



Aerospace Mechanisms and Actuation

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Modern commercial transport aircraft relies on complex aerodynamic mechanisms and sophisticated flight control systems to achieve and maintain optimal flight performance at different flight regimes. The design of such complex systems typically starts from the kinematic synthesis of the mechanisms and the preliminary design of the actuation architecture in a multidisciplinary and multiobjective context involving aerodynamic, system, and structural design.

This Special Issue on “Aerospace Mechanisms and Actuation” aims to provide a premier international platform for a wide range of professions, including researchers, academicians, and industry experts to discuss the latest advances in aerospace mechanisms, spanning from rigid-body linkages to flexible compliant members, and major achievements in the related research on both discrete and distributed actuation architectures. Focus will also be given to the evolution of actuation in aerospace by including full electrical drives for safety-critical commercial and military aircraft, helicopters, and space applications.

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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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