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# SS-15: Reliability, Risk and Resilience of Cyber-Physical Systems

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## Description

Cyber-physical systems (CPSs) integrate sensing, computation, control and connections of physical components to the Internet. They are permeating major industries. However, interdependency among components and systems exposes them to propagation of failures and (cyber) attacks. Therefore, CPS reliability, risk and resilience has received great attention from researchers, practitioners and policymakers.

This special session aims to offer a platform to researchers and practitioners for discussing advancements in the study, analysis and management of CPS reliability, risk and resilience. Emphasis will be placed on approaches to addressing the reliability, risk and resilience assessment problems in CPSs, such as smart grids, transportations networks, power networks, water networks, civil infrastructures.

## Topics of Interest

- CPS modelling
- Reliability analysis of CPSs
- Risk assessment of CPSs
- Resilience assessment of CPSs
- Multiple hazards modeling
- Cascading failures in interdependent CPSs
- Artificial intelligence for CPSs reliability, risk and resilience assessment
- Reliable and resilient optimal design of CPSs
- Optimization for CPSs reliability and resilience