Special Issue

Recent Advances in the Design Solutions of Electro-Hydraulic Actuators for Mechatronic Systems

Message from the Guest Editors

We invite investigators to contribute their original research and review articles dealing with innovative design solutions and advances in electro-hydraulic actuators, developed and applied for standard mechatronic systems or leading to new horizons and fields of application. Potential topics include, but are not limited to:

- New design solutions useful for increasing the efficiency of the electro-hydraulic actuators;
- Study of the dynamic interaction between the actuator and connected mechatronic systems;
- Adoption of new materials and manufacturing technologies;
- New and innovative applications, broadening their use in different technical fields;
- Development and validation of lumped and distributed numerical models;
- Modeling and optimization;
- Innovative setups and sensors for experimental characterization;
- Condition monitoring and predictive maintenance

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Deadline for manuscript submissions

closed (31 March 2025)

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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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