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Titolo	Robust Control and Linear Parameter Varying Approaches : Application to Vehicle Dynamics // edited by Olivier Sename, Peter Gaspar, József Bokor
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Part I Some background on LPV systems (modeling, identification control, observation) -- Part II LPV methods applied to road vehicles -- Part III Some cases of LPV methods for railway, aerospace and underwater applications.
Sommario/riassunto	Vehicles are complex systems (non-linear, multi-variable) where the abundance of embedded controllers should ensure better security. This book aims at emphasizing the interest and potential of Linear Parameter Varying methods within the framework of vehicle dynamics, e.g. · proposed control-oriented model, complex enough to handle some system non linearities but still simple for control or observer design, · take into account the adaptability of the vehicle's response to driving situations, to the driver request and/or to the road sollicitations, · manage interactions between various actuators to optimize the dynamic behavior of vehicles. This book results from the 32th International Summer School in Automatic that held in Grenoble, France, in September 2011, where recent methods

(based on robust control and LPV technics), then applied to the control of vehicle dynamics, have been presented. After some theoretical background and a view on some recent works on LPV approaches (for modelling, analysis, control, observation and diagnosis), the main emphasis is put on road vehicles but some illustrations are concerned with railway, aerospace and underwater vehicles. The main objective of the book is to demonstrate the value of this approach for controlling the dynamic behavior of vehicles. It presents, in a rm way, background and new results on LPV methods and their application to vehicle dynamics.
