

Committee on Equal Opportunities in Science and Engineering (CEOSE)
Meeting Minutes
October 17-18, 2019
National Science Foundation
Alexandria, 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. Suzanne, Barbour, University of North Carolina at Chapel Hill
Dr. Peter Eden, Landmark College
Dr. Kaye Husbands-Fealing, Georgia Institute of Technology
Dr. Juan E. Gilbert, University of Florida
Dr. Charles Isbell, Georgia Institute of Technology, GA
Dr. Daniela Marghitu, Auburn University
Dr. Robert Eugene Megginson, University of Michigan
Dr. Lydia Villa-Komaroff, Intersections SBD

CEOSE Members Absent

Dr. Gilda Barabino, CCUNY
Dr. Nai-Chang Yeh, California Institute of Technology

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. Una Alford, Program Analyst, OIA/OD/NSF
Mr. Steven Buhneing, Communications Specialist, OIA/OD/NSF
Mr. John P. White, IT Specialist, OIA/OD/NSF

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Day 1

Welcome, Introductions and Meeting Overview

The Chair, Dr. Jose D. Fuentes, opened the meeting, welcomed everyone, and asked for self-introduction. He provided an overview of the meeting agenda, pointing out that the meeting topics would focus on concerns/issues related to persons with disabilities, broader impacts, leadership, NSF INCLUDES, and the CEOSE biennial report to Congress.

Access to Innovative Education: STEM Opportunities for Students with Learning Disabilities

The presentation by CEOSE Member Peter Eden who is the President of Landmark College, a higher education institution that serve only neurodivergent students with learning differences, emphasized neurodivergent and neurodiversity as terms of empowerment. Dr. Eden highlighted the EHR-funded project, Access to Innovative Education: STEM Opportunities for Students with Learning Disabilities (AIE-STEM), designed to improve STEM education and outcomes for neurodivergent students. The project is funding and mentoring 23 scholars from the life sciences and computer science programs. He discussed the challenges and benefits of increasing internship and research opportunities for neurodivergent students with an LD (learning difference). Initial data suggested that with improved sense of self and support from multiple areas, the student scholars are gaining confidence in STEM ambitions.

NSF INCLUDES Update

CEOSE received a FY 2019 update that included a geographical display of NSF INCLUDES-supported awards and an overview of the eight NSF INCLUDES Alliances, followed by videos of the Alliances funded in FY 2018. CEOSE also received handouts about the work of the NSF INCLUDES Coordination Hub, the 2019 National Network Convening, and a directory of the NSF INCLUDES-related awards made in FY2019. The Committee also discussed the various investment strategies for FY 2019: alliances, the coordination hub, evaluation, conferences, co-funding, traineeship supplements, on-ramps, and launch pilots. Committee members were strongly encouraged to join the NSF INCLUDES National Network.

Leveraging Broadening Participation to Advance Research Impacts in Society

CEOSE expressed a strong interest in learning about the recently NSF-wide funded center focused on broader impacts. Dr. Susan Renoe of the University of Missouri reviewed the success of the National Alliance for Broader Impacts (NABI) and how it is transitioning to the Center for Advancing Research Impact in Society (ARIS). The ARIS Center has three key components: training, partnerships and scholarship. ARIS aims to: 1) serve as an advocate and resource for the Broader Impacts (BI) community; 2) leverage expertise and partnerships to make research accessible through an integrated approach to scholarship and professional development; and 3) build connections among researchers, practitioners, and communities to benefit society. Dr. Renoe's presentation also highlighted the ARIS 2019 Fellows, ARIS 2019 BI Champions, links to BI resources, and the work of the Committee on Minority Serving

Institutions. CEOSE was invited to two upcoming meetings—a March 2020 workshop, co-sponsored with the National Federation of the Blind, that will examine the intersection of broadening the participation of individuals with disabilities in STEM research and broader impacts and the April 28-30, 2020 Broader Impacts Summit in Durham, North Carolina.

Leadership Roundtable

Two Committee members, Dr. Charles Isbell and Dr. Lydia Villa-Komaroff, shared their journey in becoming STEM leaders and how they are promoting broadening participation in the STEM enterprise. Key points made included: leaders do two things—provide inspiration and provide incentives. Knowing what resources are available at all levels and knowing something about the individual school and departments become critically important in trying to introduce any kind of change through leadership. Leaders need to be held accountable for cultural change that results in inclusive environments.

Topics for Discussions with NSF Leadership

Members agreed to have less of a Q&A session with NSF leadership and have more of a discussion about diversity and leadership. CEOSE suggested there is a need to see increased engagement at the highest level of leadership in the NSF INCLUDES Alliances.

Day 2

Opening Remarks

The Chair summarized Day 1 and reviewed the agenda for Day 2. After reporting about the CEOSE Executive Teleconference, highlighting the positive response of NSF leadership to the recent biennial report, Dr. Fuentes facilitated a brief discussion about the dissemination of the 2017-2018 CEOSE Report.

The 2017-2018 CEOSE report was submitted to NSF in September and the Director transmitted it to Congress. In this report **CEOSE recommends that NSF give increased attention to including diverse community voices across its research and education portfolios through community-driven projects.** The report has been well-received by the Foundation, with special thanks for the exemplars in the report as well as the Appendices. CEOSE has prepared a dissemination letter and flyer that will be sent to the leadership of over 100 STEM organizations, NSF Program Directors, members of the various NSF Advisory Committees, and several other listservs. The report can be found on the CEOSE website.

