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Autore	Williams Daniel Eugene
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Nota di contenuto	Introduction -- Simple Suspension as a Linear Dynamic System -- The Quarter-Car Model -- The Pitch-Plane Model -- The Roll-Plane Model -- Active Suspension to Optimize Ride -- Handling Basics -- Reference Frames -- New Conventions -- Two-Axle Yaw-Plane Model -- Rear Axle Steering and Lanekeeping -- Two-Axle Vehicles that Roll -- Three-Axle Vehicle Dynamics -- Generalized Multiaxle Vehicle Dynamics -- Automated Vehicle Architecture from Vehicle Dynamics -- Afterword -- Index -- About the Author.
Sommario/riassunto	Author Daniel E. Williams, an industry professional with more 30 years of experience in chassis control systems from concept to launch, brings this experience and his unique approach to readers of Generalized

Vehicle Dynamics. This book makes use of nomenclature and conventions not used in other texts. This combination allows the derivation of complex vehicles that roll with multiple axles, any of which can be steered, to be directly predicted by manipulation of a generalized model. Similarly the ride characteristics of such a generalized vehicle are derived. This means the vehicle dynamic behavior of these vehicles can be directly written from the results derived in this work, and there is no need to start from Newton's Second Law to create such insight. Using new and non-standard conventions allows wider applicability to complex vehicles, including autonomous vehicles. Generalized Vehicle Dynamics is divided into two main sections-ride and handling-with roll considered in both. Each section concludes with a case study that applies the concepts presented in the preceding chapters to actual vehicles. Chapters include Simple Suspension as a Linear Dynamic System, The Quarter-Car Model, The Pitch Plane Model, The Roll Plane Mode, Active Suspension to Optimize Ride, Handling Basics, Reference Frames, New Conventions, Two-Axle Yaw Plane Model, Rear Axle Steering and Lanekeeping, Two-Axle Vehicles that Roll, Three-Axle Vehicle Dynamics, Generalized Multi-Axle Vehicle Dynamics and Automated Vehicle Architecture from Vehicle Dynamics.