

**4th IFToMM Symposium on
Mechanism Design for Robotics (MEDER 2018)
11-13 September 2018
University of Udine, Udine, Italy**

“Human-safe robots and mechanisms”

Robots are expected to provide various kinds of service directly to humans in human-robot coexisting environments, mainly for industrial and medical applications. From the view-point of human-robot interaction, safety is one of the most important issues to be considered.

Ideally, a service robot in direct contact with humans should be equipped with a device providing compliance to arms which greatly enhances safety.

This leads to the introduction of compliant actuation solutions, which can be classified into two main categories: Active Impedance or Passive Compliance (PC). The active compliance based approach suffers from relatively low bandwidth, because it involves a cumulative delay generated by the control loop components, in a response to fast collision. On the other hand, passive compliance is commonly composed of mechanical elements including springs to absorb the kinetic energy of the link in collision, given that an elastic joint is capable of decoupling the next link inertia from the base link.

Accordingly, this track aims at reporting on the latest research in the field by covering topics including, but not limited to:

- Safety related devices and applications
- Mechanism design for service applications
- Compliant mechanisms
- Service robots
- Rehabilitation devices
- Haptic interfaces
- Passive compliant mechanisms
- Adaptive control of compliant robots

The track is organized by:

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Authors of selected papers will be invited to submit a longer version of their work for publication in the ASME Journal of Mechanisms and Robotics.

