

## **Teacher Perceptions of Incorporating Engineering Design in Mathematics and Science Instruction (Research)**

### **Dr. Eugenia Vomvoridi-Ivanovic, University of South Florida**

Eugenia Vomvoridi-Ivanović is an Associate Professor of Mathematics Education at the department of Teaching and Learning. Eugenia is mathematically bi-literate (English and Greek) and has taught mathematics at the middle school, high school, and college level. She currently teaches mathematics education courses to undergraduate, masters, and doctoral students. Her research explores Culturally Responsive Mathematics Teacher Education (CRMTE), which she defines as teacher education that: a) is responsive to the needs and capitalizes on the funds of knowledge of culturally diverse mathematics (pre-service and in-service) teachers, and b) seeks to prepare culturally responsive mathematics teachers who will advance the education of students whose linguistic and cultural backgrounds have not traditionally been recognized as resources for mathematics learning.

### **Dr. Tonisha B. Lane, University of South Florida**

Dr. Lane's research agenda broadly examines diversity, equity, and inclusion in postsecondary education with the objective of advancing inclusive and transformative policies and practices. Her primary research strand investigates the experiences and outcomes of underrepresented groups in science, technology, engineering, and mathematics (STEM). Using qualitative methodologies, she has explored access and success for underserved students of color in STEM and STEM intervention programs. This line of research also seeks to understand the nuances and complexities of participation and persistence in these fields and develop new models for explaining such phenomena. Her secondary research strand focuses on the participation and achievement of Black students and professionals in higher education. She is the PI or co-PI on several grant-funded research projects including the national Black Doctoral Women Study (BDWS), the Women in Engineering Study (WIES), and Bulls-Engineering Youth Experience for Promoting Relationships, Identity Development, & Empowerment (Bulls-EYE PRIDE).

### **Dr. Jonathan Elliot Gaines, University of South Florida**

Jonathan E. Gaines is faculty in the Mechanical Engineering Department at the University of South Florida. He is the Director of First Year Experiential Education and Learning. Through this position, he develops and implements the curriculum for USF's Foundations of Engineering Lab course. He is also the Principle Investigator for Bulls Engineering Youth Experience (Bulls-EYE Mentoring) a Science, Technology, Engineering, and Math based outreach program that uses undergraduate students to mentor middle school youth.

**Dr. Kali Lynn Morgan, Georgia Institute of Technology**  
**Ms. Selene Willis, University of South Florida**  
**Salam Ahmad**

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