


CPG Center for Power Generation

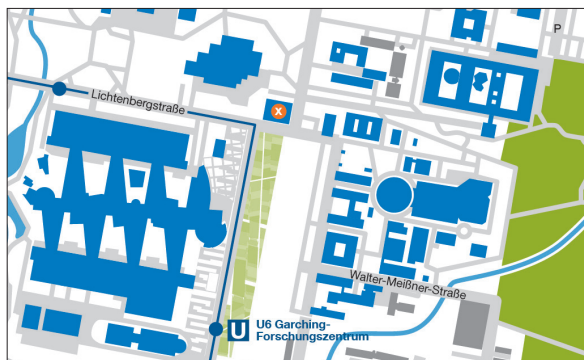
NRG Network for Renewable Energy

 Science Center for Electromobility

ENPB Centre for Energy Efficient and Sustainable Design and Building

MSE

TUM



IAS - Institute for Advanced Studies,
Lichtenbergstr. 2a, 85748 Garching

Organizer:

MSE - Munich School of Engineering
Boltzmannstr. 17
85748 Garching

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Registration: <http://www.mse.tum.de>

Energy Challenges Germany 2050

2nd Colloquium of the Munich School of Engineering

28.06.2012
8.00 am to 9.00 pm

Free Online Registration until 17.06.2012



Oriented towards the “grand challenges”, the strategy of the Technische Universität München (TUM) is characterized by increasing its strengths with transdisciplinary research programs. One response of the TUM to the changing political landscape, most notably the decision of the German government to initiate the transformation of the energy system by 2050, was to join forces through the Munich School of Engineering (MSE). With its comprehensive cross-faculty research project TUM.Energy the MSE generates an amplified impact on research in the field of sustainable energy supply.

The first colloquium of the MSE, held in 2011, illustrated the wide thematic range of research activities at TUM in the field of sustainable energy supply. The focus of this second colloquium is to outline the transdisciplinary research potential at the TUM with regard to the innovations necessary for achieving the goals set by political decision makers. Natural scientists and engineers at the TUM will highlight their research output ranging from fundamental to application-oriented science.

I would like to invite you to join this MSE colloquium and participate in an exciting and interdisciplinary dialogue fostering new partnerships between researchers from the TUM and industry.

Thomas Hofmann
Vice President

8.00 - 9.00 am

Registration

9.00 - 9.15 am

Opening

Thomas Hofmann, VP Research & Entrepreneurship TUM

9.15 - 9.45 am

Keynote Speaker

Paul van Son, CEO Dii GmbH

9.45 - 11.00 am

Session Chair: Hartmut Spliethoff, CPG MSE

Future Power Plant Requirements

Christian Schuhbauer, Institute for Energy Systems

A Long-term Power Market Model

Matthias Silbernagl, Chair of Applied Geometry and Discrete Mathematics

Solid Fuel Gasification an Old Technology with Modern Challenges

Federico Botteghi, Institute for Energy Systems

11.00 - 11.45 am

Poster Presentation/Coffee Break

11.45 - 1.00 pm

Session Chair: Müller-Buschbaum, NRG MSE

In-operando Neutron Studies on Li-Ion-batteries

Anatoliy Senyshyn, Neutron Research Source
Heinz Maier-Leibnitz (FRM-II)

Direct Carbon Fuel Cell

Michael Werhahn, Institute of Interfaces and Energy Conversion

Dye Sensitized and Hybrid Photovoltaics

Monika Rawolle, Chair of Functional Materials

1.00 - 2.30 pm

Poster Presentation/Lunch Break

2.30 - 3.45 pm

Session Chair: Markus Lienkamp, WZE MSE

Harvesting Solar Energy: DFT Studies of Organic Photovoltaics and Photo-catalytic Water Splitting

Harald Oberhofer, Institute of Theoretical Chemistry

Game Theory Approach for Interactive Wind Farm Control

Arman Kiani, Institute of Automatic Control Engineering

Smart Wind Turbine Rotor Blades

Liuz da Rocha-Schmidt, Institute of Lightweight Structures

3.45 - 4.30 pm

Poster Presentation/Coffee Break

4.30 - 5.45 pm

Session Chair: Werner Lang, ENPB MSE

Early Building Design: Heating and Cooling Plant Approach the Architect

Milica Grahovac, Institute of Energy Economics and Application Technology

System Modeling for Energy-efficient and CO₂-absorbing Building Design and City Planning

Philipp Geyer, Institute of Energy Efficient and Sustainable Design and Building

Smart Grid Demonstrator of a Future Office Prosumer

Denis Bytschkow, fortiss – Affiliated Institute to TUM

5.45 - 6.00 pm

Summary of the Day

6.00 - 6.45 pm

Keynote Speaker

Daniel Hofmann, Energy Sector Siemens AG

6.45 - 9.00 pm

Poster Award/Colloquium Dinner