

Springer

1st  
edition2015, XXVII, 224 p. 171  
illus., 16 illus. in color.**Printed book**

Hardcover

**Printed book**

Hardcover

ISBN 978-3-319-13232-7

\$ 169,99

Available

**Discount group**

Professional Books (2)

**Product category**

Monograph

**Other renditions**

Softcover

ISBN 978-3-319-35747-8

Engineering : Engineering Fluid Dynamics

Gołdasz, Janusz, Sapiński, Bogdan, BWI Group, Technical Center Kraków, Kraków, Poland

# Insight into Magnetorheological Shock Absorbers

- **Presents the magnetorheological fluid theory and its applications in automotive magnetorheological dampers**
- **Highlights common configurations of flow-mode magnetorheological shock absorbers, which are considered to be particularly interesting by the automotive industry for controlled chassis applications**
- **Offers a math-based analytical model of an exemplary MR fluid device, a flow-mode monotube damper, which is needed**

This book deals with magnetorheological fluid theory, modeling and applications of automotive magnetorheological dampers. On the theoretical side a review of MR fluid compositions and key factors affecting the characteristics of these fluids is followed by a description of existing applications in the area of vibration isolation and flow-mode shock absorbers in particular. As a majority of existing magnetorheological devices operates in a so-called flow mode a critical review is carried out in that regard. Specifically, the authors highlight common configurations of flow-mode magnetorheological shock absorbers, or so-called MR dampers that have been considered by the automotive industry for controlled chassis applications. The authors focus on single-tube dampers utilizing a piston assembly with one coil or multiple coils and at least one annular flow channel in the piston.

**Order online at [springer.com/booksellers](http://springer.com/booksellers)****Springer Nature Customer Service Center LLC**

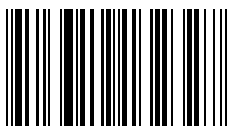
233 Spring Street

New York, NY 10013

USA

T: +1-800-SPRINGER NATURE

(777-4643) or 212-460-1500

[customerservice@springernature.com](mailto:customerservice@springernature.com)

ISBN 978-3-319-13232-7 / BIC: TGMF / SPRINGER NATURE: SCT15044

Prices and other details are subject to change without notice. All errors and omissions excepted. Americas: Tax will be added where applicable. Canadian residents please add PST, QST or GST. Please add \$5.00 for shipping one book and \$ 1.00 for each additional book. Outside the US and Canada add \$ 10.00 for first book, \$5.00 for each additional book. If an order cannot be fulfilled within 90 days, payment will be refunded upon request. Prices are payable in US currency or its equivalent.

Part of **SPRINGER NATURE**