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Design and Control of Self-Sensing Actuators for Soft Robotics

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Message from the Guest Editors

Soft robotics, with an intrinsic softness of body, allows for the design of multifunctional robotic components that enable adaptable and flexible behavior in varying and unpredictable environments. Traditional discrete component assembly approaches contrast with those of soft robotics, where soft monolithic systems commonly exploit imprecise and graded borders between functional modules. This approach not only tackles the associated fabrication challenges, such as the integration of dissimilar materials, but also paves the way to embed distributed computation to meet challenging control of multi-DOF soft materials while tracking their precise shape and position changes. Self-sensing actuators, as a new generation of multifunctional components, offer a flexible approach to the development of integrated actuators and sensors.

The objective of this joint Special Issue between the two journals *Sensors* and *Actuators* is to promote a deeper understanding of various approaches for the integration of sensors and actuators in soft robotics.



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Special Issue



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Message from the Editor-in-Chief

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