Special Issue

Sensor and Actuator Attacks of Cyber-Physical Systems

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.

Guest Editors

Prof. Dr. Guanghong Yang

Prof. Dr. Bin Jiang

Prof. Dr. Dan Ye

Dr. Anyang Lu

Deadline for manuscript submissions

closed (30 November 2023)

Actuators

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.3

mdpi.com/si/123999

Actuators
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
actuators@mdpi.com

mdpi.com/journal/actuators

Actuators

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.3

mdpi.com/journal/actuators

About the Journal

Message from the Editorial Board

We are just entering the Next Wave of Technology (NWT) where actuators will play the same role as the computer chip did for computers/social media approximately four decades ago. Just in the U.S., production of $1 trillion year of electromechanical systems (vehicles, orthotics, manufacturing cells, freight trains, aircraft, etc.) will be impacted by the NWT, all driven by actuators. Five key trends can be found for the future perspectives: “Performance to Reliability”, “Hard to Soft”, “Macro to Nano”, “Homo to Hetero” and “Single to Multi functional”. We invite papers that primarily impact these economic sectors; those illustrating basic scientific principles are also welcome.

Editors-in-Chief

Prof. Dr. Kenji Uchino
Emeritus Academy Institute, The Pennsylvania State University, University Park, PA 16802, USA

Prof. Dr. Norman M. Wereley
Department of Aerospace Engineering, University of Maryland, 3179J Martin Hall, College Park, MD 20742, USA

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within SCIE (Web of Science), Scopus, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Mechanical) / CiteScore - Q1 (Control and Optimization)

MDPI