

Fall 2016 Distinguished Speaker Series

SECURE AND SCALABLE ATTESTATION: ON BUILDING TRUST IN IOT SYSTEMS

FRIDAY October 21, 2016 • 2:00 PM – HEC 113

The emerging and much-touted Internet of Things (IoT) presents a variety of security and privacy challenges in a broad range of application domains, ranging from large-scale smart energy grids to smart vehicles, homes and personal wearable devices. Remote attestation is a service to establish trust in remote (IoT) devices that aims to ascertain the current state of potentially compromised remote devices.

In this talk we briefly survey the landscape of the recent research on security architectures and particularly scalable remote attestation schemes. We also discuss their effectiveness and related tradeoffs as well as future research challenges and directions.

DR. AHMAD-REZA SADEGHI

Center for Advance Security Research Darmstadt

Prof. Dr.-Ing. Ahmad-Reza Sadeghi is the head of the System Security Lab at the Center for Advance Security Research Darmstadt (CASED), Technische Universität Darmstadt. Since January 2012 he is the Director of Intel Collaborative Research Institute for Secure Computing (ICRI-SC) at TU Darmstadt, Germany.

He received his PhD in Computer Science with the focus on privacy protecting cryptographic protocols and systems from the University of Saarland in Saarbrücken, Germany. Prior to academia, he worked in Research and Development of Telecommunications enterprises, amongst others Ericson Telecommunications. He has been leading and involved in a variety of national and international research and development projects on design and implementation of Trustworthy Computing Platforms and Trusted Computing, Security Hardware, Physically Unclonable Functions (PUF), Cryptographic Privacy-Protecting Systems, and Cryptographic Compilers (in particular for secure computation). He has been continuously contributing to the IT security research community and serving as general or program chair as well as program committee member of many conferences and workshops in Information Security and Privacy, Trusted Computing and Applied Cryptography. He served on the editorial boards of the ACM Transactions on Information and System Security (TISSEC). Currently he is on the editorial board of ACM Books and acts as guest editor of the IEEE Transactions on Computer-Aided Design (Special Issue on Hardware Security and Trust).

Prof. Sadeghi has been awarded with the renowned German prize "Karl Heinz Beckurts" for his research on Trusted and Trustworthy Computing technology and its transfer to industrial practice. The award honors excellent scientific achievements with high impact on industrial innovations in Germany. Further, his group received the second prize of German IT Security Competition Award 2010.

Hosted by: Dr. Gary T. Leavens

