

**Committee on Equal Opportunities in Science and Engineering (CEOSE)
Meeting Minutes
June 20 & 21, 2019
National Science Foundation
Arlington, VA 22314**

MEETING PARTICIPANTS

CEOSE Members Present

Dr. Jose D. Fuentes, CEOSE Chair, Pennsylvania State University
Dr. Alicia Knoedler, CEOSE Vice Chair, Exaptive, Inc.
Dr. Gilda Barabino, CCUNY
Dr. Suzanne, Barbour, University of Georgia
Dr. Juan Gilbert, University of Florida
Dr. Kaye Husbands-Fealing, Georgia Institute of Technology
Dr. Nai-Chang Yeh, California Institute of Technology
Dr. Daniela Marghitu, Auburn University
Dr. Lydia Villa-Komaroff, Intersections SBD
Dr. Charles Isbell, Georgia Institute of Technology, GA

CEOSE Members Absent

Dr. Peter Eden, Landmark College
Dr. Robert Eugene Megginson, University of Michigan

CEOSE Designated Federal Officer – Executive Liaison

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

CEOSE Executive Secretary

Dr. Bernice Anderson, Senior Advisor, OIA/OD/NSF

CEOSE Scientific/Technical/Administrative Staff

Ms. Jolaina Jeff-Cartier, Staff Associate, OIA/OD/NSF
Ms. Una Alford, Program Analyst, OIA/OD/NSF
Mr. John P. White, IT Specialist, OIA/OD/NSF

Welcome, Introductions & Opening Remarks

The CEOSE Chair, Dr. Jose D. Fuentes, opened the meeting, welcomed everyone, and asked for self-introductions. He provided an overview of the meeting agenda, pointing out the meeting would focus on intersectionality in STEM and the competitiveness of minority serving institutions. CEOSE Vice Chair, Alicia Knoelder, provided an update about the 2017-2018 Biennial Report to Congress, calling attention

to the new cover, the appendices, and the dissemination letter that will accompany the report. Dr. Suzanne Iacono, CEOSE Executive Liaison and Head of the Office of Integrative Activities, presented updates about the following: a Town Hall focused on the progress of NSF's 10 Big Ideas; a new Dear Colleague Letter asking for research proposals on sexual harassment and other types of harassment (DCL #19-053); the recent conference of the National Alliance for Broader Impacts (NABI) and the planned work of the newly funded Center for Advancing Research Impact in Society; and the increase in funding for minority-serving institutions, from 5% of NSF funding to MSIs in 2008 to 13.1% in 2018. CEOSE members commented that it is important to be informed of such progress so as to better understand the sense of urgency regarding broadening participation (BP) in the scientific enterprise.

NSF INCLUDES Update

Dr. Sylvia James, Deputy Assistant Director/Education and Human Resource Directorate emphasized that a key message of this initiative is inclusiveness—everyone having an opportunity in STEM. In reflecting on program implementation, she noted the following:

- 2016 – funded 40 launch pilots, 13 conferences, and two 3-year evaluation contracts for developmental evaluation and technical assistance.
- 2017 – hosted the first PI meeting, and funded a second cohort of 30 launch pilots.
- 2018 – held NSF INCLUDES Summit with representatives from NSF-funded centers and center-scale activities in concert with the second PI meeting; issued a DCL 17-111 that provided opportunities for projects across NSF to connect with NSF INCLUDES (building “on-ramps”), resulting in 14 awards; and funded the coordination hub and five alliances.

Dr. James also pointed out that approximately 15 NSF solicitations have included language on NSF INCLUDES as part of the on-ramp effort, in addition to NSF 19-042: Dear Colleague Letter: Expanding the NSF INCLUDES National Network. Also, NSF hosted a two-day STEM-Funder Collaborative Meeting, engaging partners from other Federal agencies and foundations that support STEM education and broadening participation. A collaboration with Boeing provided another funding opportunity—NSF 19-038: Dear Colleague Letter: Supporting the Re-Entry of Women and Women Veterans in the STEM Workforce.

Dr. Kimberly Rause recapped the comprehensive review of the NSF INCLUDES portfolio, including methods used, and indicated that the Year Three Evaluation Report will be delivered to NSF at the end of September. Her presentation included the following noteworthy findings: one-third of the over 865 partners are academic institutions; three-fourths of the awardees have implemented BP interventions, working with over 20,000 participants in these interventions; more than half of the projects have a website and are publishing in journals or presenting at conferences. Dr. Rause also discussed with the membership a new rubric to measure collective infrastructure to determine three levels of performance (i.e., exploratory, emergent and mature) for each five elements, namely vision; partnership; goals and metrics; leadership and communications; and expansion, sustainability and scale.

Dr. Ray McGhee provided an overview of the Coordination Hub and the 2019 National Network Convening. Led by SRI International, eight different organizations will help broker connections, provide a platform for collaboration and networking, develop a shared measurement system, and elevate best practices and BP discoveries. The Coordination Hub has launched a website—the NSF INCLUDES National Network (<https://www.includesnetwork.org>). More information about Coordination Hub and the recent convening, deemed important and impactful, can be found at the website.

CEOSE members commented that it would be important to: keep the launch pilots engaged in the National Network; diversify the portfolio of alliances (e.g., K-12-focused, HBCU-led); recruit other partners like Boeing; provide more networking support to the newcomers; and be more proactive in getting more competitive

proposals from EPSCoR jurisdictions. Overall, CEOSE is excited about the NSF INCLUDES efforts designed to be inclusive, leaving no talent untapped.

