Special Issue

New Trends of 3D Printed Soft Robotics

Message from the Guest Editors

Soft robotics has gained enormous momentum in the last decade, addressing great challenges across multiple disciplines, including material science, all engineering disciplines including biomedical, computer science, and social sciences. Such grand challenges find potential solutions in extraordinary applications of soft robots where additive manufacturing (aka 3D printing) has created further possibilities to realize these technological means in various directions:

- Multi-material structures including grading material properties such as stiffness and texture,
- Monolithic robots,
- Bio-inspired robots,
- Conformal grippers and
- Wearable technologies including 3D printed sensors and actuators, stretchable electronics.

This Special Issue encourages the submission of contributions from all fields of soft robotics utilizing 3D printing in any stage of their development.

Guest Editors

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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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