Special Issue

Advanced Vehicle Dynamics Identification, Control and Observer Methods for Autonomous, Electrified Vehicles

Message from the Guest Editors

Nowadays, the main focus of the automotive industry is on the development of fully automated, electrified vehicles. This task poses several challenges, which must be solved before launching the first self-driving vehicle. These challenges can be divided into three main groups:

- Identification of vehicle dynamics, which aims to provide a reliable model of the vehicle.
- Observer design, whose goal is to estimate the unmeasurable states of the vehicle and its battery system.
- Control design, which guarantees the stable and precise motion of the vehicle and maximizes the operation range of the battery system through the optimization of the velocity profile of the vehicle.

Although there are some solutions in the literature, these topics still have some open questions. The goal of this special issue is to provide a platform for research, which addresses one of the mentioned issues.

Guest Editors

Dr. Tamás Hegedűs

Systems and Control Laboratory, Institute for Computer Science and Control (SZTAKI), Eötvös Loránd Research Network (ELKH), H-1111 Budapest, Hungary

Dr. Daniel Fenyes

Systems and Control Laboratory, Institute for Computer Science and Control (SZTAKI), Eötvös Loránd Research Network (ELKH), H-1111 Budapest, Hungary

Deadline for manuscript submissions

closed (30 April 2025)



World Electric Vehicle Journal

an Open Access Journal Published by MDPI

Impact Factor 2.6 CiteScore 5.0



mdpi.com/si/177681

World Electric Vehicle Journal Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 wevi@mdbi.com

mdpi.com/journal/ wevj





World Electric Vehicle Journal

an Open Access Journal Published by MDPI

Impact Factor 2.6 CiteScore 5.0





About the Journal

Message from the Editor-in-Chief

The World Electric Vehicle Journal is the official journal of the World Electric Vehicle Association (WEVA) and its members the European Association for Electromobility (AVERE), the Electric Drive Transportation Association (EDTA), and the Electric Vehicle Association of Asia Pacific (EVAAP). Since its foundation in 2007, the journal has aimed to provide a publishing platform for the academic and industrial world to share the latest developments and knowledge about electric vehicles. If you are developing Electric, Plug-in Hybrid, Hybrid Electric, or Fuel Cell Vehicles, we cordially invite you to consider us as the place for you to publish your latest results and innovations.

Editor-in-Chief

Prof. Dr. Joeri Van Mierlo

MOBI–Electromobility Research Centre, Department of Electrical Engineering and Energy Technology, Faculty of Engineering Sciences, Vrije Universiteit Brussel, 1050 Brussel, Belgium

Author Benefits

High Visibility:

indexed within Scopus, ESCI (Web of Science), Ei Compendex, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Electrical and Electronic) / CiteScore - Q2 (Automotive Engineering)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 21 days after submission; acceptance to publication is undertaken in 3.8 days (median values for papers published in this journal in the second half of 2025).