

# Avviso di Seminario

## Vehicle Active Systems

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**Abstract:** Introduction of the presentation (and discussion) is aimed to the main principles of the control theory applied to road vehicles from the mechanical engineering point of view. The overview of basic control strategies is presented in relation to the requirements of vehicle design.

As practical examples, popular semiactive and active suspension control strategies are presented, along with the basic system of ABS control loop, including hydraulic and mechanical systems.

Autopilot example is used to present advanced approach to the control system.

At the conclusion, a general discussion on the topics of vehicle sensors and system linearization, especially in the field of vehicle dynamics, will be proposed.

#### **About the speaker:**

##### **Education:**

- 1994 Associated professor of Transportation Systems and Technology  
Thesis: Dynamic Simulation of Constrained Mechanical Systems in Vehicles
- 1989 Ph.D., Motor Vehicle Research Institute at the Czech Technical University, Prague  
Thesis title: Dynamic Analysis of Vehicle Mechanisms, Mainly of Axles
- 1980 MSc., Czech Technical University of Prague  
Faculty of Mechanical Engineering, specialization Applied Mechanics  
M.S. - diploma work: Optimization of the wheel suspension and steering mechanism

##### **Academic Experience:**

- 2017 - now Full Professor, University of West Bohemia, Faculty of Mechanical Engineering, RTI
- 1999 - 2016 Czech Technical University – Faculty of Transportation Sciences
- 1994 - 1999 Czech Technical University - Faculty of Mechanical Engineering
- 1980- 1993 Motor Vehicle Research Institute

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