# Special Issue

# Design, Control, and Optimization of Powertrain for New Energy Vehicles

## Message from the Guest Editors

New energy vehicles (NEVs), including battery electric vehicles (BEVs), hybrid electric vehicles (HEVs), and fuel-cell electric vehicles (FCEVs), are the inevitable current trend of the automotive industry which aim to reduce carbon dioxide emissions and air pollution in cities. The powertrain, which includes energy storage systems, power machines, and transmission, has decisive influence on the dynamic and economic performance of these new energy vehicles. Systematic research into how to design, control, and optimize NEV powertrains is still crucial to improve their acceptance in the market. Therefore, it is necessary to explore the ideas, investigate the methodology and validate the technology related to designing, controlling, and optimizing NEV powertrains to improve their comprehensive performance. This Special Issue is aimed at providing an open platform to share the innovations, contributions and discussions surrounding the development of NEV powertrains.

## Guest Editors

Dr. Jinglai Wu

School of Mechanical Engineering, Huazhong University of Science and Technology, Wuhan, China

Prof. Dr. Jiageng Ruan

College of Mechanical and Energy Engineering, Beijing University of Technology, Beijing 100124, China

## Deadline for manuscript submissions

closed (31 May 2023)

**Actuators**

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.3

mdpi.com/si/117884

*Actuators*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
actuators@mdpi.com

mdpi.com/journal/actuators

# Actuators

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.3

mdpi.com/journal/actuators

# 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.

## Editors-in-Chief

Prof. Dr. Kenji Uchino
Emeritus Academy Institute, The 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

## 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)

MDPI