

Special Session Proposal

Title:

Resilience of Cyber-Physical Systems (CPSs) to security attacks

Organizer(s):

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Motivation:

Cyber-Physical Systems (CPSs) feature a tight combination of (and coordination between) physical processes and cyber systems enabling innovative opportunities of command, control, and communication in a number of applications such as smart grids, autonomous vehicles, and intelligent robots. The existence of communication links has widened the attack surface (physical and cyber), and faults originating in either system may have potential, cascading effects on the other interdependent one. In this new and evolving scenario, risk assessment of CPSs faces new challenges and the convergence of safety and security concerns should be properly addressed, in particular during the CPS design that must be proven attack-resilient.

Objective:

The aim of this special session is to provide a forum for researchers and engineers to discuss how to develop condition monitoring, diagnostics, protection and mitigation strategies that can be implemented on CPSs to be safe and secure in presence of faults and attacks and increase their resilience to such threats.