学术报告会

时间：**2016年6月7日(周二)14:00**

地点：**电院群楼2-410会议室**

Multi-level Control of Large-Scale Systems with Applications to Road Networks

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Abstract:

In this presentation we present a multi-level, multi-agent approach for model-based predictive control for large-scale networks, with a focus on road traffic networks. We discuss the main challenges in model-based control of large-scale networks, the basic ingredients of distributed and multi-level model predictive control (MPC), and the main open issues. We in particular highlight several approaches that can be used to deal with computational complexity issues that arise in model-based control of large-scale traffic networks. Finally, we present a detailed description of a multi-level multi-agent MPC approach for large-scale traffic networks.

Biography:

Bart De Schutter received the MSc degree in Electrotechnical-Mechanical Engineering in 1991 and the PhD in Applied Sciences in 1996, both at the K.U.Leuven, Belgium. Next he was a senior research assistant at the ESAT-SISTA research group of the K.U.Leuven. In 1998 he transferred to the Control Systems Engineering group of Delft University of Technology, The Netherlands. In 2003 the control groups of Delft University of Technology merged into the Delft Center for Systems and Control (DCSC). Currently, Bart De Schutter is a full professor at Delft Center for Systems and Control (DCSC) department of Delft University of Technology. Bart De Schutter is associate editor for Automatica and senior editor for the IEEE Transactions on Intelligent Transportation Systems. He was also coordinator of the European FP7 STREP project Hierarchical and distributed model predictive control of large-scale complex systems (HD-MPC).