Special Issue

Advanced Actuators for Aerospace Systems

Message from the Guest Editor

This Special Issue is devoted to coverage of advanced actuators and their associated power delivery and control systems for aerospace vehicles, systems, and sub- and super-systems. This Special Issue will include both endoatmospheric and exoatmospheric actuator classes for vehicles as small as subscale munitions, microsats, and microdrones to jumbo jets and solar panel deployment mechanisms. Papers covering primary and secondary flight control, undercarriage extension, and retraction, as well as active flutter suppression, vibration mitigation, launch load accommodation, mission package deployment, and staging actuators are sought. Advanced approaches using pneumatics, electrostatics, electrohydrostatic, modern ultra-high-pressure hydraulics, rare-earth rotary and linear motors, shape-memory alloys, and piezoelectric and other classes of adaptive materials are of interest.

Guest Editor

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Deadline for manuscript submissions

closed (15 November 2022)

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About the Journal

Message from the Editorial Board

We are just entering the Next Wave of Technology (NWT) where actuators will play the same role as the computer chip did for computers/social media approximately four decades ago. Just in the U.S., production of $1 trillion year of electromechanical systems (vehicles, orthotics, manufacturing cells, freight trains, aircraft, etc.) will be impacted by the NWT, all driven by actuators. Five key trends can be found for the future perspectives: “Performance to Reliability”, “Hard to Soft”, “Macro to Nano”, “Homo to Hetero” and “Single to Multi functional”. We invite papers that primarily impact these economic sectors; those illustrating basic scientific principles are also welcome.

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