Special Session

Perception and Manipulation of Deformable Objects

Description/Scope

Deformable objects are very common in our everyday activities. Many types of objects such as fruits, vegetables, paper, clothes, cables, etc., deform as a result of force being applied. Manipulation of deformable objects is essential for most human activities and endeavors.
The robotic manipulation of soft and deformable objects is of paramount importance for the improvement of our quality of life.
This Special Session aims at discussing techniques and approaches used for the perception and manipulation of deformable objects.

Topics (but are not limited to)

- 2D and 3D-vision based perception of deformable objects and of deformation.
- Force and tactile-based measurement and perception of deformation.
- Manipulation of deformable objects with one or multiple rigid robot arms.
- Soft robotics arms and grippers for the manipulation and handling of deformable objects.
- Modeling of soft and deformable objects

Organizers

- Helder Araujo, University of Coimbra, Portugal
- Youcef Mezouar, Clermont Auvergne INP - Sigma Clermont, France
- Gonzalo Lopez-Nicolas, Universidad de Zaragoza, Spain
- Miguel Aranda, Universidad de Zaragoza, Spain
- Pablo Gil, Universidad de Alicante, Spain