DEPARTMENT of INDUSTRIAL ENGINEERING
UNIVERSITY of HOUSTON

FRIDAY SEMINAR SERIES
BROADEN HORIZONS | EXTEND MINDS

DR. ARON LASZKA
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Date: Friday, Feb 23, 2018
Time: 1 - 1:50 pm
Location: D3 W122

Privacy-Preserving Energy Transactions (PETra): Providing Privacy, Safety, and Security in IoT-based Transactive Microgrids Using Blockchains

Abstract: Power grids are undergoing major changes due to rapid growth in renewable energy and improvements in battery technology. Prompted by the increasing complexity of power systems, decentralized IoT solutions are emerging, which arrange local communities into transactive microgrids. However, providing security, safety, and privacy in such energy systems is challenging. We introduce PETra, a blockchain-based solution for transactive microgrids that enables consumers to trade energy without sacrificing their privacy and provides safety and security for the grid.

Biography: Aron Laszka is an Assistant Professor in the Department of Computer Science at the University of Houston. His research interests broadly revolve around the security and resilience of cyber-physical systems and Internet of Things, the economics of cyber-security, and game-theoretic modeling of security problems. Previously, he was a Research Assistant Professor at Vanderbilt University from 2016 to 2017, and a Postdoctoral Scholar at the University of California, Berkeley from 2015 to 2016. He graduated summa cum laude with a Ph.D. in Computer Science from the Budapest University of Technology and Economics in 2014. In 2013, he was a Visiting Research Scholar at Pennsylvania State University.