“Strategies for Building Inclusive Classrooms in Engineering”

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3:00 pm
Wu and Chen Auditorium
Levine Hall

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Abstract
The need to diversify and grow the STEM workforce to remain competitive in a global economy is well established. Research shows that improving diversity in an organization has positive effects on creativity, innovation, productivity, and financial performance. The benefits of diversity extend to the educational environment, with diversity among students and faculty being essential to the intellectual and social development of all students. The National Academies advocate that diversity in STEM must be a national priority, and several engineering professional societies have explicitly recognized the importance of diversity in their mission statements, goals, core values, and ethics statements.

The culture of STEM education culture has proven to be a barrier to diversity in terms of its impact on student interest, self-concept, connectedness, and persistence in STEM disciplines. One of the key reasons cited for students leaving STEM is the perception of a chilly climate, especially by those who are members of underrepresented groups. This talk focuses on the role of pedagogy and curriculum in building a more inclusive environment for engineering education, and will present several practical recommendations and examples for engineering educators to make their own courses more inclusive.

Bio
Dr. Stephanie Farrell is Professor and Founding Chair of the Department of Experiential Engineering Education at Rowan University (USA). Her education in chemical engineering began at Penn, where she was a member of class of 1986 (B.S. ChE). She is currently President-Elect of the American Society of Engineering Education (ASEE), and was the 2016-2017 Chair of the ASEE Diversity Committee. Her research interests also include inductive teaching in engineering, spatial visualization skills, and increasing participation of underserved and underrepresented groups in engineering. Stephanie was the 2014-2015 Fulbright Scholar in Engineering Education at Dublin Institute of Technology (Ireland). She has been honored by the American Society of Engineering Education (ASEE) with several teaching awards such as the National Outstanding Teaching Medal and the Quinn Award for experiential learning.