The background features a large, light gray watermark of the National Science Foundation (NSF) logo. The logo consists of a central globe with the letters 'NSF' overlaid in a large, serif font. The globe is surrounded by a circular border with ten pointed, gear-like protrusions.

Faculty Early Career Development
(CAREER) Program
Program Solicitation – NSF 15-555

William Badecker, Ph.D.
Program Director, SBE/BCS/Linguistics

Support for New Investigators

- All NSF programs support new investigators as part of the regular (“core”) research competitions.
- About 2/3^{rds} of new investigators are supported by the “core” research programs.
- Faculty Early-Career Development (**CAREER**) Program
 - **Most prestigious awards to provide early career faculty with 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**



Goals of the CAREER Program

- Provide stable support for five years (\geq \$400K in most Directorates – ENG, BIO and GEO/PLR are \geq \$500K) to allow the career development of outstanding new teacher-scholars in the context of the mission of their organization.
- Build a foundation for a lifetime of integrated contributions to research and education.
- Provide incentives to Universities to value the integration of research and education.
- Increase participation of those traditionally underrepresented in science and engineering.



CAREER is NSF wide

- The program started in 1996
- All Directorates/Offices participate in the program
- Proposals are submitted to program of interest
- More than 9,000 CAREER awards have been made over the years
- NSF Presidential Early-Career Awards in Science and Engineering (PECASE) are selected out of the pool of recent CAREER awardees



Investigator Eligibility Criteria

- Hold a doctoral degree in a field supported by NSF by proposal deadline
- Be untenured up until Oct 1st following proposal deadline
- Be employed in a tenure-track (or equivalent) position at an eligible institution as an Assistant Professor (until Oct 1st following deadline)
- Have not previously received a CAREER award
- Have not had more than two CAREER proposals reviewed
- Untenured Associate Professors are NOT eligible



Institutional Eligibility

- Academic institutions in the U.S., its territories or possessions, and the Commonwealth of Puerto Rico that award degrees in fields supported by NSF.
- Non-profit, non-degree-granting organizations such as museums, observatories or research labs may also be eligible to submit proposals, if the eligibility requirements of the PI's position are satisfied
- NSF encourages proposals from different institutional types, including Minority Serving and Undergraduate Institutions

