

UNIVERSITY OF SOUTH FLORIDA

Major Research Area Paper Presentation

From Hardware to Algorithms: Securing the Next Generation Machine Learning Applications

by
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For the Ph.D. degree in Computer Science Engineering

The costs of artificial intelligence (AI) and machine learning (ML) continue to rise. Energy costs of building complex models have driven innovations using alternative hardware platforms like field-programmable gate arrays (FPGAs) and tensor processing units (TPUs). As standard compute paradigms for AI/ML shift away from general purpose fabrics, so too has the discussion on security of these systems. Real life costs as a result of dangerous security threats have spurred research in adversarial machine learning towards securing these applications and their hardware platforms. In this talk, we discuss the security risks of deploying ML applications in the cloud and at the edge and present methods for securing ML applications from various cyberattacks, starting from the hardware abstraction layer, up to the ML algorithm itself.

Tuesday, December 15, 2021

11am-12pm

Online ([Microsoft Teams](#))

THE PUBLIC IS INVITED

Examining Committee

Robert Karam Ph.D., Major Professor

Srinivas Katkoochi Ph.D.

Mehran Mozaffari Kerman Ph.D.

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