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# Performance and Safety Enhancement Strategies in Vehicle Dynamics and Ground Contact

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Edited by

Flavio Farroni, Andrea Genovese and Aleksandr Sakhnevych

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# **Performance and Safety Enhancement Strategies in Vehicle Dynamics and Ground Contact**



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## About the Editors

**Flavio Farroni** is a Professor of Applied Mechanics at the University of Naples; founder and CEO of its spinoff, MegaRide; and works as an academic advisor in vehicle dynamics with several companies and racing teams. He works on the development of physical models for the optimization of performance in motorsports, in Drivers in the Loop systems and in digital mobility scenarios, cooperating within an international research network. During TireExpo2015, he received the “Young Scientist of the Year” award from MIT Technology Review, was among “Italian Innovators Under 35” of 2018, and as the start-up of MegaRide, won “Tire Technology of the Year” at the 2018 Tire Technology Conference.

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# Preface to "Performance and Safety Enhancement Strategies in Vehicle Dynamics and Ground Contact"

This book was created with the aim of collecting the latest and most interesting advances in the research domain the guest editors' scientific and technical activities are focused towards.

We hope that it serves as a useful contribution to the state-of-the-art developments in vehicle dynamics, which nowadays concern onboard controls and computational science, attracting experimental and in-simulation papers, focusing on both basic research and perspective applications for future mobility. This book's articles involve research, studies, and projects derived from vehicle dynamics and contact mechanics, with the outlook of embracing activities that aim to enhance vehicle performance in terms of handling, comfort, and adherence and to examine safety optimization in the emerging contexts of smart, connected, and autonomous driving.

Our work on the editing of the volume allowed us to get in touch with brilliant scientists and professionals from the automotive community, providing further value to this challenging research topic.

Our sincere thanks go to all of them for their contributions and to the MDPI Editorial Office, with particular reference to Ms. Shirley Wang, who provided continuous and extensive support.

**Flavio Farroni, Andrea Genovese, Aleksandr Sakhnevych**  
*Editors*