



**The 27th IEEE International Symposium on Industrial Electronics
June 12 - June 15, 2018, Cairns, Australia**

**Special Session on
STABILITY ANALYSIS AND SECURITY CONTROL OF HYBRID NETWORKED SYSTEMS
organized and co-chaired by:**

**Associate Professor Wangli He
Professor Jian Sun
Professor Qing-Long Han**

**wanglihe@ecust.edu.cn
sunjian@bit.edu.cn
qhan@swin.edu.au**

Call for Papers

Most infrastructures are indeed hybrid systems in which heterogeneous subsystems coexist and interact with each other. The coordinated functioning of several infrastructures such as electric systems, power systems, transportation systems, fresh food distribution chains, Gas-ducts, oil pipelines lays the foundation of modern society. Identifying, understanding and protecting these critical infrastructures are crucial tasks to be pursued by the scientific community at both the academic and applied levels.

As complexity and interconnectedness increase, there is a higher risk of faulty operation in one or more components/subsystems of the overall systems. Also the systems are vulnerable to malicious attacks as the interdependencies of infrastructures will increase the risk of cascade failure and cyber attacks (e.g., DoS attacks, false data injection attacks and replay attacks etc.), which forces us to rethink the control problem in light of security concerns. There is an urgent need for control algorithms that can defend cyber attacks while completing control tasks.

This special session is to report recent developments on resilient consensus of multi-agent systems under malicious attacks. It is expected to develop effective control algorithms to defend cyber attacks. Topics of interest are included but not limited to:

- 1) DoS attack and defence scheduling
- 2) Multi-sensor fusion for attack detection
- 3) Secure control for networked control systems
- 4) Secure control for multi-agent systems under attacks
- 5) Distributed tracking control under malicious attacks
- 6) Distributed resilient event-triggered filtering
- 7) Distributed resilient event-triggered control
- 8) Resilient control under open network environments
- 9) Signals restriction and estimation under uncertain security attacks

Deadline for submission of special session papers

January 15, 2018

Notification of acceptance

March 1, 2018

Deadline for submission of final manuscripts

April 1, 2018

All the instructions for paper submission are included in the conference website: <http://www.ieee-isie2018.org>