Special Issue

Advances in Fluid Power Systems and Actuators

Message from the Guest Editors

The aim of this Special Issue on "Advances in Fluid Power Systems and Actuators" is to contribute to the current body of knowledge by sharing the latest developments in fluid power technology, that is, the transmission of forces and motions using a confined and pressurized fluid with its main overall merit of density power. This Special Issue includes a broad range of subjects, including the following:

- New methodologies for the analysis, modeling, simulation, and design of hydraulic and pneumatic components;
- Advanced configurations and design for hydrostatic pumps and motors;
- New configurations and design solutions for hydraulic valves and actuators;
- New experimental approaches and techniques in hydraulic and pneumatic components;
- Component sizing and manufacturing techniques in fluid power components;
- Advanced system configuration in mobile and industrial fluid power;
- Monitoring, fault detection, and life reliability in fluid power components;
- Hydraulic drives and actuators in powered prosthetics;
- Noise and vibration in hydraulic components and systems.

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Deadline for manuscript submissions

30 November 2025

Actuators

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.3

mdpi.com/si/230428

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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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