

## 2nd International Symposium on Energy System Optimization

### Program Overview (*Preliminary*)

Day 1

10th of October, 2018

10:00 Opening & welcome coffee

10:30 Keynote:

**Modelling societal and governance drivers within an techno-economic energy systems context**

*Professor Neil Strachan, Director of the University College London UCL Energy Institute*

**1st Session: Planning and operation of distribution grids**

11:30 **Cost optimal design of ZENs energy system**

*Dimitri Pinel, NTNU Trondheim*

12:00 **Dimensioning of battery storage as temporary equipment during grid reinforcement caused by electric vehicles**

*Lukas Held, Karlsruhe Institute of Technology (IHK)*

12:30 Lunch break & networking

**2nd Session: Demand response**

13:30 **A discussion of mixed integer linear programming models of thermostatic loads in demand response**

*Carlos Henggeler Antunes, University of Coimbra*

14:00 **Modelling interactions between market power and demand response**

*Mel Devine, University College Dublin*

14:30 **Weighted fair queuing as a scheduling algorithm for deferrable loads in smart grids improving distress distribution over a greedy strategy**

*Tuncer Haslak, FAU Erlangen*

15:00 Coffee break

**3rd Session: Optimal power flow 1**

15:30 **Policy optimization for optimal power flow under uncertainty**

*Tillmann Mühlfordt, Karlsruhe Institute of Technology (IAI)*

16:00 **Distributed optimal power flow – feasibility vs. optimality**

*Alexander Engelman, Karlsruhe Institute of Technology (IAI)*

16:30 **ADMM based decoupling techniques for unit commitment problems considering grid restrictions**

*Viktor Seldnev, Karlsruhe Institute of Technology (IIP)*

17:00 End of the first conference day

18:30 Dinner & networking

<b>4th Session: Energy system integration</b>
<b>08:30 A green copper concept: on the design of a full-renewable energy supply for its production</b> <i>Simón Moreno Leiva, Stuttgart University</i>
<b>09:00 Effects of power changes on the gas network / Optimal control of coupled power and gas networks</b> <i>Eike Fokken, Mannheim University</i>
<b>09:30 Coffee break</b>
<b>10:00 Keynote:</b> <b>Modelling challenges for energy systems integration – the good, the bad and the ugly</b> <i>Mark O'Malley, Chief Scientist, Energy Systems Integration and Senior Research Fellow at the National Renewable Energy Laboratory, USA.</i>
<b>5th Session: Optimal power flow 2 (AC/DC)</b>
<b>11:00 Security analysis for embedded HVDC in transmission grids</b> <i>Susanne Schmitt, ABB Ladenburg</i>
<b>11:30 Decentralized optimal power flow in hybrid AC-DC grids</b> <i>Nico Meyer-Hübner, Karlsruhe Institute of Technology (IHK)</i>
<b>12:00 Lunch break &amp; networking</b>
<b>13:00 Panel discussion</b> <b>Bridging the gap between mathematical modelling and policy support</b>
<b>14:00 Coffee break</b>
<b>6th Session: Transmission and generation expansion</b>
<b>14:30 The cost-benefit of transmission expansion in a sector-coupled, highly-renewable European energy scenario</b> <i>Tom Brown, Karlsruhe Institute of Technology (IHK)</i>
<b>15:00 The performance of planning reserve constraints to deal with demand uncertainty in long-term planning models</b> <i>Tim Mertens, KU Leuven</i>
<b>15:30 Generation and transmission expansion in Uganda: The cost of minimising sub-national energy inequalities</b> <i>Philipp Andrew Trotter, University of Bath</i>
<b>16:00 Summary &amp; closing</b>