

ADM 2023

INTERNATIONAL CONFERENCE

September 06th – 08th, 2023 – Florence (Italy)



UNIVERSITÀ DEGLI STUDI
DI NAPOLI FEDERICO II



Fraunhofer
IWU



CALL FOR PAPERS

SPECIAL SESSION “DESIGN FOR BIOINSPIRED AND SUSTAINABLE SOFT ROBOTICS”

Soft robotics refers to an emerging class of bioinspired robotic systems where purposefully induced compliant elements are embedded within their mechanical structure. This aspect guarantees enhanced capabilities with respect to traditional rigid robots, namely safe manipulation of delicate objects, remote access in constrained environments and intrinsic safety in human-robot and environment-robot interaction. Taking inspiration from biology and nature, soft robots have the unique potential of emulating their natural antitypes not only in terms of performance and capabilities, but also in terms of their ecological footprint. This special session is dedicated to design methods and tools for bioinspired and sustainable soft robots, considering the whole lifecycle from concept generation to robot usage in operation till its end of life and beyond. A particular attention is also dedicated to the application of soft robots in multiple areas as manufacturing, agri-food, healthcare, inspection and maintenance, service.

Main topics of interests:

- Design and prototyping of bioinspired and sustainable soft robots
- Design optimization of soft robots for sustainability
- Smart and flexible sensors for soft robotics
- Design, modeling and simulation of stiffening mechanisms
- Soft robotic grippers
- Soft articulated robots and soft continuum robots
- Tendon-driven and pneumatically actuated soft exoskeletons
- Soft robots at micro-scale
- Modeling and control of soft robots
- Human-soft robot interaction
- Smart and active materials
- Green aspects in the realization of smart and actuated textiles
- Actuation methodologies for augmented textiles

More details about the conference: <https://www.associazioneadm.it/ADM2023/>

SPECIAL SESSION CHAIRS

Stanislao Grazioso

University of Naples Federico II, Italy

stanislao.grazioso@unina.it

Giuseppe Di Gironimo

University of Naples Federico II, Italy

giuseppe.digironimo@unina.it

Antonio Lanzotti

University of Naples Federico II, Italy

antonio.lanzotti@unina.it