

Vehicle Dynamics of Modern Passenger Cars

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=9999920520066&lokasi=lokal>

Abstrak

The book provides the essential features necessary to understand and apply the mathematical-mechanical characteristics and tools for vehicle dynamics including control mechanism. An introduction to passenger car modeling of different complexities provides the basics for the dynamical behavior and presents vehicle models later used for the application of control strategies. The presented modeling of the tire behavior, also for transient changes of the contact patch properties, shows the necessary mathematical descriptions used for the simulation of the vehicle dynamics. The introduction to control for cars and its extension to complex applications using e.g. observers and state estimators is a main part of the book. Finally the formulation of proper multibody codes for the simulation leads to the integration of all parts. Examples of simulations and corresponding test verifications show the profit of such a theoretical support for the investigation of the dynamics of passenger cars.