



SEMI-ACTIVE SUSPENSIONS CONTROL

€ 200
+ IVA

PROFESSOR: Emanuele Guglielmino

DATE: Contact us for more info

DURATION: 3 hours

This training provides an overview of vehicle ride control employing smart semi-active damping systems (controlled dissipative elements which only require low energy input). In this context the term smart refers to the ability of these systems to tune the amount of damping in response to measured vehicle-ride and handling indicators.

Contents

The following issues will be discussed:

- ride comfort
- road holding
- road damage
- human body response to vibration

Two physically different dampers (magnetorheological and controlled friction) will be analysed by the perspectives of mechatronics and control. A multidisciplinary approach is adopted during the course and case studies are presented for on- and off-road vehicles. Finally a brief overview of semi-active damping technology will be presented concerning the field of seismic protection of buildings.

Course contents

- Semi-active suspension control book included
- Thanks to the Moodle platform, the course attendee will benefit from the following advantages: refer course material at any time, monitor the activities schedule conduct online tests, enjoy Q&A online discussions with other attendees and the teacher as well.
- At the end of the 3 hours course, a certificate of participation in the training activity will be issued.

About the Professor



Emanuele Guglielmino is graduated in Electrical Engineering of University of Genova and holds a PhD from the University of Bath (UK). In Westinghouse Brakes (UK) (2001-2204) he worked as R&D engineer on railway brakes controls (ABS for trains). He worked at General Electric (Florence, Italy) as Lead control engineer (2004-2007) on turbomachinery control systems design and as Proposal manager for gas turbines during 2008. From 2008 to 2012 he was Team Leader at the Italian Institute of Technology in the field of robotic actuation. In 2013 he founded Advanced Microturbines Srl, a company focusing on energy harvesting using microturbines. He is the author of Semi-active Suspensions book published by Springer, London and over 70 publications in the fields of semi-active suspensions, fluid power, mechatronics and robotics. For his work he won the ASME Best Paper Award (Fluid Power Systems and Technology Division) in 2001, and the Italian National Prize for Innovation in 2012.

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