

Special Session on Advanced Control Methods and Applications on Smart Materials-based Actuators and Sensors

Session Organizer

Changan Jiang

RIKEN-TRI Collaboration Center for Human-Interactive Robot Research

Email: c.a.jiang@nagoya.riken.jp

In recent years, many kinds of smart materials-based actuators and sensors have been widely applied into artificial muscle, biomimetics, micro pump, tactile display, vibration control device and so on instead of traditional motors. To present and discuss new trends in the design, control and application with the smart materials-based actuators and sensors, this special session is intended to focus on modeling for addressing properties of the actuators and sensors, advanced control methods for realizing good performance of the actuators and sensors, novel application with the actuators and sensors etc.

Session topics include but are not limited to:

- Modeling method
- Robust control
- Adaptive control
- Optimization control
- Variable structure control
- Robotics and Mechatronics
- Hybrid control
- Intelligent control
- Human interaction systems
- Biomimetics

and applications on smart materials-based actuators and sensors.