Competent, Engaged, Diverse and Realized (CEDaR) Scientists

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Competent, Engaged, Diverse and Realized (CEDaR) scientists positively impact the world. CEDaR combines elements of self-determination theory and Maslow's Hierarchy of Needs to capture key drivers of motivation. This presentation will discuss the journey of the author toward CEDaR status. The journey begins with the precursors to the decision to pursue a Science, Technology, Engineering and Math (STEM) degree and ends with a summary of accomplishments as a researcher and educator. The presentation will also provide ideas to aspiring and current faculty about how to help others achieve CEDaR status through research advising and classroom instruction. The presentation will cover doctoral research advising in the context of studies to produce polymeric, composite and ceramic particles using stop flow lithography (SFL). The presentation will also describe the results of a study showing the connection between sense of belonging and engagement. By the end of the presentation, listeners should gain an appreciation for two theories related to human motivation and have ideas for how be a CEDaR scientist and mentor others to achieve the same status.

Bio: Dr. Tamara Floyd Smith is Professor of Chemical Engineering and Associate Provost at Tuskegee University in Tuskegee, AL. She completed a B.S. in chemical engineering at Tuskegee University in 1996. She went directly to graduate school at the Massachusetts Institute of Technology in Cambridge, MA and completed requirements for an M.S. in chemical engineering practice in 1998 and a Ph.D. in chemical engineering in 2001. After completing her doctoral degree, she joined the research staff of Lucent Technologies from 2001-2003. In 2003, she joined the faculty of Tuskegee University as an Assistant Professor of Chemical Engineering. Recently, she served as a rotating program officer at the National Science Foundation. Dr. Floyd Smith's scientific research interests center around microfluidics for different applications including materials processing, thermal management and biosensing. She is also involved in engineering education research. She has received millions of dollars in grant funding from various agencies, published dozens of peer reviewed publications and jointly holds two U.S. patents. Dr. Floyd Smith is married with two children.