US National Science Foundation presents panel on LGBTQ+ community in STEM

By Judy Meiksin

"If you can't see it, you cannot be it," said Wil Srubar of the University of Colorado Boulder during an event organized by the US National Science Foundation (NSF) on June 24, 2021, called **Pride in STEM: A Conversation about Research, Mentorship and Advocacy**. Rhonda Davis, NSF's head of Diversity and Inclusion, moderated a panel of scientists on video who discussed ways to continuously improve representation of the lesbian-gay-transgender-bisexual-queer+ (lgbtq+) community in STEM (science-technology-engineering-mathematics). The event can be viewed on the NSF YouTube channel.

Explaining one way in which the lgbtq+ community differs from some of the other minority groups, Srubar said that people can "hide" this part of their identity. Srubar is an associate professor in the Departments of Building Systems Engineering and Materials Science and Engineering at the University of Colorado Boulder. He is also a recipient of an NSF CAREER Award. He said that hiding made him feel like an imposter. "I embattled with imposter syndrome throughout my time as a student," he said.

Panelist Bryce E. Hughes, assistant professor in the Department of Education at Montana State University, said that how lgbtq+ individuals express sexual or gender identity in different settings is mostly due to self-preservation. Furthermore, Srubar said, "One of the reasons why there's such a paucity of research [of lgbtq+ in STEM] is [due to] the visibility, the identity, the feeling that you are comfortable

enough to claiming your identity even to an anonymous research scientist."

Hughes studies ways to keep STEM lgbtq+ students from leaving the pipeline, while fellow panelist Jon Freeman—an associate professor of psychology and neural science at New York University and along with Hughes, also a recipient of an NSF CAREER Award—conducts studies on stereotypes and cognitive neural mechanisms. Their work goes hand-in-hand with how students and professionals can integrate both their lgbtq+ and STEM identities. Change is needed in terms of STEM structure and culture, Hughes said.

A key factor to retention, said Freeman, is a "sense of belonging in STEM." However, the "objectivity and data-oriented culture" of STEM discourages students and scientists from disclosing their sexual and gender identity. And the STEM culture as masculine, heterosexual, and cisgender further marginalizes those who do not see themselves in this light.

Well-intentioned colleagues put up subtle barriers when asking a gay man, for example, "Do you have a wife?" because if the man responds honestly, he simultaneously embarrasses his colleague and creates an awkward environment.

Srubar pointed out that the lgbtq+ community contains many subcommunities "but tends to be lumped as one" so studies on marginalization actually lack data on these differences. "More research needs to be conducted to tease out [challenges of the] subgroups," he said. Also advocating for more research, Freeman said NSF-funded studies can be used by professional societies to provide resources, and by universities and policymakers.

In the meantime, to help lgbtq+ students "see" themselves as part of the STEM community, Srubar shares his stories and creates opportunities for students to share theirs, too. He reassures his students that they are not alone: "We all come out every day." □