

HANDBOOK FOR THE AUTOMOTIVE INDUSTRY

(with Contribution of Dr. Andreas Laschet)

... Available @ CRC Press / Taylor & Francis

<http://www.crcpress.com/product/isbn/9780849333224>

Road and Off-Road Vehicle System Dynamics Handbook

Published:

January 6, 2014 by CRC Press (Hardback)

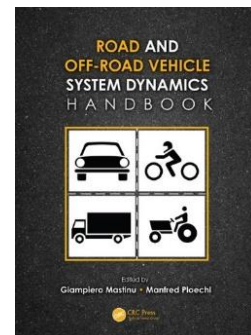
November 30, 2017 by Taylor & Francis (Paperback)

Content:

1708 Pages, 1283 Illustrations

Editor(s):

Giampiero Mastinu, Manfred Ploechl



Features ...

- Covers all major aspects of road vehicle dynamics, modeling, and performance analysis
- Offers up-to-date information for both beginners and experienced engineers
- Provides practical information that can be readily applied to real-world problems
- Includes contributions from world leaders in their respective expertise

Summary ...

Featuring contributions from leading experts, the **Road and Off-Road Vehicle System Dynamics Handbook** provides comprehensive, authoritative coverage of all the major issues involved in road vehicle dynamic behavior. While the focus is on automobiles, this book also highlights motorcycles, heavy commercial vehicles, and off-road vehicles.

The authors of the individual chapters, both from automotive industry and universities, address basic issues, but also include references to significant papers for further reading. Thus the handbook is devoted both to the beginner, wishing to acquire basic knowledge on a specific topic, and to the experienced engineer or scientist, wishing to have up-to-date information on a particular subject. It can also be used as a textbook for master courses at universities.

The handbook begins with a short history of road and off-road vehicle dynamics followed by detailed, state-of-the-art chapters on modeling, analysis and optimization in vehicle system dynamics, vehicle concepts and aerodynamics, pneumatic tires and contact wheel-road/off-road, modeling vehicle subsystems, vehicle dynamics and active safety, man-vehicle interaction, intelligent vehicle systems, and road accident reconstruction and passive safety.

- Provides extensive coverage of modeling, simulation, and analysis techniques
- Surveys all vehicle subsystems from a vehicle dynamics point of view
- Focuses on pneumatic tires and contact wheel-road/off-road
- Discusses intelligent vehicle systems technologies and active safety
- Considers safety factors and accident reconstruction procedures
- Includes chapters written by leading experts from all over the world

This text provides an applicable source of information for all people interested in a deeper understanding of road vehicle dynamics and related problems.

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Purchase Information ...

Hardback (2014)
£ 197.00

ISBN 9780849333224
Cat# 3322

Paperback (2017)
£ 75.00

ISBN 9781138075290
Cat# K34092

... also available as **eBook** for **£ 35.99**

Further Information ...

<http://www.crcpress.com/product/isbn/9780849333224>

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