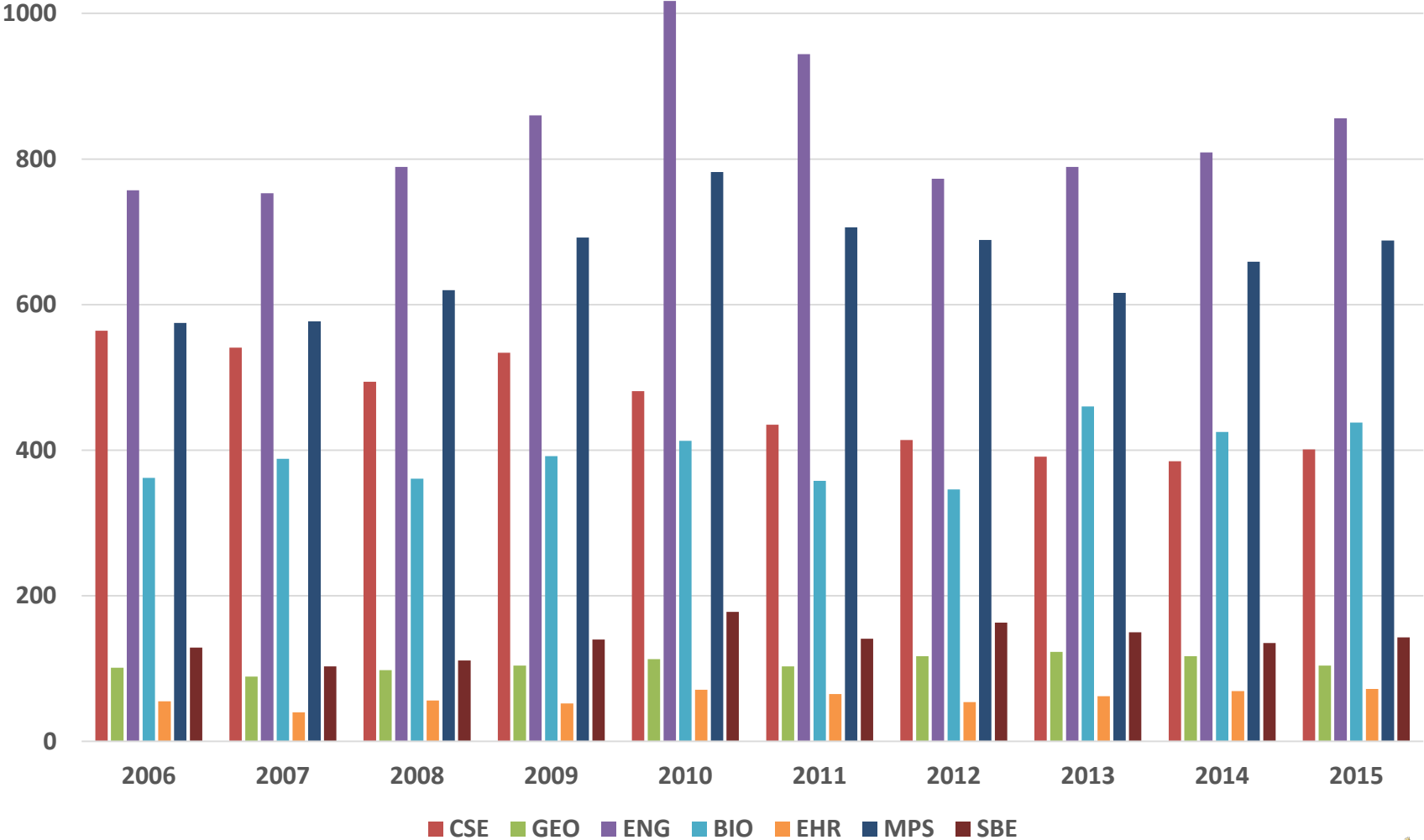


CAREER varies across NSF

- Number of submitted CAREER proposals vary widely across NSF
- Review and Funding methods vary according to Directorate and Division practices
- Many CAREER proposals compete with other research proposals in the most appropriate research program
- CAREER Coordinating Committee is made up of members from the different Directorates/Offices – We are the liaison between the programs and the senior management at NSF



CAREER Proposals Submitted



Merit Review of CAREERs

- Ad hoc + Panel (with other proposals in the Program – BIO, SBE and most of GEO (*Atmospheric & Geospace Sciences* uses ad hoc only))
- Mostly dedicated CAREER Panels – ENG, CISE, EHR, MPS varies by Division:
 - *Astronomical Sciences* – Panel only
 - *Chemistry, Materials Research* – Mix of ad hoc and panels (check your program)
 - *Mathematical Sciences* – mostly panels (2 programs use ad hoc only)

