

**COMMITTEE ON EQUAL OPPORTUNITIES IN  
SCIENCE AND ENGINEERING (CEOSE)  
National Science Foundation**

**MEETING MINUTES  
February 25 - 26, 2015**

**MEETING PARTICIPANTS**

**CEOSE Members Present**

**Dr. Mary M Atwater**, The University of Georgia  
**Dr. Karl S. Booksh**, University of Delaware, DE  
**Dr. Nancy Cantor**, Rutgers University - Newark  
**Dr. C. Michael Gooden**, Integrated Systems Analysts, Inc.  
**Dr. Ira Harkavy, CEOSE Vice Chair**, University of Pennsylvania, Philadelphia, PA  
**Dr. Charles Isbell**, Georgia Institute of Technology, GA  
**Dr. Robert Jones**, University at Albany, NY  
**Dr. Alicia Knoedler**, University of Oklahoma  
**Dr. Daniela Marghitu**, Auburn University  
**Dr. Louis Martin-Vega**, North Carolina State University  
**Dr. Robert Eugene Megginson**, University of Michigan  
**Dr. George Middendorf**, Howard University, Washington, DC  
**Dr. Wendy Raymond, CEOSE Chair**, Davidson College, Davidson, NC  
**Dr. Keivan G. Stassun**, Vanderbilt University, TN  
**Dr. Lydia Villa-Komaroff**, Cytonome/ST  
**Dr. Joseph A. Whittaker**, Morgan State University, MD

**Federal Agency Liaisons Present**

**Dr. Meldon Hollis**, White House Initiative on Historically Black Colleges and Universities  
**Mr. Jim Johnson**, Environmental Protection Agency

**Speakers/Panelists**

<b>Mr. Michael Reardon</b> , Department of Labor	<b>Dr. James Olds</b> , NSF/BIO
<b>Ms. Hattie Carwell</b> , CHANGES	<b>Dr. James Kurose</b> , NSF/CISE
<b>Dr. Diane Spresser</b> , NSF/OD/IIA	<b>Dr. Joan Ferrini-Mundy</b> , NSF/EHR
<b>Dr. Scott Edwards</b> , NSF/BIO/DBI	<b>Dr. Grace Wang</b> , NSF/ENG
<b>Dr. Bernice Anderson</b> , NSF/OD/IIA	<b>Dr. Margaret Cavanaugh</b> , NSF/GEO
	<b>Dr. Wanda E. Ward</b> , NSF/OD/IIA

**CEOSE Designated Federal Officer – Executive Liaison**

**Dr. Wanda E. Ward**, Office Head, Office of International & Integrative Activities (OIIA), National Science Foundation (NSF)

**CEOSE Executive Secretary**

**Dr. Bernice Anderson**, Senior Advisor, Office of International & Integrative Activities, National Science Foundation (NSF)

**CEOSE Scientific/Technical/Administrative Staff**

**Dr. Joan Burrelli**, Science Resource Analyst, NSF/IIA  
**Mr. Steven Buhneing**, IT Specialist, NSF/IIA  
**Ms. Victoria Fung**, Program Analyst, NSF/IIA

## **Day One**

**February 25, 2015**

### **Welcome/Introduction**

Dr. Wendy Raymond, CEOSE Chair, opened the meeting and welcomed the four new members (Dr. Mary M. Atwater, Dr. C. Michael Gooden, Dr. Daniela Marghitu, and Dr. Lydia Villa-Komaroff). Current and new members then introduced themselves. Dr. Raymond encouraged members to be thinking about the focus of the next biennial report (2015-16) and how to build on the bold initiative. She also encouraged them to think about issues to be raised in the session with NSF Director, Dr. Cordova.

### **NSF Executive Liaison Report**

Dr. Wanda E. Ward, CEOSE Executive Liaison and Head of the Office of International and Integrative Activities (IIA), welcomed the new members, expressing interest in benefitting from their expertise. She mentioned that the Broadening Participation Working Group's second deliverable—the 2014 Framework for Action—is under review and would be discussed at the CEOSE meeting on Thursday. The working group is also enhancing the NSF Broadening Participation web page. Dr. Ward noted that the current CEOSE draft report has been shared with the NSF senior leadership and that the previous report informed FY 2016 NSF budget investments.

