

# RFID Security & Privacy Tutorial

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Purveyors of Radio Frequency IDentification (RFID) technology conceive of a new world of automation and consumer convenience. Indeed, RFID surrounds us in many forms: supply chains, car keys, credit cards, subway fare passes, and even blood bags. Yet these new applications can result in unintentional privacy risks and security pitfalls. In this tutorial, participants will be introduced to the various technologies behind RFID. Participants will gain an understanding of applications of secure RFID systems; cryptographic attacks on deployed RFID security systems; and defenses to avoid security and privacy risks. Participants will also learn the basic radio properties of how RFID works and what are the semantic and computational limitations and benefits for various choices of RFID technology.



Who should attend: (1) Engineers and researchers looking for a technical background on academic and industrial aspects of RFID security and (2) tech savvy managers who seek to understand the risks and benefits of RFID technology. People who need to deploy an RFID system will learn about potential threats and pitfalls in RFID security and privacy. After completing this tutorial, participants will better understand how to quantify and reduce the security and privacy risks of deploying RFID-based systems.

**Bio:** Kevin Fu is an assistant professor in the Department of Computer Science at the University of Massachusetts Amherst. He serves as the director of the RFID Consortium on Security and Privacy (RFID-CUSP.org) and the co-director of the Medical Device Security Center ([secure-medicine.org](http://secure-medicine.org)). Prof. Fu investigates how to ensure security and privacy for pervasive devices that must defend against malicious parties. His contributions include the security and threat model analysis of several systems ranging from contactless “no swipe” credit cards and wireless medical devices to access-controlled Web sites and automated software updates. Prof. Fu’s research has led to improvements in security and privacy of pervasive devices, promoting the vision of safer and more effective technology for consumers. Prof. Fu received his Ph.D. in Electrical Engineering and Computer Science at the Massachusetts Institute of Technology. He has served on numerous program committees of prestigious conferences in computer security and cryptography, and has given dozens of invited talks world-wide to industry, government, and academia on the topic of security and privacy. His research has appeared in *The New York Times* and *The Wall Street Journal*. Kevin also holds a certificate of achievement in artisanal bread making from the French Culinary Institute.