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Altri autori (Persone)	El-SayeghZeinab
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Nota di contenuto	On-Road Tire Mechanics -- Off-Road Terrain Characterization and Modelling -- Performance Characteristics of Off-Road Vehicles -- Road and Off-Road Neuro-Tire -- Road Vehicle Characteristics -- Multi-Wheeled Combat Vehicle Dynamics -- Logging Trucks Dynamics.
Sommario/riassunto	This book introduces and provides a detailed understanding of on- and off-road vehicle dynamics. It discusses classical on-road tyre mechanics, including finite element tyre modelling and validation, using a combination of theoretical and experimental data sets. Chapters explore new computational techniques that describe terrain models and combined to develop better off-road vehicle models, and focus is placed on terrain characterization and modelling, using two

popular modelling techniques, as well as performance characteristics of off-road vehicles - including rolling and driven combinations, traction, and steering. The effect of multi-pass and soil compaction on tyre performance is described as well. The book presents a unique neuro-tyre model for both on-road and off-road situations, capable of computing the steering, braking characteristics, and soil compaction. Road vehicle characteristics are described, including the stability and control, roll centre and roll axis, and rollover mechanics. The road vehicle braking performance is also described, including the brake components, choice of brake, and the transient load transfer. Finally, the dynamics and control of multi-wheel combat vehicles are presented and described extensively. The book is dedicated to undergraduate and graduate engineering students, in addition to researchers, and the automotive industry. As well as provide the readers with a better understanding of vehicle dynamics and soil mechanics. The book is also beneficial for automotive industries looking for a quick and reliable model to be implemented in their main software.