Other updates included:

- The first topic being addressed by NSF's new internal Broadening Participation Idea Share challenge is how to get more persons from underrepresented groups to apply for grants (i.e. to increase diversity among proposal submissions).
- NSF's investment to Minority-Serving Institutions (MSIs) increased 16% in 2014.
- Dr. Ward will present the semi-annual broadening participation briefing to NSF senior management in the next month
- NSF maintains a leadership role in the gender summits, which will be a topic at the next CEOSE meeting. Dr. Ward attended planning meetings in Mexico last week and will present at the next gender summit in Africa in April.

### **Discussion with NSF Director**

Dr. Raymond welcomed Dr. Córdoba and asked CEOSE members to introduce themselves. Dr. Cordova welcomed the four new members and acknowledged the contributions of outgoing members Alex Rodriguez and Evelyn Hammonds.

The director began the discussion by describing the budget process and the need to start thinking about the FY2017 budget. The FY2016 budget stresses support for the NSF core investments as well as four new investments—Understanding the Brain, Risk and Resilience, Innovations at the Nexus of

Food, Energy and Water, and NSF INCLUDES (Inclusion across the Nation of Communities of Learners that have been Underrepresented for Diversity in Engineering and Science). She noted that although NSF spends roughly \$800 million on NSF diversity programs, the money needs to go further and have more impact. She commended CEOSE on their recent report and outlined several FY2016 efforts, welcoming CEOSE input on what to do next and how to get the most out of the money available. Dr. Ward encouraged CEOSE to think about ways to create greater synergy and connectivity toward game-changing approaches.

CEOSE members noted the lack of progress for persons with disabilities and the need for more emphasis in that area, the need for greater emphasis on broadening participation in the NSF review process (i.e., both intellectual merit and broader impacts), and the need for more assessment and evaluation.

### **Leadership Panel Discussion: FY2015 Broadening Participation Efforts**

Representatives from the NSF directorates discussed broadening participation efforts within their directorates/offices:

Dr. Joan Ferrini-Mundy (Assistant Director, EHR) noted the many broadening participation programs in the Education and Human Resources Directorate (EHR) and the wealth of knowledge about what works. She highlighted the EHR Advisory Committee's new report on strategic re-envisioning for the directorate. Two of the main points of that report are that broadening participation should be viewed as an asset rather than a problem to be solved and that broadening participation should be viewed as central to cultivating a culture of science.

Dr. Grace Wong (Deputy Assistant Director, ENG) stressed that broadening participation is a very stubborn problem in engineering. Their new Broadening Participation in Engineering program strives to understand the problem and generate innovative approaches.

Dr. Wanda Ward (Office Head, IIA) reported on International and Integrative Activities (IIA) efforts to broaden participation including EPSCOR Track III; Science and Technology Center activities that focus, for example, on Native Americans; the gender summits which focus on gendered science and innovation; and measuring impacts of broadening participation efforts.

Dr. Margaret Cavanaugh (Deputy Assistant Director, GEO) spoke of the education challenges Geosciences (GEO) face—there are few K-12 courses in geosciences and a lot of geoscience majors come from other disciplines. It is hard to interest students, particularly underrepresented minority students, in the geosciences and they are looking to INCLUDES to help.

Dr. James Kurose, (Assistant Director, CISE) said that scaling and sustainability are a real problem in Computer and Information Science and Engineering (CISE). They have established partnerships with the National Center for Women & Information Technology, Google, Microsoft, professional societies, and CODE.org to address these issues.

Dr. James Olds (Assistant Director, BIO) reported that scaling in the Biological Sciences (BIO) is not trivial, as technology is expensive, that measuring outcomes of interventions is essential, and that BIO has a new Partnership for Life Sciences Education program.

## **Day two**

**February 26, 2015**

### **Panel Discussion: Accessibility and Careers in STEM**

Michael Reardon of the Office of Disability Employment Policy at the U.S. Department of Labor, spoke on a new disability initiative at his agency. The Department of Labor is expanding beyond information sharing to policy development and has launched ePolicy Works ([www.ePolicyWorks.org](http://www.ePolicyWorks.org)) which is a new, collaborative approach to federal policy making that leverages Web-based technology, stakeholder involvement and real-time information sharing. The site empowers national experts to shape policy and address specific barriers to employment faced by people with disabilities. One of the online dialogues that ePolicy Works led from July 28 to August 8, 2014, was on “Encouraging People with Disabilities to Pursue Careers in STEM” (<http://stemcareersforpwd.epolicyworks.org/>). The online dialogue yielded 39 ideas on education, training, and accessibility.

