

**Special Session on**  
**Robot Environment Interaction**

**Organizers:**

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**Technical Outline of the Session and Topics:**

It is a well-known fact that traditional robotic systems fall-short when dealing with several problems we face today, e.g., meeting the requirements of fast changing and diversified demands of customers in the 4th revolution of industry and providing assistance to help older adults to independently fulfil daily activities in super mature societies. Compared to the traditional robots that can precisely perform predefined repetitive tasks, today's robots should be resilient and perform interactive tasks in unknown and dynamic environments, accomplishing by humans every day. To this end, several robotic systems and control techniques have been developed in the last decades. This special session aims to bring researchers together to discuss recent advances in the field of robot environment interaction. In particular, the special session will focus on, but is not limited to, the following topics of interest.

- Explicit and implicit force control
- Compliant and soft robotics
- Assistive robotics
- Medical and rehabilitation robotics
- Human-robot collaboration
- Physical robot-environment interaction
- Intelligent robotics

**IEEE IES Technical Committee Sponsoring the Special Session**

- Technical Committee on Sensors and Actuators
- Technical Committee on Motion Control