GOLD: Building capacity for broadening participation in the Geosciences

Amanda Adams, Lina Patino, Michael B. Jones, and Elizabeth Rom
National Science Foundation, Arlington, VA United States (amadams@nsf.gov)

The geosciences continue to lag other science, technology, engineering, and mathematics (STEM) disciplines in the engagement, recruitment and retention of traditionally underrepresented and underserved minorities, requiring more focused and strategic efforts to address this problem. Prior investments made by the National Science Foundation (NSF) related to broadening participation in STEM have identified many effective strategies and model programs for engaging, recruiting, and retaining underrepresented students in the geosciences. These investments also have documented clearly the importance of committed, knowledgeable, and persistent leadership for making local progress in broadening participation in STEM and the geosciences. Achieving diversity at larger and systemic scales requires a network of diversity "champions" who can catalyze widespread adoption of these evidence-based best practices and resources. Although many members of the geoscience community are committed to the ideals of broadening participation, the skills and competencies that empower people who wish to have an impact, and make them effective as leaders in that capacity for sustained periods of time, must be cultivated through professional development. The NSF GEO Opportunities for Leadership in Diversity (GOLD) program was implemented in 2016, as a funding opportunity utilizing the Ideas Lab mechanism. Ideas Labs are intensive workshops focused on finding innovative solutions to grand challenge problems. The ultimate aim of this Ideas Lab, organized by the NSF Directorate for Geosciences (GEO), was to facilitate the design, pilot implementation, and evaluation of innovative professional development curricula that can unleash the potential of geoscientists with interests in broadening participation to become impactful leaders within the community. The expectation is that mixing geoscientists with experts in broadening participation research, behavioral change, social psychology, institutional change management, leadership development research, and pedagogies for professional development will not only engender fresh thinking and innovative approaches for preparing and empowering geoscientists as change agents for increasing diversity, but will also produce experiments that contribute to the research base regarding leader and leadership development.