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Recent Advances in Sensors Application for Soft Robotics

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Message from the Guest Editor

Sensor technology, signal processing technology, and recognition technology are important to control soft robots. Different from rigid robots, soft robots are deformable and require not only state estimation in the work area, but also state estimation of the robot itself. Soft robots can be regarded as having infinite dimensional degrees of freedom. Additionally, several external forces can be applied to the robot while moving in contact with the environment. Therefore, state estimation is very difficult. External sensors such as cameras cannot observe hidden areas due to deformation and contact with the environment. Large deformation of their body requires flexibility in embedded internal sensors. For this reason, a wide variety of sensors for soft robots have recently been developed. Accordingly, applications using new sensor technologies for soft robots are also attracting attention. With these recent progress in sensor technologies, this Special Issue focuses on the latest sensor technologies and their application for soft robots.



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Special Issue



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