Diversity Data: Women, Minorities, and Persons with Disabilities in Science and Engineering, 2019

Ms. Emilda Rivers, Division Director, National Center for Science and Engineering Statistics, led and facilitated the discussion about the most recent Women, Minorities, and Persons with Disabilities in Science and Engineering report (NSF 19-304). The report provides policy- relevant/policy-neutral evidence to inform broadening participation decision-making. Additionally, colleagues from NCSES provided a demonstration of the interactive website and asked for suggestions to enhance the digest/ website. CEOSE members suggested reporting data by region and greater disaggregation of data for women and providing access to data that exclude the temporary VISA holders to prevent the overestimation of counts for underrepresented groups. The CEOSE members were encouraged to help NCSES to re-imagine the report. Another suggestion was for NCSES to obtain feedback from the community to understand the use of the data and the needs for customizing reports.

Update on the CISE Broadening Participation in Computing Pilot

Dr. Erwin Gianchandani provided a status report of the CISE BP pilot which requires BPC plans as part of proposal submission for medium and large funding opportunities. It has become a game-changer for cultural change via enhanced exposure to broadening participation and having an appropriately tailored plan. CISE has also funded the BPCnet Resource Portal. There is now a white paper (https://www.nsf.gov/cise/bpc/White_Paper.pdf) that provides advice about plans since previously most plans submitted were not very good. More workshops and webinars are planned. CEOSE commended CISE for a pilot which appears very intentional and solution-oriented. One member expressed that it was groundbreaking and could become another NSF-wide model.

Day 2 Opening Remarks/Topics for Discussion with NSF Leadership

Dr. Jose D. Fuentes welcomed members to the second day of the meeting, reviewed the agenda, and facilitated the identification of topics for discussion with NSF leadership. The range of possible topics related to the areas being covered at the meeting included NSF INCLUDES, intersectionality, MSIs, and biennial reports.

Intersectionality and STEM Diversity

Two NSF-funded research projects provided critical insights about women of color in STEM. Research methods and findings of Multiple Consciousness: Investigating the Identities (Academic, Gender, Race and Disability) of Black Women Undergraduate Students in STEM and Their Impact on Persistence – Howard University/ HBCU-UP #1505150 – was presented by Dr. Kalynda C. Smith, Co-Principal Investigator, Hampton University. Dr. Carmen M. Lilley, Principal Investigator, presented research results of her research initiation grant, A Study on the Intersection of Race and Gender on Leadership Formation of Engineering Students – University of Illinois at Chicago/ENG #1738132.

Both presentations pointed out that group membership is challenging in that it is multidimensional—the intersection of race and gender with the intersection of academic success and science identity. CEOSE noted that the situation becomes more complicated when another level is considered, e.g., women of color with disabilities. The panelists and CEOSE discussed coping mechanisms/strategies, the influence of group dynamics on risk-taking and the need to address the leadership skills as the cross-cutting theme.

Supporting MSI to Broaden Participation in STEM Disciplines

This panel consisted of two presentations: *MSI: America's Underutilized Resource for Strengthening the STEM Workforce* – a NASEM report presented by Dr. Leigh Jackson, Study Director and Senior Program Officer at the National Academies of Science, Engineering and Medicine and an overview of the recent and planned activities of the White House Initiative on Historically Black Colleges and Universities (WHI-HBCU) by Mr. Jonathan Holifield, Executive Director of WHI-HBCU.

Dr. Jackson pointed out that about 700 MSIs are enrolling about 30% of the Nation's undergraduates. The MSIs are under-resourced; however, they serve as a model of diversity for educating the STEM workforce. CEOSE pointed out that there is a need for meaningful partnerships that are respectful of MSIs' roles and contributions.

Mr. Holifield provided a historical overview of HBCUs and advanced the discussion about supporting MSIs. The WHI-HBCU is using the term "competitiveness" as a watchword focused on improving the quality of life for HBCUs and visualizes them as an asset base for opportunity zones in their local communities. Mr. Holifield indicated that there needs to be a rising moment to acknowledge MSI's local investment as an advantage for workforce development and economic development.

Liaisons Reports

The report from the USDA Liaison was distributed. Lisa Evans briefed CEOSE about NIH's recent efforts, which included a listening session about persons impacted adversely by sexual harassment. Additionally, reports from the CEOSE Liaisons to the ACs were given for BIO, SBE, ENG, CISE, EHR, and ISE. Each of the reports had BP highlights, such as exploring the use of NEON as an opportunity for place-based, community- engagement (BIO) and discussing actions for preventing sexual harassment (ENG and CISE).

Discussion with NSF Director

After extending greetings to CEOSE, Director France Córdova gave brief remarks about NSF recent leadership appointments and her presentation at the recent National Science Board meeting. Comments from CEOSE focused on the Committee's support of the CISE BP Pilot, the need to address small cell size to ensure that certain groups do not become invisible due to lack of data reporting, the need for more industrial partners like Boeing, the need to continue to do good evaluation and assessment in real time to further advance NSF INCLUDES, and the need to study differences within the MSI portfolio.

CEOSE Biennial Reports (2017-2018 and 2019-2020)

The members agreed on the cover design and the submission of edits within a week. NSF will be responsible for getting the report copy edited. The distribution of the 2017-2018 CEOSE report will be discussed in greater details at the October 2019 meeting.

The Vice Chair reminded the membership of the suggested topics, such as intersectionality, persons with disabilities, and minority-serving institutions, that may frame the upcoming 2019-2020 CEOSE report. Dr. Kaye Husband Fealing suggested that the next report could address the following three issues: inclusion, identity and implementation. An emphasis on leadership was suggested, too. The Co-Leads for the 2019-2020 report will be named at the October 2019 meeting.

Announcements and Final Remarks

CEOSE would like another roundtable with NSF Senior Leadership at a future meeting. The upcoming meeting in October will focus on persons with disabilities in STEM education and research.

The Chair thanked everyone and adjourned the meeting.