

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

**CEOSE 2015 October Virtual Meeting
October 15, 2015**

MEETING MINUTES

MEETING PARTICIPANTS

CEOSE Members Present

Dr. Wendy Raymond, CEOSE Chair, Williams College, Williamstown, MA
Dr. Ira Harkavy, CEOSE Vice Chair, University of Pennsylvania, Philadelphia, PA
Dr. C. Michael Gooden, Integrated Systems Analysts, Inc.
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. Lydia Villa-Komaroff, Cytonome/ST

CEOSE Members Absent

Dr. Mary M Atwater, The University of Georgia
Dr. Nancy Cantor, Rutgers University - Newark

Federal Agency Liaisons Present

Dr. Katie Blanding, Department of Education
Dr. Shalin Nemazee, Smithsonian Institution

Speakers/Panelists

Dr. Joan Ferrini-Mundy, Directorate of Education and Human Resources (EHR)/NSF
Dr. Suzanne Iacono, Office of Integrative Activities (OIA)/OD/NSF
Dr. Anand Desai, OIA/OD/NSF
Dr. Richard Buckius, Office of Director/NSF

CEOSE Designated Federal Officer – Executive Liaison

Dr. Suzanne Iacono, Acting Office Head, OIA/NSF

CEOSE Acting Executive Secretary

Dr. Bernice Anderson, CEOSE Executive Secretary/ Senior Advisor/NSF/OIA

CEOSE Scientific/Technical/Administrative Staff

Ms. Victoria Fung, Program Analyst, OIA/NSF

NSF A/V Team, Division of Administration Services/Office of Information & Resource Management/
NSF

Welcome/Introduction

Dr. Wendy Raymond, CEOSE Chair, opened the meeting with a welcome, noting that this was CEOSE's second virtual meeting. Following introductions, she reported that an executive teleconference was held with Dr. Richard Buckius, Chief Operating Officer of NSF, on October 8, 2015, and stated that Dr. Buckius would meet with the Committee in the afternoon. Dr. Raymond also provided a context for and an overview of the meeting agenda.

NSF Executive Liaison Report

Dr. Suzanne Iacono, CEOSE Executive Liaison and Acting Head of the Office of Integrative Activities, greeted the Committee, thanking both the members of CEOSE and the NSF technical team for their support of the virtual meeting. After thanking Dr. Raymond for her excellent leadership as Chair, she announced with gratitude that Dr. Ira Harkavy has accepted the appointment of CEOSE Chair beginning February 2016 and that Dr. Louis Martin-Vega has accepted the Vice Chair appointment.

Dr. Iacono thanked the Committee, NSF leadership and others who responded to the call for nominations for new CEOSE members. She reported that the NSF Director had appointed the following individuals for a three-year term, beginning February 2016:

- Dr. Jose D. Fuentes, Department of Meteorology, Pennsylvania State University
- Dr. Loretta Moore, Department of Computer Science, Jackson State University
- Dr. Garikai Campbell, Provost, Morehouse College
- Dr. Nai-Chang Yeh, Department of Physics, California Institute of Technology

Other highlights of her report included:

- dissemination of the 2013-2014 CEOSE report to approximately 120 Executive Directors of STEM organizations
- NSF INCLUDES as a direct response to the CEOSE recommendation for a bold initiative and the formation of the NSF INCLUDES Working Group is in progress
- special observance days hosted by the Office of Diversity and Inclusion (e. g., Dr. Gwendolyn Boyd, President of Alabama State University, was keynote speaker for the NSF Observance of Women's Equality Day)
- NSF's involvement in events related to HBCUs--White House Initiative's HBCU Funding Webinar held August 27, 2015 and the participation of EHR in WHI HBCU annual conference held September 20-22, 2015, as well as the submission of a report to Congress on Advancing Historically Black Colleges and Universities that was prepared by a subcommittee of the EHR Advisory Committee
- NSF's *Investing in Diversity* seminar given by Dr. Roosevelt Johnson of NASA on September 30, 2015, detailing effective strategies for tribal colleges and HBCUs.

2015-2016 CEOSE Biennial Report to Congress

Dr. Charles Isbell, Chair of the Sub-group for the Biennial Report, led the session, pointing out that CEOSE agreed that the third report in the bold initiative series would focus on accountability. The proposed four report sections were: Introduction, Challenges and Opportunities, Evaluative Efforts, and Future Actions for CEOSE. The timeline was discussed and members volunteered for writing assignments. The Committee agreed to define accountability in the context of the agency itself and the institutions that NSF is funding, particularly institutions of higher education, with an emphasis on what the metrics are for determining how we are progressing and moving things forward—that is, metrics toward full participation. Some consideration may be given to why efforts were unsuccessful as well as the “consequences for not reaching the mark.”

