actuators

an Open Access Journal by MDPI

IMPACT FACTOR 2.3

CITESCORE 4.3

Active Flow Control: Recent Advances in Fundamentals and Applications — Volume II

Guest Editors:

Dr. Feng Ren
School of Marine Science and Technology, Northwestern Polytechnical University, Xi'an 710072, China

Prof. Dr. Xin Wen
School of Mechanical Engineering, Shanghai Jiao Tong University, Shanghai 200240, China

Prof. Dr. Hui Tang
Department of Mechanical Engineering, The Hong Kong Polytechnic University, Hong Kong, China

Deadline for manuscript submissions:
closed (30 September 2024)

Message from the Guest Editors

Dear colleagues,

Active flow control (AFC) utilizes local active perturbations to induce global flow field changes that result in an improvement in net performance. For decades, it has been a vibrant research area with potential applications in a wide variety of problems of academic and industrial interest. Recent developments in actuation technologies and computational/experimental methods, along with the re-booming of machine learning techniques, have made it possible for AFC to be more efficient, robust, and intelligent. In 2021, we proposed a Special Issue to showcase and discuss new advances in AFC. Eleven excellent papers were collected that pushed the boundaries of this research area, both in fundamentals and in applications. Following its success, we would like to continue the efforts here by calling for a second volume of this Special Issue. The topics of interest include, but are not limited to, the following:

- Design and development of novel actuators for AFC;
- Theoretical/computational/experimental studies on AFC;
- New control strategies in AFC;
- Machine-learning-guided AFC;
- New AFC applications.

actuators

an Open Access Journal by MDPI

IMPACT FACTOR 2.3

CITESCORE 4.3

Editors-in-Chief

Prof. Dr. Kenji Uchino
Electrical Engineering, Emeritus Academy Institute, Pennsylvania State University, University Park, PA 16802, USA

Prof. Dr. Norman M. Wereley
Department of Aerospace Engineering, University of Maryland, 3179J Martin Hall, College Park, MD 20742, USA

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.
High Visibility: indexed within SCIE (Web of Science), Scopus, Inspec, and other databases.
Journal Rank: JCR - Q2 (Engineering, Mechanical) / CiteScore - Q1 (Control and Optimization)

Contact Us

Actuators Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/actuators
actuators@mdpi.com
𝕏@Actuators_MDPI