THE 4TH IEEE INTERNATIONAL CONFERENCE ON INDUSTRIAL CYBER-PHYSICAL SYSTEMS
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Special Session on

"Resilient and Swarm Cooperative Control of Complex Cyber-Physical Systems"

Organized by

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Call for Papers

Cyber physical systems (CPSs) have found broad applications ranging from electric power, water, transportation, robots to various networked systems. The operation of CPS depends on the synergy of computational and physical components, situation awareness, and multiple subsystem cooperation. With the advances in real-time monitoring, control theory, wireless sensor-actuator networks, Internet of Everything, data-driven analytics, and machine-to-machine interfaces, the cooperation and swarm of CPSs, especially among different homogeneous and heterogeneous systems bring major challenges for exploring the adaptability of distributed network control system. This motivates development of new techniques to deal with issues such as communication, cooperation, info-exchanges, system degradation, fault and failure, human interaction, malicious attacks, just name a few. This special session aims to attract new techniques to enhance the CPS resilience by introducing diagnostic tools and distributed control methods to ensure the system security and safety under various operation conditions.

Topics of interest include, but are not limited to:

- Swarm cooperative control
- Fault tolerant control/ Prognostics and health management
- Security attacks and decision
- Robust control/formation control
- Networked control systems and human decision
- Model predictive control
- Multi-agent cooperative control and distributed optimization
- Cyber physical systems
- Distributed fault detection and information fusion
- Fixed/finite-time control

Accepted papers will be published in an IEEE proceedings volume and will be also submitted for the International Publication in *IEEE xplore*