### **Perspectives on Broader Impacts**

Dr. Diane Spresser of the Office of Integrative and International Activities briefed the committee on recent broader impacts efforts: the publication “Perspectives on Broader Impacts”; the broader impacts website; a collaborative IIA and OLPA special report on broader impacts; Broader Impacts week November 12-18; products from AAAS fellows; directorate and division activities; BIONIC products and websites by institutions of higher education and professional societies. She noted NSF’s two broader impacts goals: 1) raising awareness of broader impacts, and 2) assessing effectiveness of emphasis on broader impacts on competitiveness. NSF has made recent changes to requirements for annual and final progress reports that ask for certification of organizational support for broader impacts. She emphasized the need for accountability and the need for institutional approaches to leverage expertise and also to assess effectiveness.

CEOSE members stressed the need to hold institutions accountable, noting that institutions and PIs are not held accountable for not implementing proposed broader impacts or broader participation activities. Another CEOSE suggestion was for NSF to lead institutionalization of broader impacts in tenure and promotion criteria. Members also stressed the need to integrate both review criteria—broader impacts and intellectual merit.

### **NSF Broadening Participation Framework for Action**

Dr. Bernice Anderson and Dr. Scott Edwards, co-chairs of the NSF Broadening Participation Working Group, updated CEOSE on recent activities of the working group including the 2014 draft Framework for Action, which updates and builds on the previous 2008 framework. Although some progress has been made on the 2008 priorities, not all have been achieved as yet. The 2014 NSF priorities for broadening participation are: revising and expanding broadening participation policies; improving NSF’s processes and infrastructure; fostering strategic outreach, engagement and partnerships; promoting innovative accountability measures for broadening participation; and promoting innovation in communication technologies. In response to CEOSE questions, Dr. Anderson stated that the working group is interested in CEOSE’s ideas on how to track broadening

participation metrics at the institutional level. CEOSE members also discussed how to get researchers to adopt best practices in broadening participation and how to increase reporting of demographic information in Fastlane.

### **Discussion of Reports by CEOSE Liaisons to NSF Advisory Committees**

Several issues reported by the CEOSE liaisons were: the need for greater guidance of NSF directorates on broader impacts, the need to broaden global regional focus to include South America and Africa, feedback from advisory committees on the CEOSE recommendation, and the need for CEOSE members to get on the advisory committees' agendas.

### **Discussion of Federal Liaisons Reports**

Liaison reports, either verbal or written, were received from the White House Initiative on Historically Black Colleges and Universities, the Smithsonian Institution, the Environmental Protection Agency, and the National Institutes of Health. Issues discussed included the decline in federal support to HBCUs, the need to report on HBCUs, HHE's and Tribal Colleges separately rather than in an MSI category as the trends for each may differ, and NIH's new freestanding policy on diversity.

### **Presentation: Partnering to Further the Diversification of the STEM Workforce**

Hattie Carwell of the Coalition of Hispanic, African, and Native Americans for the Next Generation of Engineers and Scientists (CHANGES) briefed CEOSE on the relatively new (2012) organization, including steps thus far and plans for the next few years. CHANGES is an umbrella organization of 16 minority-serving organizations, that has as its goals: 1) to elevate national visibility and influence of member organizations in the development of STEM research, policy, and educational programs, and 2) to strengthen member organizations programs and finances in support of the next generation of scientists and engineers from diverse backgrounds. Thus far they have been doing outreach, growing their membership, and developing white papers, action plans, a website ([www.changescoalition.org](http://www.changescoalition.org)), and a booklet describing partner organizations. They are looking to find a host university this year, to solidify and strengthen their organizational structure, and to develop best practices and strategies for sustainability. CEOSE members thought CHANGES could be helpful as providers of information and data on existing efforts and how to move forward.

### **Announcements and Final Remarks**

Committee members discussed ideas for the next CEOSE biennial report including an emphasis on accountability and more resources. Committee members thought the development of measurable criteria for success could be a priority and they stressed the need to continue to focus on the culture of race/ethnicity as well as socio-economic status/class. Members thought the next CEOSE report should focus on broader impacts and broadening participation, and particularly on accountability, including the need for consequences for the PI and for the institution for not doing what they proposed to do vis-a-vis broader impacts and broadening participation.