TAMPA, Fla (October 1, 2012) Sylvia W. Thomas, assistant professor in the Department of Electrical Engineering, is the principal investigator of three new NSF awards in the amount of $254,188.

“EAGER: Implementing Nanolaminates in an Anodic Oxide Trench for Energy Storage Systems” provides funding for enabling the development of densely packed nano-scale structures to be used in the manufacturing of energy storage devices, such as capacitors. The expected outcomes of this research will lead to improved nanostructure processing and enhanced equivalent planar capacitance (EPC) performance for energy storage devices.

In collaboration with Norma Alcantar, associate professor in the Department of Chemical and Biomedical Engineering, the “EAGER: Fabrication, Characterization, and Implementation of an Ofi Mucilage Nanofiber Membrane System” project will provide fundamental understanding of how current and future natural material membrane systems can affect water, wastewater, overall environmental quality, and public health issues.

The “TUES: Collaborative Research: A Systems-Centric Foundation for Electrical and Computer Engineering Education” project is a multi-institutional collaboration involving USF, Northern Arizona University, University of Vermont and State Agricultural College, University of Hawaii, and University of Minnesota-Twin Cities. This project will develop an educational model that pioneers the integration of circuits and systems concepts, forming a new set of conceptual cornerstones for electrical and computer engineering (ECE) students by focusing on three areas (health, energy, and environment), that are of national importance and provide students with relevant application arenas. The USF team includes Sylvia Thomas and Thomas Weller, professor and chair in the Department of Electrical Engineering.

National Science Foundation

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