

**Space Science Seminar**  
**Tuesday, 2019 August 13**  
**10:30 a.m.**  
**NSSTC/2096**

**Hidden Obstacles to Success: Unconscious  
Bias, Stereotype Threat, and Imposter  
Syndrome**

Dr. Joan Schmelz / Director, NASA Postdoctoral Program (NPP) / Universities  
Research Association (USRA)

Host: Dr. Amy Winebarger (Sponsored by USRA)

Women and other underrepresented groups still struggle in their efforts to rise to leadership positions in science and engineering. Obsolete ideas blame nature - girls' brains are wired differently so, for example, they are not as good as boys at math. New ideas shift the blame to nurture - girls face a powerful combination of hidden obstacles that are part of the society we live in. This talk introduces three nurture topics that sociologists have been studying for decades but are rarely discussed by the scientists and engineers whose lives and careers are most seriously affected by the findings. Studies of Unconscious Bias show that men and women both unconsciously devalue the contributions of women. Stereotype Threat is the anxiety women face in a situation where they have the potential to confirm a negative stereotype about women as a group. Women may also face Impostor Syndrome where they find it impossible to believe in their own competence. This talk is for everyone, not just for women. No science or engineering background is required. Everyone who mentors students, hires employees, and evaluates performance (or will in the future) needs to understand how these issues skew the competition and keep us from vying on a level playing field. Before coming to this talk, try taking the Harvard Implicit Association Test: <https://implicit.harvard.edu/implicit/>.

(Instructions: Scroll down. Click "I wish to proceed." Select "Gender - Science IAT." Instruction will pop up. Click to begin.)

Bio: Dr. Joan Schmelz is the director of the NASA Postdoctoral Program at Universities Space Research Association (USRA). She was the Associate Director for Science and Public Outreach at SOFIA, the Stratospheric Observatory for Infrared Astronomy (2018-19) and the deputy director of the Arecibo Observatory in Puerto Rico (2015-18). She was a program officer for the National Science

Foundation's Division of Astronomical Sciences (2013-15) and a professor at University of Memphis for over 20 years. Her research involves observations of solar coronal loops and developing constraints for coronal heating models. Schmelz has published papers on a variety of astronomical topics including stars, galaxies, interstellar matter, and the Sun using data from ground- and space-based telescopes at (almost) every band of the spectrum. She is a current Vice President of the American Astronomical Society and a former chair of the Committee on the Status of Women in Astronomy. She won a teaching award from Rensselaer Polytechnic Institute, a service award from Gallaudet University, and a research award from the University of Memphis. She gives talks and writes articles on topics such as unconscious bias, stereotype threat, and the gender gap. Dr. Schmelz was honored in 2015 as one of Nature's top ten people who made a difference in science for her work fighting sexual harassment.

<https://solarscience.msfc.nasa.gov/colloquia/>