# Special Issue

# Intelligent Control of Actuator Systems

### Message from the Guest Editors

Actuators are a key component of a cyberphysical system, which senses the real world environment, makes decisions using the sensed data, and then activates a response system. Actuators form a key element of the response system. Actuators rely on both feed forward and feedback systems, controlled via software, to make intelligent decisions. Such smart actuators are the cornerstone of Internet of Thing (IoT) devices found in smart devices. This Special Issue will be devoted to topics related to the use of artificial intelligence in the area of actuator technology. Such topics include but are not limited to:

- Use of machine learning techniques to improve decision making;
- Closed loop (feedback) control of actuators;
- Resource-aware actuator systems;
- Cognitive actuator systems;
- Latency and determinism topics related to sensor-actuator interactions;
- Energy efficient actuator systems;
- Security in actuator systems (centralized);
- Blockchain/DLT techniques for security in distributed actuator systems;
- Sensors and actuators for smart systems;
- Testbed architectures for testing smart actuators.

### Guest Editors

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### Deadline for manuscript submissions

closed (20 April 2022)

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# 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

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