanding researchers and educators who effectively integrate teaching, learning, and discovery.




CAREER Program Goals: (continued)

- ❖ Awardees are selected on the basis of their plans to develop highly integrative and effective research and education careers.
- ❖ Increase participation of those traditionally under-represented in science and engineering is encouraged.




CAREER: Award Duration and Size

- ❖ All awards are for a 5-year duration
- ❖ New FY15 Minimum ENG award size of \$500,000
- ❖ CMMI awards have maximum of \$500,000
 - ❖ Proposal Budgets range
 - ❖ \$400K - \$990K
 - ❖ Panelists are asked to consider budgets when reviewing and discussing proposals



CAREER: PI Eligibility Requirements

- ❖ Hold a doctoral degree as of submission date.
- ❖ Be employed in a tenure-track (or equivalent) position as of October 1 following submission.
- ❖ Be employed as an assistant professor (or equivalent) as of October 1 following submission.
- ❖ Have not competed more than two times previously in the CAREER program.
- ❖ Have not previously received an NSF CAREER award.




CAREER: Departmental Letter

- ❖ An indication that the PI's CAREER activities are supported by and integrated into the goals of the Dept. and organization and the Dept. is committed to the support, mentoring and professional development of the PI.
- ❖ A description of the relationship between the CAREER project, the PI's career goals and job responsibilities, and the goals of his/her department/organization.
- ❖ Verification of the PI's self-certified CAREER eligibility.

CAREER:


Letters of Collaboration



- ❖ Letters of Collaboration should contain only one sentence:
 - If the proposal submitted by Dr. First Last entitled "Title" is selected for funding by the NSF, it is my intent to collaborate and/or commit resources as detailed in the Project Description
- ❖ Departure from this format may result in the proposal being returned without review
- ❖ The spirit of the new guideline is that no additional project description content should be included in the letter itself.
- ❖ The panel should disregard additional content included in the letter of collaboration


CAREER:

Compliance and Eligibility




- ❖ All proposals have been screened for CAREER/GPG compliance and eligibility.
- ❖ *Questions about a proposer's eligibility, proposal's compliance, budget, letters?* Bring it to the attention of the Program Director (PD) and continue reviewing the proposal. The PD will look into the issue and quickly get a resolution for the panel.

CAREER: Proposal Review




- ❖ Evaluated using NSF's two merit review criteria:
 - ❖ What is the intellectual merit of the proposed activity?
 - ❖ What are the broader impacts of the proposed activity?
- ❖ Additional Consideration for CAREER proposals
 - ❖ Integration of Research and Education




Integration of Research and Education

- ❖ All CAREER proposals must have an integrated research and education plan at their core.
- ❖ NSF recognizes that there is no single approach to an integrated research and education plan, but encourages all applicants to think creatively about how their research will impact their education goals and, conversely, how their education activities will feed back into their research.
- ❖ These plans should reflect the proposer's own disciplinary and educational interests and goals, as well as the needs and context of his or her organization.
- ❖ Because there may be different expectations within different disciplinary fields and/or different organizations, a wide range of research and education activities may be appropriate for the CAREER program.




CAREER: Points to Consider

- ❖ Does the PI propose creative, effective and integrated research and education plans as well as plans for assessing these components?
- ❖ Is it a well-argued and specific proposal for activities that will, over a 5-year period, build a firm foundation for a lifetime of contributions to research and education in the context of the PI's organization?




CAREER: Points to Consider (continued)

- ❖ While excellence in both education and research is expected, activity of an intensity that leads to an unreasonable workload is not.
- ❖ The research and educational activities do not need to be addressed separately, if the relationship between the two is such that the presentation of the integrated project is better served by interspersing the two throughout the Project Description.



Avoid Unintended Bias

- ❖ **Implicit bias toward a group**
- ❖ **Lack of critical mass a greater reliance on perceptions and generalizations**
 - ❖ **Few women and underrepresented minorities in sciences**
- ❖ **Accumulation of disadvantage**
- ❖ **Mitigate evaluation bias**



Ways to Mitigate Evaluation Bias

- 1. Increase awareness of how implicit bias might affect evaluation**
- 2. Decrease time pressure and distractions in evaluation process**
- 3. Rate on explicit criteria rather than global judgments**
- 4. Point to specific evidence supporting judgments**

Bauer & Baltes, 2002, *Sex Roles*, 47 (9/10), 465-476

Please incorporate (3) & (4) in your reviews and discussions.
