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Special Session on
Design and Control of Compliant Robots

Organized by

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Call for Papers

High precision position control and repeatability are the first priorities of many conventional robot applications, such as pick and place tasks in industrial robotics. Since the intrinsically robust mechanical structures of stiff and non-back-drivable robots improve the stability and performance of such tasks, “stiffer is better” rule of thumb has long been widely accepted in conventional robotics. However, today, physical interaction with an unknown and dynamic environment, possibly a human being, becomes a more dominant requirement for many robotic applications such as rehabilitation, humanoids and human-robot collaboration. To improve the stability, performance and safety of advanced robot applications, compliant robots have been received increasing attention in last decades. Motivated by this paradigm shift in robotics, we would like to organize a special session on “Design and Control of Compliant Robots” to gather researchers who focus on this problem and provide a site for discussion. In particular, the Special Session will focus on, but is not limited to, the following topics of interest.

- Compliant Actuators and Robots
- Rehabilitation Robots
- Humanoids
- Human Robot Collaboration
- Force and Admittance control
- Haptic Sensation
- Soft Robotics

- **IES Technical Committee Sponsoring the Special Session (if any):**
 - TC Motion Control, TC Sensor and Actuators