Progress in Designing Secure Critical Public Infrastructure

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Complex and critical public infrastructure includes systems for water treatment, water distribution, power generation and distribution, and private and mass transportation. Such systems share one design characteristic: they include a complex *cyber* component to control a complex *physical* component. The cyber component is a source of attraction for people with malicious intent; and the number of attempts and successes to cripple, disrupt, or damage critical infrastructure continues to increase.

In this talk I will provide an overview of progress made in iTrust towards the design of critical infrastructure that is highly resilient to cyber and physical attacks from outsiders and insiders.

Biography

Aditya Mathur is professor and head of the Information Systems Technology and Design pillar at the Singapore University of Technology and Design (SUTD). As the center director of iTrust, Aditya manages a fast growing group of researchers and infrastructure in cyber security. The center is focused sharply on the design of safe and secure cyber physical systems. This young and growing center now consists of about 70 research and admin staff and is home to some of the best realistic testbeds for research in designing resilient public infrastructure. Aditya's research contributions are in software testing, reliability, process control, and the design of secure public infrastructure.