Special Issue

Flexible Micromanipulators and Micromanipulation

Message from the Guest Editor

Micromanipulation is becoming essential in many applications such as micromechanics and medicine. In microsurgery, micromanipulation is employed to repair nerves and ligaments or manipulate cells and biological samples. Microgrippers and micromanipulators are MEMS-based devices fabricated using surface micromachining. These microsystems are required to grip and move micro-objects with precision and without causing damage. The movement capability comes from compliant structures that deform under the application of actuation forces. Depending on the application, micromanipulators are required to have a wide range of motion, the right stiffness to grasp an object without damaging it, and the ability to translate and orientate an object controlling one or more degrees of freedom of its end-effector. All these features are challenging and need advanced solutions in terms of design and manufacturing. Accordingly, this Special Issue seeks to collect research papers, short communications, and review articles that focus on novel planar and spatial compliant micromanipulators.

Guest Editor

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