



ESREL2020PSAM15

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CALL FOR ABSTRACTS

Special Session on

Fault-Tolerant and Attack-Resilient Cyber-Physical Systems (CPS)

Description: The welfare and security of modern societies rely on the safe and secure operation of CPS. The existence of communication links has widened the attack surface. This increases the range of possible problems that cannot be properly addressed, unless under a unified view of safety and security characteristics. This session is intended to include research papers focusing on the development of methodologies for detecting, preventing, and diagnosing faults and attacks that would pave the way together towards fault-tolerant attack-resilient CPS.

Motivation: CPS have growing real-world applications such as smart grids, autonomous vehicles, and intelligent robots. The CPS are usually complex due to the integrity of various physical and cyber agents taken from various engineering domains including mechanical, electrical, computer, industrial and control. This integration results in various challenges on the reliability design and modelling, condition monitoring, diagnostic, prognostics, and security analysis due to occurrence of faults and attacks. Hence, in order to maintain the safe and secure operation of CPS, the fault-tolerant and attack-resilient design is of paramount importance.

Objective: The aim of this special session is to provide a forum for researchers and engineers to discuss on how to develop condition monitoring, diagnostics and resilient control strategies that can be implemented on cyber-physical systems considering uncertainties, measurement noises, and finite online computation time of the control signal to behave safe and secure with an acceptable performance in the presence of faults/attacks.

Please submit your abstract by November 10, 2019

Please submit your abstract through the conference website, www.esrel2020-psam15.org/authors.html. In step 1 of the submission procedure, select “*Fault-Tolerant and Attack-Resilient Cyber-Physical Systems (CPS)*” as conference track. Please send a copy of the abstract by email to the special session organizers.

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