CEOSE anticipates making recommendations to NSF regarding how to hold institutions accountable for broadening participation. Questions discussed included: What are the metrics to say progress was sufficient/insufficient? How do we know when we have been successful? How does NSF know there is progress? The consensus was that NSF needs to be accountable for encouraging its communities to follow through on their broadening participation efforts in their funded proposals and for sharing the value of doing the evaluation of broadening participation activities. The next report will convey what the broadening participation accountability system would look like for NSF and institutions.

NSF INCLUDES: Inclusion across the Nation of Communities of Learners that have been Underrepresented for Diversity in Engineering and Science

Drs. Joan Ferrini-Mundy, Assistant Director for the Directorate of Education and Human Resources, and Suzanne Iacono, Acting Head of the Office of Integrative Activities, co-led the session on the NSF INCLUDES Initiative. NSF held a workshop on June 3, 2015 and the summary can be found at <http://www.informalscience.org/community/groups/details?id=60>.

The key messages were: learn from and build on existing success; promote wide-ranging partnerships with shared measurements and systematic networked coordination, advance a national agenda with sensitivity to local differences, and connect research and practice to the science of broadening participation. There will be an INCLUDES Working Group tasked to develop the solicitation(s) for the INCLUDES pilots and to plan the ideas labs and workshops. There will be more funding in FY 2017 to catalyze and build on FY 16 success to ensure that NSF INCLUDES does advance as a national effort.

The goal is to develop NSF INCLUDES as the bold new initiative for broadening participation by building on existing efforts to develop capacity and expanding the evidence of diversity as an asset. Data collection and measurement will be critical aspects of building the knowledge base regarding large-scale implementation, multiplicative impacts, and scale-up. CEOSE members suggested additional work for the effort that includes examining the lessons that can be transferred from EPSCoR’s Track 3 awards, understanding how to manage the resisters, and conducting implementation research in the promotion of systemic approaches and linkages.

Topics for Discussion with NSF Leadership

Members raised several topics/issues that they wanted to discuss with NSF leadership:

- accountability at three levels—NSF as the funding agency; individuals, specifically the PIs, and institutions receiving NSF awards
- the INCLUDES Initiative and other programmatic changes (or opportunities) that may be relevant to the Committee
- how is GEO protecting its investment in diversity efforts, in light of external pressures
- the overall impact of the CEOSE report(s)
- the perspectives informing the strategic visioning of NSF regarding broadening participation

NSF Evaluation and Assessment Capability

Dr. Anand Desai, Section Head of Evaluation and Assessment Capability (EAC), provided an update on NSF's context for evaluation. EAC is charged to provide leadership, coordination, and collaboration for evaluation and assessment by developing evaluation capacity, conducting evaluations in collaboration with directorates and offices, and cultivating a culture of learning from program/portfolio evaluations. As EAC focuses on the evaluation of the broadening participation efforts, the unit will make use of two resources: a 2008 evaluation workshop that focused on monitoring metrics and the evaluation designs and indicators for the evaluation of broadening participation grants, and the recent roadmap description that the evaluation framework for NSF INCLUDES would be “an evidence-based approach that drives management decision-making, mid-course corrections, improvements, and enhancements for yields greater than incremental progress.”

The following two questions shaped the discussion with CEOSE members: What constitutes evidence of broadening participation? What broad concepts and constructs should be used to explore texts for evidence of broadening participation? CEOSE members emphasized that it is important to help communities know how to determine whether an activity has results that are advancing broadening participation goals and if the effects are moving in the right direction. It was suggested that in addition to text mining using key words like inclusion, diversity, equity, equality, parity, etc., NSF should examine the totality of investments in broadening participation at a given institution to assess diversity goals in terms of institutional transformation.

Discussion with Dr. Richard Buckius

Dr. Raymond welcomed Dr. Buckius and stated that CEOSE is pleased with NSF's response to the recommendation for a bold new initiative. She stated that the upcoming report will focus on accountability: NSF accountability, institutional accountability, and grantee accountability. Dr. Buckius responded that NSF is attentive to broadening participation and prepared to be held accountable, including providing the necessary data for the next CEOSE report. He also stated that NSF is mindful of workload issues when considering additional requirements of the PIs and expressed concerns about defunding as the best course of action when results are less than desired.

Dr. Buckius pointed out that the recent CEOSE reports have been impactful and that CEOSE has spurred the momentum of the leadership in investing more time, effort, and funds to broaden the participation of the STEM communities. As the Committee focuses on its next report, he encouraged CEOSE to work closely with Dr. Desai and the EAC unit to build the accountability system for

measuring the progress and success in broadening participation. Dr. Buckius also pointed out the importance of embedding the two merit review criteria in such a system. It was suggested that a workshop or an ideas lab could provide expert guidance in creating the framework for the NSF broadening participation accountability system. Additionally, CEOSE was encouraged to have discussions with the Assistant Directors about how their communities will be implementing NSF INCLUDES and how their other collective programmatic efforts are having an impact on diversity and inclusion.