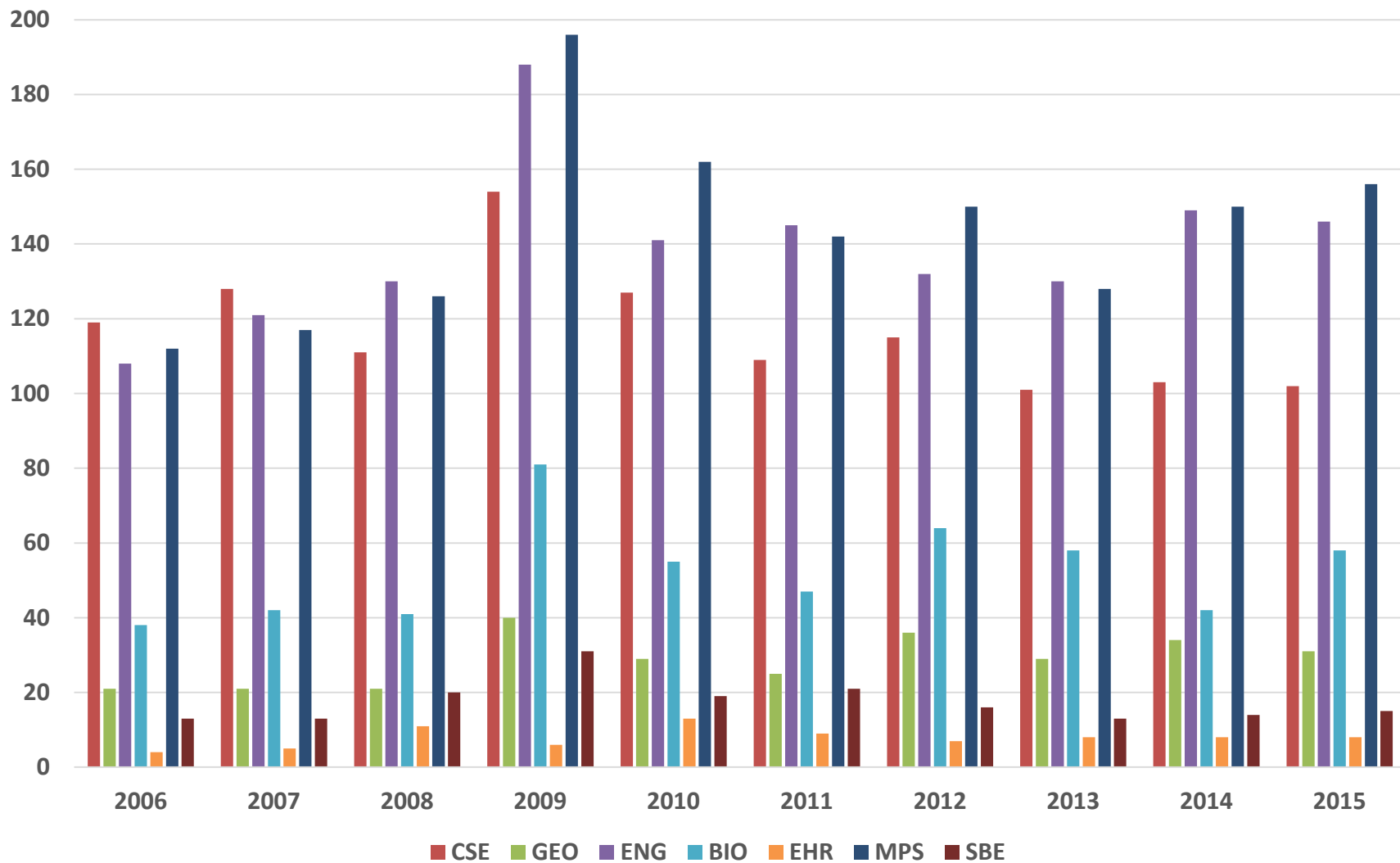


Success Rates and Expectations

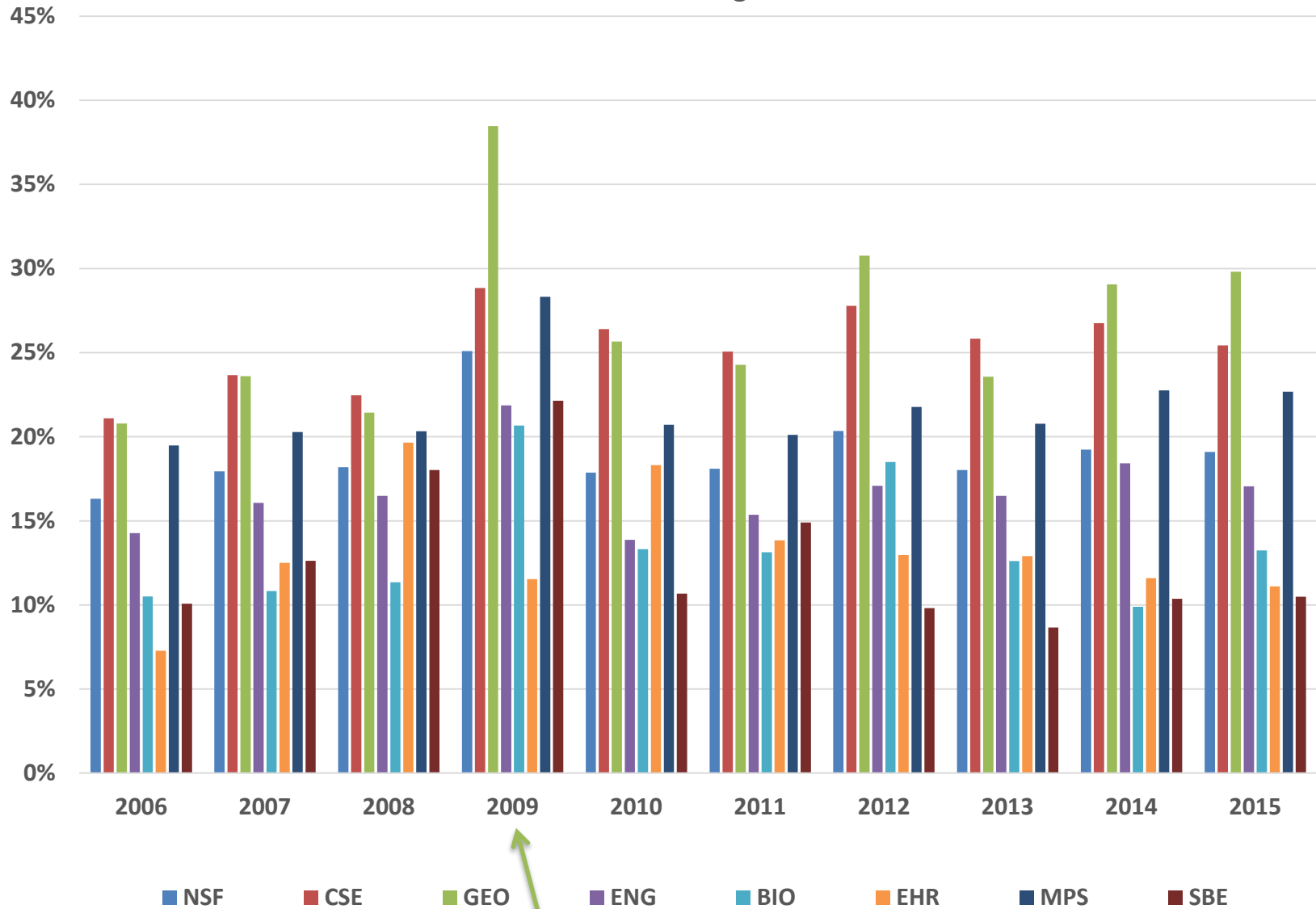
- CAREER proposals are submitted to a disciplinary unit or program
- They are reviewed according to the relevant Program guidelines - Talk to Program Officer or Division Contact for more information
(<http://www.nsf.gov/crssprgm/career/contacts.jsp>)
- Make sure to check on typical award sizes in your program
- Ask about expectations for scope of research and education plans
- Assessment of Departmental Letter (2 pages) is part of the review criteria for CAREER
- Funding rates follows trend for regular proposals in the program of interest



CAREER awards



CAREER Funding Rate



ARRA
(2009)

<http://www.nsf.gov/career>



Is CAREER the right program for you?

- Can you think of a proposal that is appropriate for NSF with research and education activities that are innovative and ambitious?
- Is your Department/Organization supportive?
- Are you seriously committed to the goals of CAREER?
- Are you at the right stage in your career?
- Would you like to be considered for the Presidential Early Career Awards for Scientists and Engineers (PECASE), if eligible?
- Have you discussed your ideas with mentors, fellows, program officers?



What should be in a CAREER proposal?

