actuators

an Open Access Journal by MDPI

IMPACT FACTOR 2.3

CITESCORE 4.3

Shape Memory Alloys Actuators

Guest Editors:

Dr. Salvatore Ameduri
Italian Aerospace Research Centre, Capua, Italy

Dr. Antonio Concilio
Department of Adaptive Structures, Centro Italiano Ricerche Aerospaziali, 81043 Capua, Italy

Deadline for manuscript submissions:
closed (15 August 2020)

Message from the Guest Editors

Shape memory alloys (SMAs) is an emerging technology, which is increasingly being applied in different fields, from aerospace sector to automotive industry, and from biomedical field to civil engineering. SMAs' specific features make them suitable for actuation purposes. Their compactness and large energy and force density suit applications characterised by narrow available room that require as simple as possible actuation architectures, to minimise any transmission losses. Another important feature is the load bearing capability, which can cooperate with surrounding structure in absorbing external loads.

The present Special Issue aims at the current SMA applications in actuation field. Attention is paid to the development path, that is to say, the complex and often multidisciplinary process that starts from the requirements issued by specific problem (aerospace, biomedical, automotive, and civil engineering); continues with the generation of specifications for SMA actuation systems; arrives at the preliminary and advanced design of concepts; and finally, comes to the demonstration and validation, with a clear contextualisation of the achieved maturation level.

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