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Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Introduction -- Mathematic and Kinematic Fundamentals -- Kinematics of Multibody Systems -- Equations of Motion for Complex Multibody Systems -- Kinematics and Dynamics of the Vehicle Body -- Modeling and Analysis of Suspension Systems -- Modeling of Road-Wheel Interactions -- Powertrain Modeling -- Applied Forces and Torques -- Single-Track Model -- Double-Track Model -- Three-Dimensional Vehicle Model -- Model of a Typical Complex Vehicle -- Selected Applications -- References.
Sommario/riassunto	The authors examine in detail the fundamentals and mathematical descriptions of the dynamics of automobiles. In this context different levels of complexity will be presented, starting with basic single-track models up to complex three-dimensional multi-body models. A

particular focus is on the process of establishing mathematical models on the basis of real cars and the validation of simulation results. The methods presented are explained in detail by means of selected application scenarios.

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