UCF DEPARTMENT OF COMPUTER SCIENCE

Fall 2017 Seminar Series

Reflections on Applying Mathematics to Solve Hard Software Problems

August 30th 2017

Time 2:00pm-3:00pm – HEC 450

This talk will trace the history of a branch of mathematics and how that mathematics is likely to be the key to verify software for safety and security. While mathematics is crucial, being able to apply it to real-world software with millions of lines of code poses a colossal engineering challenge. The talk will present examples of sophisticated malware, and a software verification study of the Linux kernel to illustrate our research on building a platform to apply mathematics to reason about large software.

Dr. Suresh C. Kothari

Iowa State University

Suresh Kothari is the Richardson Professor of Electrical and Computer Engineering (ECE) at Iowa State University (ISU). He has pioneered research on machine-enabled reasoning to solve complex problems of software productivity, security and safety. He served as a Principal Investigator (PI) for the US Defense Advanced Research Project Agency (DARPA) Automated Program Analysis for Cybersecurity (APAC) program, and a Co-PI for the DARPA Software Enabled Control (SEC) program. Currently he is a PI for the DARPA Space/Time Analysis for Cybersecurity (STAC) program.

EnSoft (http://www.ensoftcorp.com/), the company he founded in 2002, provides software productivity, safety, and security products and services worldwide to more than 330 organizations including all major avionics and automobile companies. He was awarded in 2012 the Iowa State Board of Regents Professor Award for excellence in research, teaching, and service. He has served as a Distinguished ACM Lecturer. He has given more than 120 invited talks at major conferences, government organizations, universities, and industry.

Hosted by: ***Dr. Gary Leavens***

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