

The speaker will cover the following topics:

- The importance of software security.
- Contemporary approaches to software analysis.
- Intractability and challenges of software analysis.
- The need for intelligence amplifying (IA) tools for practical software analysis.
- Projected Control Graph as an example of necessary abstraction for IA tools to capture relevant program behaviors.
- Research directions based on experience on multi-million DARPA programs.

Bio:

Dr. Ahmed Tamrawi is a software security researcher, instructor, and a full-stack developer. He has extensive experience in program analysis to: (1) verify the safety and security of industrial software such as the Linux kernel, and (2) detect novel and sophisticated algorithmic complexity and side channel attacks in Java applications and malware in Android applications. Ahmed also has experience working on two high profile US Department of Defense DARPA programs: Automated Program Analysis for Cybersecurity (APAC) and Space/Time Analysis for Cybersecurity (STAC) programs.

Ahmed is currently a research scientist at EnSoft Corp. and an assistant professor at Birzeit University. He holds a PhD and MSc degrees in Computer Engineering from Iowa State University, and B.S in Computer Engineering from Yarmouk University.