

# **IEEE AMC2018**

## **(THE 15TH INTERNATIONAL WORKSHOP ON ADVANCED MOTION CONTROL)**

**9 - 11 MARCH 2018, TOKYO, JAPAN**

**Special Session on**

### **Motion Control for Physical Human-robot Interaction**

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### **Call for Papers**

Physical human robot interaction (pHRI) has been considered an important technology for the future of robot applications. Control engineering plays a significant role for realization of safe physical human robot interaction. Haptics including haptic rendering has been leading this research field, but not it is extended to attract researchers with various backgrounds. Control engineers, robotics engineers as well as rehabilitation engineers. Moreover, actuator system itself is now re-designed to best perform force control, i.e., series elastic actuator, and servo brake.

Therefore, it can be said that research on physical human robot interaction is a multidisciplinary research topic, while it is also performance oriented research topic. Application can be extended to assisted industrial manipulation, collaborative robot, rehabilitation or medical applications. Motivated by this significance of pHRI, we would like to organize a special session on “Motion Control for Physical Human-robot Interaction” to gather researchers who focus on various aspects on physical human robot interaction in terms of control, and provide a site for discussion. In particular, the Special Session will focus on, but is not limited to, the following topics of interest.

- Force measurement/ estimation
- High performance force control
- Force control oriented actuator
- Force control of flexible robot joint
- Impedance control vs. position control
- Application of force/impedance control

- **IES Technical Committee Sponsoring the Special Session:**
  - TC on Sensors and Actuators
  - TC on Motion Control