Dr. Buckius expressed deep appreciation for the leadership of the out-going Chair, Dr. Wendy Raymond. He also acknowledged the many contributions of the three members whose terms expired in September 2015: Dr. Karl Booksh, Dr. Keivan Stassun, and Dr. Joseph Whittaker.

Updates from Federal Liaisons

Dr. Katie Blanding, representing the Department of Education, provided an overview and reference materials for the following programs: Graduate Assistance in Areas of National Need (GAANN); Hispanic Serving Institutions-Science, Technology, Engineering, Math (HSI-STEM) and Articulation Discretionary Grant Program; Ronald E. McNair Postbaccalaureate Achievement (MCNAIR) Program; Upward Bound Math-Science Program; Minority Science and Engineering Improvement Program (MSEIP), and Student Support Services. She shared data that highlighted the increased participation for women in several of the programs. Dr. Blanding shared that these programs have various resources to strengthen the performance of underserved populations and called attention to support given to minority-serving institutions to encourage students to pursue STEM degrees.

Dr. Shanin Nemazze, representing the Smithsonian Institute (SI), reported on several broadening participation outreach efforts. SI has held workshops with HACU and SACNAS to broaden the involvement of minority populations in STEM. Partnering with HBCUs received focused attention at the Association of African American Museums Conference. Dr. Nemazze also highlighted SI's FY 2015 Diversity and Inclusion Report that documented up to 40 initiatives. While participant/applicant data were useful in measuring the type of impact the initiatives have had, he emphasized the difficulty in measurement of the exposure and awareness components of the outreach portfolio in terms of the pipeline/pathway approach to STEM engagement and/or career development.

Reports of the CEOSE Liaisons to NSF Advisory Committees (AC)

Two reports were given for recent advisory committee meetings. Dr. Raymond reported on the BIO AC meeting, noting two relevant discussion areas. First, the Director provided an overview of NSF INCLUDES and second, the CEOSE Liaison called attention to diversity and inclusion needs regarding doctoral and post-doctoral fellowships.

Dr. Charles Isbell provided a brief overview of the ERE AC meeting, pointing out that the meeting focus was the release of the new ERE report, "America's Future: Environmental Research and Education for a Thriving Century: A 10-year Outlook" The agenda included a presentation on CEOSE and broadening participation that was given by Dr. Alicia Knoedler. She discussed the CEOSE mandate, membership, and various responsibilities, including the Committee's recent reports to Congress. She highlighted NSF's response to the recent CEOSE recommendation of a bold new initiative in terms of the work of the 2014-2015 NSF Working Groups and the FY 2016 investment of

\$15 million for NSF INCLUDES that will be championed by Director France Córdova. This presentation will be sent to the members to adapt and use as needed at upcoming meetings (e. g, ENG AC and the CISE AC).

Final Remarks/Announcements

Members were reminded of the proposed schedule for preparing the 2015-2016 CEOSE report. After Drs. Raymond and Isbell emphasized the creative writing process and the need for the full engagement of CEOSE membership, the initial volunteers for writing various the first three sections and/or members with early ideas for these sections were:

- *Section One* to set the vision based on core arguments and connect all three reports in the series: Isbell, Harkavy, Martin-Vega, Middendorf
- *Section Two* to frame the challenges related to where change is required and innovative opportunities to make a difference via cultural change and decision-making : Villa-Komaroff, Jones
- *Section Three* to focus on the accountability framework conveying that broadening participation counts and on the indicators of success: Megginson, Gooden

Other comments to spark creative thinking included the reminder that transformative impact for the bold new initiative is to occur at the institutional level and that leveraging the broader impacts agenda can be a strategic opportunity to influence institutional leadership.

Suggestions for topics or information needs for future meetings included: NCSES and demographic analyses; GRFP data; panel on successful efforts focused on persons with disabilities in STEM; examples of unintended, positive broadening participation consequences; studies or vignettes about data patterns and the impact of decisions; presentation(s) on the downstream of the pipeline/pathway analysis and collective impact; resources on the theory and research on changing culture; results of innovation through integration of institutional efforts; exemplars of strategic interventions across all levels; discussion on biases; and requests for BP highlights for the next CEOSE report, especially the BP responsibilities of large alliances in STEM.

The next CEOSE meeting will be held at the Foundation on February 25-26, 2016. The Chair adjourned the meeting at 3:51 PM.