



Sensor and Actuator Attacks of Cyber-Physical Systems

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Message from the Guest Editors

Cyber-physical systems (CPSs) monitor and regulate physical plants through advanced information technologies including computation, communication and control. With the construction of CPSs in power systems, aerospace, robotics and many other fields, human production and life have been greatly transformed. However, the integration of the information world and physical world brings new safety challenges in the sensor–controller–actuator process of CPSs. Different from traditional control systems, whose safety is mainly threatened by physical faults, CPSs will also compromise cyber-attacks. In particular, intelligent cyber-attacks can lead to more complex destruction under the guise of physical faults. From the viewpoint of control technologies, recent studies have presented many effective approaches to diagnose and attenuate the special faults and attacks in the sensor–controller–actuator process of CPSs. This Special Issue is expected to present advanced control technologies for dealing with more intelligent cyber-attacks, more complex physical faults and their coupling influences in CPSs.

