



FACULTY RESEARCH TALKS

LISTEN. LEARN. COLLABORATE.

Zoom talk | Friday, June 3, 2022 | Noon to 1 p.m.



PRESENTER 1:

MICHAEL

GEORGIPOULOS

Pegasus Professor and Dean, College of Engineering and Computer Science

NSF S-STEM Programs: Flit-Path and Flit-GAP

The S-STEM program enables low-income students with academic ability, talent or potential to pursue successful careers in promising STEM fields. This talk will cover two NSF S-STEM, Track 3 (Inter-Institutional Consortia) projects: Flit-Path and Flit-GAP, awarded to lead institution Florida International University and partner institutions, University of Central Florida and University of South Florida. Flit-Path was awarded in 2016 and is in its first no-cost extension, while Flit-GAP was awarded in 2021 and is in its first year of implementation. Objectives, activities, metrics, and results will be shared for each project, in addition to what is needed to create a competitive Track 3, \$5M S-STEM proposal.

Dr. Georgiopoulos became the college's sixth dean in July 2013. He received his diploma in electrical engineering from National Technical University of Athens, and his MS and Ph.D. in electrical engineering from the University of Connecticut. His research expertise is in machine learning with special emphasis on neural network algorithms and related applications, Dr. Georgiopoulos has a strong affinity towards programs that enhance STEM student experiences and help them discover their professional pathway, including YES, Flit-Path and EXCEL, which improved STEM students' graduation rate by more than 50 percent.



PRESENTER 2:

NAVEEN ELURU

Professor, Civil, Environmental and Construction Engineering, FUTURe CITY Initiative

Role of Modern Micro-Economic Approaches for Analyzing Technology Adoption and Usage Behavior Patterns Recognition

While several studies employ machine-learning approaches for data analytics, there is scope for adoption of micro-economic theory-based models for analyzing data. This is particularly true for examining individual level data for technology adoption and usage pattern analysis. This talk will cover econometric formulations developed for different kinds of individual or personal variables (continuous, categorical and groups of variables). Example applications in the context of stated preference survey design, response to emerging technology and consumer purchase decisions of newer vehicles such as electric and autonomous vehicles will be discussed.

Dr. Eluru leads the Transportation Econometric Modelling Group at UCF. His research is geared towards the development of choice models that allow us to better understand the behavioral patterns involved in decision processes across domains. He has published more than 145 journal articles in interdisciplinary fields including transportation planning, transportation safety, land-use modeling, public health and environmental sciences. Dr. Eluru's research has received funding from the Federal Highway Administration, National Science Foundation, National Academies, Florida Department of Transportation, U.S. Department of Transportation and Canadian Institute of Health Research.



PRESENTER 3:

QUN ZHOU SUN

Assistant Professor, Electrical and Computer Engineering

NanoGrid Testbed: A Collaborative Project with OUC

UCF Smart Infrastructure Data Analytics Laboratory (SIDAL) has been collaborating with Orlando Utilities Commission (OUC) to develop a NanoGrid Testbed. Specifically, SIDAL is developing an Energy Management System (EMS) for the NanoGrid to achieve a high utilization level of solar power by incorporating different types of energy storage systems. The NanoGrid management system acts as a grid-edge computing device that models the characteristics of various components and switches between operating modes specified by system operators. This talk will also discuss some of the challenges and lessons learned.

Dr. Sun is the director of the UCF Smart Infrastructure Data Analytics Lab. Before joining UCF, Dr. Zhou worked for Genscape and GE Grid Solutions as a power system engineer. She received her Ph.D. in electrical engineering from Iowa State University. Dr. Zhou is devoted to improving energy efficiency and customer engagement through data analytics, probabilistic modeling and advanced pricing schemes. She focuses on grid-edge resources, including smart buildings, rooftop PVs, and batteries, and their interactions with the grid.