

MAGDEBURG LECTURES ON OPTIMIZATION AND CONTROL



MAGdeburg Lectures on Optimization and Control

Prof. Dr. Jacquelin Scherpen
University of Groningen

Optimal control, optimisation,
market mechanisms and physics of
smart energy systems

Di. 09.01.2018 17:00 MPI Großer Saal 'Prigogine'

Further information:
www.mpi-magdeburg.mpg.de

Jointly organized by: Faculty of Electrical Engineering and Information Technology
Faculty of Mathematics
Max Planck Institute Magdeburg
Center for Dynamic Systems: Biosystems Engineering

CDS FACULTY OF ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY
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09.01.2018 - **Optimal control, optimisation, market mechanisms and physics of smart energy systems**

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Time & Place

The presentation on January 23, 2018 will be given in the › Max Planck Institute Magdeburg (<http://www.mpi-magdeburg.mpg.de/>), Großer Seminarraum 'Prigogine' and starts at 5.00 p.m..

Abstract

In this talk I will first give a combined distributed, hierarchical optimal control perspective using dual decomposition and pricing mechanisms for smart energy systems, and in particular for household prosumers (consumers and producers). In this setup a possible future (EU) market structure is taken into account. Furthermore, I will take a second perspective from the physics, where stabilisation is important,

and optimisation is done on the welfare function. Some questions about the coupling of these two perspectives are raised.