



UCF

# FACULTY RESEARCH TALKS

LISTEN. LEARN. COLLABORATE.

Zoom talk | Friday, March 8, 2024 | Noon to 1 p.m.



PRESENTER 1:

**PAUL SOHL**

Retired Rear Adm.,  
U.S. Navy  
CEO, Florida High  
Tech Corridor

## Leveraging the Florida High Tech Corridor Matching Grants Research Program for Industry-University Collaborations

The Florida High Tech Corridor Matching Grants Research Program can provide support for collaborative research projects between companies and university researchers. CEO Paul Sohl will discuss how to engage with the organization to build impactful industry collaborations, provide valuable training for your students and address critical needs in Florida's leading tech sectors.

The Florida High Tech Corridor is an organization serving a 23-county region anchored by three of the country's largest research institutions: the University of Central Florida, the University of South Florida and the University of Florida. Its mission is to converge and catalyze the capacity of high tech, innovation and bright minds to generate a global ripple effect that advances the lives of people in the communities it serves. Sohl joined the Florida High Tech Corridor in June 2020, following more than three decades of service in the U.S. Navy. He holds a bachelor's degree in aeronautical engineering from the Massachusetts Institute of Technology and a master's degree in aeronautical and astronautical engineering from Stanford University



PRESENTER 2:

**CUNEYT  
AKCORA**

Associate Professor  
Finance and  
Computer Science

## Topological Graph Machine Learning

Over the last couple of years, topological data analysis (TDA) has seen a growing interest from data scientists of diverse backgrounds. TDA is an emerging field at the interface of algebraic topology, statistics and computer science. The key rationale in TDA is that the observed data are sampled from some metric space and the underlying unknown geometric structure of this space is lost because of sampling. TDA recovers the lost underlying topology. Dr. Akcora aims to adapt TDA algorithms to work on networks and overcoming the scalability issues that arise while working on large networks. In this talk, he will outline three alternative approaches in applying persistent homology and TDA mapper based topological data analysis algorithms to blockchain networks.

He obtained his Ph.D. from the University of Insubria and conducted postdoctoral research at the University of Texas at Dallas. Previously, he was an assistant professor of computer science and statistics at the University of Manitoba. His research interests encompass data science in decentralized finance, large-scale graph analysis and complex networks, with applications spanning social, biological, IoT and blockchain networks. Dr. Akcora is a recipient of a Fulbright scholarship and has authored research papers published in esteemed conferences and journals, including IEEEtran, KDD, NeurIPS, VLDB, SDM, IJCAI and ICDE.