Special Issue

Advances in Vehicle Dynamics

Message from the Guest Editors

Vehicle system dynamics is critical for understanding and optimizing the behavior of vehicles under diverse operating conditions. It ensures efficiency and reliability by enhancing stability, control, and crashworthiness while improving performance through refined handling, ride comfort, and fuel efficiency. This Special Issue explores experimental and theoretical challenges in the dynamics of diverse vehicles. The focus is on advancing technical insights into vehicle behavior through physical models and/or experimental validation. Topics of interest, including but not limited to:

- Dynamics of vehicle systems and subsystems.
- Vibration analysis and control in chassis and rotating components.
- Motion control, force distribution, and stabilization mechanisms.
- AI and machine learning for optimizing and predicting vehicle behavior.
- Smart vehicle technologies, including navigation and traffic systems.
- Advanced simulation tools, virtual prototyping, and digital twins.
- Safety systems such as collision avoidance and crash mitigation.
- Experimental methods for real-world vehicle dynamics validation.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Machines is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications.
Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided.
There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

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