



Soft and Compliant Actuators and Their Robotic Applications

Guest Editors:

Dr. Amir Jafari

Department of Biomedical
Engineering, University of North
Texas, Discovery Park, 3940 N
Elm St, Denton, TX 76207, USA

Dr. Guangbo Hao

School of Engineering-Electrical
and Electronic Engineering,
University College Cork (Former
Queen's College Cork), Cork,
Ireland

Deadline for manuscript
submissions:

closed (31 May 2022)

Message from the Guest Editors

New trends in robotic applications demand physical human–robot interactions (pHRIs), the adaptability of the robotic platform to unknown and challenging environments, resilience against impacts and sudden changes, etc. These require substantial breakthroughs in the actuation aspect of robotic technology, where embedded compliance and softness are a plus if not a must. This Special Issue is intended to provide a forum for academic researchers and technical professionals to exchange their recent works on the design, development, and control of compliant and soft actuators.

Topics of interest include but are not limited to the following:

- active and passive impedance control
- variable stiffness actuators
- artificial muscles
- pneumatic soft actuators
- dielectric elastomer actuators
- soft actuators based on electroactive polymers (EAPs)
- thermo-active soft actuators
- hydraulic soft actuators
- electromagnetic soft actuators (ESAs)
- fluidic elastomer actuators (FEAs) and shape morphing polymers (SMPs).

