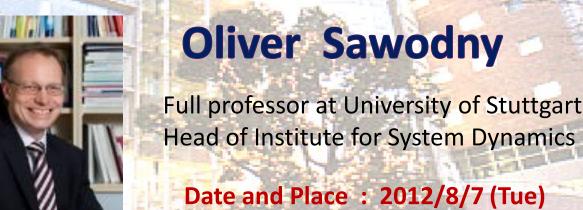
NL Seminar 2012

Modelbased Approaches for Control and Optimization Strategies in Automotive Engineering

16:30-18:00 (14-211)



## **Abstract:**

In the talk three different examples of model-based control design and optimization strategies are presented. At first a model based approach to design a control for a dual clutch gear box is presented. Dual clutch gear boxes are able to simulate the same functionalities than automatic transmission gear boxes without the losses of the torque converter. Secondly a cooperation project concerning to active vehicle suspension systems is presented, which include a predictive element to configure the spring-damper system of the vehicle suspension. Lastly, at the example of optimization based control of electric hybrids the approach by suitable model predictive control methods is presented.

## About the Speaker:

| F | 1986-1991  | Studying electrical engineering at University of Karlsruhe                      |
|---|------------|---|
|   | 1991-1995  | Second studies in economy at FernUniversität Hagen                              |
| I | 1996       | PhD degree at University of Ulm   |
|   | 1996-2001  | Assistant professor at department of measurement, control, and                  |
|   |            | microtechnology at university of Ulm  |
|   | 2002-2005  | Full professor at TU Ilmenau  |
|   | Since 2005 | Full professor at University of Stuttgart Head of Institute for System Dynamics |
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