Special Issue

Modelling and Motion Control of Soft Robots

Message from the Guest Editors

Soft robots and devices exploit deformable materials that can change their shape to allow conformable physical contact for controlled manipulation. In this context, we are delighted to announce a new Special Issue, entitled “Modelling and Motion Control of Soft Robots”, which will address significant and emerging developments in the modelling and control of soft actuators and robots, and their applications. This Special Issue will collect a coherent ensemble of original and inspiring articles, communications, and reviews emphasizing the following topics:

- New modelling methodologies for soft actuators and robots;
- Dynamic modelling of soft robots;
- Modelling and analysis of soft robots;
- Control of soft actuators and robots;
- Motion control of soft robotic systems;
- AI in modelling and control of soft robots;
- Demonstrations and applications.

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Deadline for manuscript submissions

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About the Journal

Message from the Editorial Board

We are just entering the Next Wave of Technology (NWT) where actuators will play the same role as the computer chip did for computers/social media approximately four decades ago. Just in the U.S., production of $1 trillion year of electromechanical systems (vehicles, orthotics, manufacturing cells, freight trains, aircraft, etc.) will be impacted by the NWT, all driven by actuators. Five key trends can be found for the future perspectives: “Performance to Reliability”, “Hard to Soft”, “Macro to Nano”, “Homo to Hetero” and “Single to Multi functional”. We invite papers that primarily impact these economic sectors; those illustrating basic scientific principles are also welcome.

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