

ATS/CIRA Colloquium

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Applying a multicultural mentoring model to broaden participation in atmospheric sciences: Best communication practices for mentoring underrepresented students

**Hosted by Leah Grant (on behalf of the Diversity, Equity and Inclusion Committee) and Christine Chiu
3 p.m. Thursday, Feb. 18, via Microsoft Teams**

Mentoring has become a leading intervention strategy to increase diversity of underrepresented students (e.g., women, Black, Latinx, Indigenous) in science, technology, engineering, and mathematics (STEM). The ability to communicate with male or female protégés from various cultures is essential to STEM mentors' ability to support and advise Asian, Black, Indigenous, and Latinx atmospheric science students. Although there is limited research about specific mentoring practices for underrepresented atmospheric science students, multicultural mentoring offers an effective mentor model. Multicultural mentoring acknowledges protégés' multiple identities and the ways that gender and race shape a protégé's experiences (Benishek et al., 2004; Schlosser & Foley, 2008). It is based on the premise that traditional mentoring models do not address the needs of students with diverse backgrounds. In order to study the best practices of multicultural mentoring, STEM faculty (including atmospheric science faculty) were interviewed to provide insight about their multicultural mentoring, communication, and relationship with their underrepresented students. Based on this study, the Multicultural Mentoring Communication Praxis (MMCP) mentor model was developed. The MMCP reveals how STEM mentors can utilize open communication, supportive communication, and consistent communication to engage in effective multicultural mentoring with their students. These practices facilitate multicultural mentoring across mentor dyads (e.g., same-gender, cross-gender, same-race, cross-race) that recognize specific challenges for underrepresented students, such as discrimination or first-generation students navigating higher education. The MMCP also delineates how the mentoring process is influenced by nuances of race, gender, and culture that can guide a mentor's ability to understand the needs and experiences of their student, or affect a student's capacity to actively engage in a mentorship. This presentation will highlight the best practices of multicultural mentoring, and identify communication strategies for mentors and students (e.g., developing a communication plan) from the MMCP to facilitate multicultural mentoring.

Dr. Leticia Williams is a research fellow for the NOAA Center for Atmospheric Sciences and Meteorology (NCAS-M) at Howard University. She completed her doctoral degree at Howard University in the Communication, Culture, and Media Studies program where studied science communication. Dr. Williams earned a master's degree in communication from California State University Fresno (CSUF), and a bachelor's degree in journalism from the University of Southern California (USC). Her work focuses on the integration of social, behavioral, economic, and communication sciences (SBEC) at NCAS-M to train an interdisciplinary cadre of 50 students spanning various disciplines (e.g., atmospheric sciences, physics, mathematics) at 13 institutions. This integration prioritizes advancing theoretical findings and applied research to understand the societal impacts of weather events, improve weather and air forecasting, and support operations in the forecast community. As the inaugural NCAS-M SBEC postdoctoral fellow, Dr. Williams continued her science communication research and implemented social science methods at the National Weather Service (NWS) Operations Division to expand the research program for core partners (e.g., emergency managers) and the general public. During this fellowship Dr. Williams worked with the quarterly (NWS) Customer Satisfaction Index (CSI) survey team to better understand the delivery and usage of NWS products, collaborated on the development of Impact-based Decision Support Services (IDSS) External Partner performance metrics to assess the quality and consistency of IDSS provided to core partners, and worked on data collection and analysis for the Hurricane Florence and Michael NWS Service Assessment. Dr. Williams' research also focuses on broadening participation in science, technology, engineering, and mathematics (STEM). The objective of her current research is to facilitate multicultural mentoring practices among STEM faculty and STEM professionals for underrepresented STEM students. Through her research, Dr. Williams has advised how to establish effective mentoring relationships, and provided mentoring tools and best practices for underrepresented STEM students and mentors in various programs.