## Department of Mathematics, Statistics and Computer Science COLLOQUIUM ANNOUNCEMENT

# Follow the Information: Illuminating Emerging Security Attacks and Applications

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### **Abstract**

Cyberspace is a constantly changing landscape. Not only security attacks have become more and more stealthy, but also a myriad of opaque security applications have emerged. Navigating the increasingly complex cyber threat landscape has become overwhelming. Thus, it is essential to profile and understand emerging security attacks and applications. In this talk, I will first present a novel approach and tool, FAROS, which illuminates in-memory injection attacks via provenance-based whole-system dynamic information flow tracking. Then, I will present a framework ProfileTract to enable behavior-based profiling for smart contracts, which could enhance users' understanding and control of contract behavior and assess performance and security implications. Finally, I will briefly discuss current ongoing research and future directions.

#### Bio

Xuetao Wei is a tenure-track assistant professor in the School of Information Technology at the University of Cincinnati. He received his Ph.D. in Computer Science from the University of California, Riverside. His research interests span the areas of cybersecurity, blockchain, and measurements. His current research is supported by federal and state agencies, including NSF, DARPA and Ohio Cyber Range. He particularly enjoys solving problems and developing innovative solutions based on the interdisciplinary perspective.