- A compelling research plan
- Innovative but doable education plan
- A plan for the effective integration of both sets of activities (evaluation plan is a big plus)

Education activities – curriculum, pedagogy, outreach, mentoring at any level, majors and non-majors, teacher preparation or enhancement, K-12 students, and/or the general public.



CAREER Education Plan

- Activities should go beyond what is expected from any Assistant Professor in your field
- Workload should not be unreasonable
- Should be informed by what has been successful in the past - intellectual merit of the education component
- Should have a plan for assessing the success of the education program
- Check with your Program Officer or search the abstracts on the web



Integration of Research and Education

How will your research impact your education goals and how will your education activities feed back into your research?

- Involving others (graduate, undergraduates, K-12, high school teachers, public) in your research using new tools, laboratory methods, field components, web outreach, cyber networks, etc...
- Partnering with those in other communities, especially those traditionally underrepresented in Sciences and Engineering
- Bringing the excitement of your research topics to help in the education of others
- Searching for new methods to deliver your research results to a broader audience than those in the immediate research community
- Using the broader community to gather data for your scientific pursuits (“citizen science”)



CAREER personnel and budgets

- No co-principal investigators or other senior personnel are allowed
- Consultants, sub-awards are allowed (but no senior personnel costs in sub-awards)
- Some programs will support buy out of academic year time for teaching intensive institutions (check with your Program Officer)
- International activities are encouraged and may be supported by the Office of International Science and Engineering (OISE)
- Some Directorates prefer making more awards but closer to the \$400K minimum (or \$500K in BIO and OPP).



Departmental Letter (up to 2 pages)

- Support for the PIs proposed CAREER research and education activities
- Description of how the PIs career goals and responsibilities mesh with that of the organization and department
- Commitment to the professional development of the PI with mentoring and whatever is needed to forward the PIs efforts to integrate research and education
- Statement that indicates the PI is eligible for the CAREER program
- Should not serve as a letter of recommendation or endorsement of the PI or the research project



Traits of Successful CAREER proposals

- CAREER proposals should match the expectations in the disciplinary programs in terms of research and education
- This is a highly competitive program!
- Written with peer reviewers (Ad Hoc and/or Panel) in mind - **Ask your Program Officer** who will be assessing your proposal
- Appropriate scope of education and research activities. It is a 5-year plan, not your whole life
- Goes outside the 'education box' of regular research proposals in your field
- Strikes a balance between doable research activities and more risky pursuits



CAREER Urban Myths

- “You cannot apply because you have another award from NSF”
- “It is an entry program, so apply to CAREER first”
- “I need to see a successful proposal to write a successful proposal”
- “I read on the web that to succeed, I have to....”
- “CAREER proposals are more portable”
- “The education component does not matter”
- “You have no chance, if you are not from a research-intensive institution”



PECASE: Presidential Early-Career Awards for Science and Engineers

- **PECASE Eligibility** - Be a US Citizen or US Permanent Resident by the time of nomination to the White House's Office of Science and Technology Policy
- 20 NSF Nominees for PECASE every year from the pool of recent CAREER awardees
- Number of nominees from each Directorate is a function of the number of proposals submitted to the programs in the Directorate



International Research Opportunities for CAREER PIs

- NSF/ERC: Dear Colleague Letter: Research Opportunities in Europe for NSF CAREER Awardees (nsf15036)
- NSF/DFG: Dear Colleague Letter: Research Opportunities in Germany for NSF CAREER Awardees (nsf15059)



The CAREER website – www.nsf.gov/career

- Latest Program Solicitation - NSF 15-555
- Frequently Asked Questions - NSF 15-057
- CAREER Directorate/Division Contacts
- Link to recent awards
- Link to PECASE awards
- Deadlines for the current solicitation
 - **July 20, 2016 - BIO, CISE, EHR**
 - **July 21, 2015 - ENG**
 - **July 22, 2015 - GEO, MPS, SBE**



PECASE: Presidential Early-Career Awards for Science and Engineers (April 2014)