NSF Executive Liaison Report

Dr. Suzanne Iacono, CEOSE Executive Liaison, applauded CEOSE for its continuity across the recent biennial reports and encouraged the Committee to continue to provide advice to the Foundation about NSF INCLUDES, as well as join the National NSF INCLUDES Network. Her report highlighted: the Louis Stokes Regional Centers of Excellence, NSF involvement in the NABI Summit and Historically Black Colleges and Universities Conference Week, the recent STEM Mentoring report of the Presidential Awards of Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM), FY 2019 awards funded in response to the NSF DCL on Sexual Harassment and Other Harassment, and the ADVANCE Resource and Coordination (ARC) Network website.

South East Alliance for Persons with Disabilities in STEM

The presentation by the CEOSE Member who is a Co-PI of the NSF INCLUDES Launch Pilot entitled, South East Alliance for Persons with Disabilities in STEM (SEAPD-STEM) highlighted the following successful interventions: peer and faculty mentoring, small student cluster groups, monthly group meetings, research internships and presentations, annual conferences, and high school campus visits. Dr. Daniela Marghitu described the project history, involving 21 institutions throughout the South East United States and Washington, DC, and plans for becoming one of the NSF INCLUDES Alliances. The project has provided financial, academic and social support to over 260 students with disabilities in STEM majors. The disability categories of these participating students have included: Asperger's Syndrome/autism spectrum, attention deficit disorder/attention deficit hyperactivity disorder, deaf or hard-of-hearing, physical/orthopedic/mobility impairment, systemic health/medical condition, psychological/psychiatric condition, learning disorder, blind or visual impairment, speech impairment, and acquired/traumatic brain injury. Dr. Marghitu reiterated that students enrolled in postsecondary STEM majors comprise one of the largest untapped pools of future American engineers, mathematicians, scientists, technologist and technicians.

Discussion with NSF Chief Operating Officer

Dr. Fleming Crim, Chief Operating Officer greeted the members and made opening remarks, covering budget updates for FYs 19, 20 and 21; the upcoming celebration of the 70th anniversary of NSF, the appointment of Dr. Margaret Martinosi as the next CISE AD; and the importance of the Convergence Accelerator portfolio, the NSF INCLUDES National Network and the new alliances. Dr. Crim commended CEOSE for a timely biennial report that is forward-thinking and conveyed that the Director would be referencing the report in an upcoming speech in Iceland. He commented that the recommendation is relevant for what the Foundation is implementing in Navigating the New Artic Big Idea, and the recommendation is deemed visionary beyond the Foundation's investment in informal science.

The Committee shared that the October meeting has been emphasizing the need to increase the participation of persons with disabilities in STEM careers and the need to leverage institutional leadership to help achieve the goal of broadening participation of various groups in STEM fields. The members shared that it is difficult to accomplish long-term change culturally for inclusion and increased representation of underrepresented groups in STEM without the support and active involvement of leadership. Questions raised included: How can leadership impact diversity? How diverse is the pool of senior leaders in STEM? What role does NSF have as a convener, funder, and agenda setter to incentivize leaders to value and promote broadening participation in the scientific enterprise? This session concluded with CEOSE thinking that NSF INCLUDES could host an engagement with presidents, provosts, and deans to address such questions.

Liaison Reports

Most of the Fall Advisory Committee (AC) meetings have been scheduled to occur at the current CEOSE meeting. The CEOSE Liaisons did express their excitement about attending these upcoming AC meetings in anticipation of sharing the recommendation of the 2017-2018 CEOSE Report. Members also mentioned that the standard CEOSE slide deck needed to be updated.

The CEOSE Liaisons will make sure that all NSF Advisory Committees receive the report. CEOSE leadership will work with NSF to create a slideshow to convey the core messages in the report.

Supporting Persons with Disabilities in STEM Disciplines

The presentation by Dr. Sheryl Burgstahler who founded and directs the DO-IT (Disabilities, Opportunities, Internetworking, and Technology) Center and the Access Technology Center (ATC) at the University of Washington featured several NSF-funded projects focused on individuals with disabilities. She described the following four theoretical and conceptual frameworks: 1) social justice model of disability instead of the medical/deficit model, 2) disability as a diversity issue, 3) universal design instead of accommodations-only framework, and 4) student-centered community building framework. Dr. Burgstahler made the following key points. Broadening participation in STEM by including more people with disabilities is improving these fields with the unique expertise and perspectives of persons with disabilities. It is important to consider ability on a continuum and most disabilities are “invisible.” Students with disabilities identify with multiple identities. She shared that the results of an external evaluation of DO-IT showed the following positive outcomes that drive successful transition and retention in STEM: a sense of belonging, involvement in academic and social life, a sense of purpose (through internships, workshops, networking, and mentoring), and self-determination skills developed through skill building and practice.

Plans for the 2019-2020 Report

Dr. Knoedler led the discussion about the next biennial report, noting that it will be comprised of an introduction, an organizing theme, a summary of past activities, and recommendations, as well as future directions. She pointed out that CEOSE has been focusing on the following topics: BP data/accountability, intersectionality, minority-serving institutions, persons with disabilities, and leadership. One suggestion was that the topic of leadership could be the umbrella for all ideas that had been discussed. Another suggestion was to focus on issues of invisibility in STEM. The goals of the February meeting would include deciding on an integrating theme and drafting a recommendation with a set of suggestions.

The members also discussed the need to prepare a white paper on leadership and STEM diversity. Drs Isbell, Gilbert, Villa-Komaroff, and Fuentes will draft an initial document. If possible, CEOSE would like to have a leadership workshop in Fall 2020.

Announcements and Final Remarks

The members agreed that a future meeting should focus on the issue of “loss in aggregation” when reporting BP data/results/findings. The next meeting will be an in-person meeting in February 2020. After thanking everyone for their hard work and acknowledging the contributions of outgoing member Dr. Peter Eden, the Chair adjourned the meeting.