

HACKING IN STYLE: USING PROGRAM ANALYSIS TOOLS FOR DETECTING VULNERABILITIES IN THE IOT ECOSYSTEM

MARCH 25, 2021

5:00-6:00PM EST



Dr. Tuba Yavuz,
Assistant Professor,
Department of Electrical and
Computer Engineering,
University of Florida

The interactive workshop will present some of the ethical hacking efforts within the Systems Reliability Lab (SysRel) at the Electrical and Computer Engineering (ECE) Department of University of Florida. In the first part of the workshop, Dr. Tuba Yavuz, the director of SysRel, will present various attack vectors in an IoT ecosystem and IoT security best practices that IoT users and developers should follow. In the second part, she will present the real-world vulnerabilities that have been detected by the tools developed by SysRel researchers. She will also share her interactions with the open-source community in reporting and patching those vulnerabilities. In the third part, she will present pedagogical examples of various types of vulnerabilities, and the participants will be provided with several hacking puzzles that they will solve in groups. The workshop will end with information for those who would like to participate in ethical hacking efforts including specific efforts on broadening participation of women and other underrepresented groups in cybersecurity and ethical hacking. This workshop is open to both undergraduate and graduate students at the University of Florida. It is recommended that the participants have taken some introductory programming course.

BIO:

Dr. Tuba Yavuz is an Assistant Professor within the Electrical and Computer Engineering (ECE) Department at the University of Florida (UF). She received her Ph.D. in Computer Science from the University of California, Santa Barbara in 2004. She is affiliated with the Warren B. Nelms Institute for the Connected World, the Florida Institute for CyberSecurity Research (FICS), and the CISE Department at UF. Her research experience spans formal methods, software engineering, and systems security. She teaches Advanced Systems Programming and Automated Hardware/Software Verification courses. She has found several vulnerabilities in the Linux Kernel and various open-source cryptographic libraries including ARM's mbedTLS using program analysis tools that have been developed within her research group. She has received an NSF CAREER Award in 2020.

Dr. Yavuz will discuss the topic “Hacking in Style: Using Program Analysis Tools for Detecting Vulnerabilities in the IoT Ecosystem” followed by Q&A with the students and faculty. More information at iot.institute.ufl.edu/events

Registration link: <https://forms.gle/f9t2G3xt83zWJygCA>

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