



Advances in High-Precision Magnetic Levitation Actuators

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Deadline for manuscript
submissions:

closed (15 April 2024)

Message from the Guest Editors

Dear Colleagues,

Magnetic levitation is widely used in various fields, including rail transit, bearings, motors, precision motion systems, microactuators, biomedicine, chemistry and materials science. Because there is no mechanical contact, magnetic levitation systems have the advantages of friction-free motion, multi-degree-of-freedom drive, vacuum compatibility, response speed, pollution-free operation, etc. Therefore, the drive and control of magnetic levitation systems have attracted extensive attention in the past decades.

The purpose of this Special Issue is to collect valuable theoretical, simulational and experimental results of novel structure designs, performance optimizations, multi-field coupling, function coupling or decoupling, and control issues of both the magnetic levitation and driver, as well as the relevant core components, prototypes, and case analysis research for practical applications such as magnetic levitation bearings, plane motors, magnetic levitation precision positioning, levitation microactuators, particle and cell manipulation, and magnetic robot drive.

