Abstract: In the last decade, advances in embedded systems and communication networks have help us modernize our physical infrastructure systems like the power grid and transportation systems. These modern infrastructures are usually called cyber-physical systems (CPS) and they bring several advantages to society; however, these modern infrastructures are changing the way we interact with our environment and raising new security and privacy questions. In this talk we will discuss the new and fundamentally unique challenges for securing cyber-physical systems. We will discuss in particular our research on network security monitoring for industrial control networks, and some of the challenging problems for IoT privacy.

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