**Title of Workshop:**

IEEE International Workshop on Cross-Layer Cyber-Physical Systems Security (CPSS)

**Date and Time:**

April 11, 1400—1830pm

**Brief description:**

The research of Cyber-Physical Systems (CPS) security addresses the security issues among close interactions and feedback loop between the embedded cyber components for computing and control and the dynamic physical components that involve mechanical components, human activities and surrounding environment. Example CPS systems include automotive and transportation systems, smart home, building and community, smart battery and energy systems, surveillance systems, cyber-physical biochip, and wearable devices. The purpose of this workshop is to bring together researchers from a broad community, presenting state-of-the-art security solutions crossing software and hardware layers towards trustworthy CPS development and to motivate new research topics and directions in this interdisciplinary area.

**Chairs/Organizers with Company and Country in parenthesis:**

Shiyan Hu (Michigan Technological University, USA)

Xin Li (Carnegie Mellon University, USA)

Yier Jin (University of Central Florida, USA)

Mark Tehranipoor (University of Florida, USA)

**Program Listing include times:**

|  |  |
| --- | --- |
| 14:00--14:20 | Opening remarks |
| 14:20–15:20 | **Keynote: A Mathematical Formulation for Optimal Load Shifting of Electricity Demand** |
|  | [*Yinyu Ye, Stanford University, USA*](http://www.ieee-cps.org/CPSS-2016/doc/bio_yinyu_ye.pdf) |
|  |  |
| 15:20–15:30 | Break |
|  |  |
| 15:30–16:00 | **Invited: TBD** |
|  | Mark Tehranipoor (University of Florida, USA) |
|  |  |
| 16:00–16:20 | **Leveraging Carbon Nanotube Technologies in Developing Physically Unclonable Function for Cyber-Physical System Authentication** |
|  | *Shiyan Hu (Michigan Technological University, USA)* |
|  |  |
| 16:20–16:40 | **Overview of Cyber-Physical Temperature Estimation in Smart Buildings: From Modeling to Measurements** |
|  | *Xin Li (Carnegie Mellon University, USA)* |
|  |  |
| 16:40–17:00 | **A Novel Algorithm for Secrecy Rate Analysis in Massive MIMO System with Target SINR Requirements** |
|  | *Danda Rawat (Georgia Southern University, USA)* |
|  |  |
| 17:00–17:20 | Break |
|  |  |
| 17:20–17:40 | **Emerging Challenges in Cyber-Physical Systems: A Balance of Performance, Correctness, and Security** |
|  | *Yier Jin (University of Central Florida, USA)* |
|  |  |
| 17:40–18:00 | **Security concerns for automotive communication and software architecture** |
|  | *Huafeng Yu (TOYOTA InfoTechnology Center, USA)* |
|  |  |
| 18:00–18:20 | **Spatiotemporal Risk-Averse Routing** |
|  | *Fernando Kuipers (Delft University of Technology, Netherlands*) |