

Special Issue

Actuators for Climbing Robotics

Message from the Guest Editor

Climbing robotics has steadily gained interest over the years due to its potential of unlocking safe, efficient, and autonomous inspection and maintenance of dangerous and hard-to-reach spaces. Robots targeting these tasks have been traditionally multidimensional in terms of utilized adhesion and motion technologies, while being tailored to match specific application scenarios and environments. The motion and adhesion capabilities required for efficient handling of sensors and tools and the structural requirements posed by different environments spanning from aerospace to nuclear and underwater facilities have led to several actuation methods developed and evaluated on climbing robot designs. In this Special Issue, both theoretical and practical contributions are encouraged, covering all aspects related to the design, modeling and control of adhesion and locomotion actuators for climbing robots, as well as contributions in navigation, localization, and collaboration of climbing robot systems.

Comprehensive surveys on current technologies, industries and applications related to climbing robotics are also encouraged.

Guest Editor

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