

UTSA College of Business
Department of Management Science and Statistics
Research Seminar Series

September 14

“Cybersecurity Data Analytics: Problems, Recent Results, and Research Directions”

Shouhuai Xu

Department of Computer Science
The University of Texas at San Antonio

Abstract

Cybersecurity Data Analytics is one of the pillars underlying the Cybersecurity Dynamics framework, which is a systematic foundation for modeling, analyzing, and quantifying cybersecurity from a holistic perspective. The Cybersecurity Dynamics framework is multidisciplinary and interdisciplinary in nature because it cuts across many disciplines, including: Computer Science (including Security), Applied Mathematics (broadly defined, including Stochastic Processes, Dynamical Systems, Control Theory, Game Theory), Statistics, Data Science, Machine Learning, Artificial Intelligence, Statistical Physics, Complexity Science, Network Science, and Social Sciences. Statistics and Machine Learning are two underlying pillars of Cybersecurity Data Analytics.

In this talk, I will discuss the problems for Cybersecurity Data Analytics to solve, review the recent advancement in this field, and outline future research directions. Please refer to <http://www.cs.utsa.edu/~shxu/socs/index.html> for more information about this exciting research endeavor.