



## Design and Application of Actuators with Multi-DOF Movement

Guest Editor:

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### Message from the Guest Editor

Dear Colleagues,

With the increasing demand of industrial automation and robots around the world for a multi-degree-of-freedom (DOF) motion mechanism, a motion mode for actuators has been developed from simple 1-DOF motion to a multi-DOF motion and application of humanoid is actively proceeding.

Along with recent advances in materials sciences, stretchable electronics, and mechatronics, the research and development of multi-DOF actuators is rapidly increasing. The reasons lie in their multifunctionality, low cost, fast response, high repeatability, and small size, making them a promising solution for the industrial automation and robots. Applications of multi-DOF actuators cover a wide range of fields such as robotics, joints and eyeballs of the humanoid, haptic device for an augmented reality system, camera modules, data storage devices, projectors, optics, optoelectronics, and medical and mechanical engineering, to name a few, which are expected to expand substantially in the years and decades ahead.

Prof. Dr. Chien-Sheng Liu

*Guest Editor*

