

2ND CONFERENCE ON MATHEMATICS OF GAS TRANSPORT

10-11th
OCTOBER
2018

2nd Conference Mathematics of Gas Transport October 10th to 11th, 2018

The Science Day

- 09:00h-09:45h Alfredo Bermúdez (Univ. of Santiago de Compostela & ITMATI, Spain),
Numerical Methods for Transient Simulation of Gas Networks
- 09:45h-10:10h Johannes Thürauf (Energie Campus Nürnberg),
Robust Optimal Discrete Arc Sizing for Tree-Shaped Potential Networks
- 10:10h-10:35h Max Klimm (HU Berlin),
A Homotopy Method to Compute Equilibrium Flows Parametrized by the Flow Value
- 10:35h-10:55h **Coffee break**
- 10:55h-11:20h Johann Schmitt (TU Darmstadt)
Optimal Control of Hyperbolic Balance Laws With State Constraints
- 11:20h-11:45h Holger Heitsch (WIAS Berlin),
A Probabilistic Approach to Optimization in Gas Transport
- 11:45h-12:30h Falk Hante (FAU Erlangen-Nürnberg),
Hybrid System Theory for Gas Network Optimization
- 12:30h-13:50h **Lunch**
- 13:50h-14:35h Pia Domschke (TU Darmstadt),
Error-controlled Adaptive Simulation of Large Gas Networks
- 14:35h-15:00h Sara Grundel (Uni Magdeburg),
Model Order Reduction on Network Systems - Efficient Simulation of the Transient Gas Network
- 15:00h-15:25h Verleihung Masterpreis an Jan Lammel (Uni KL), Modeling, Numerical Simulation and
Parameter Estimation in Heat Flux Differential Scanning Calorimetry Arno Seidel (FAU),
Sequenzielle Aktionssteuerung der Wärmeleitungsgleichung
- 15:25h-16:25h **Coffee break**
- 16:25h-16:50h Christoph Huck (HU Berlin),
Perturbation Analysis and Numerical Discretisation of Hyperbolic Partial Differential
Algebraic Equations Describing Flow Networks
- 16:50h-17:15h Martin Schmidt (FAU Erlangen-Nürnberg, Uni Trier),
A Multilevel Model of the European Entry-Exit Gas Market
- 17:15h-18:00h Ruth Misener (Imperial College London),
The Pooling Problem With a View Towards Gas Transport
- 18:30h **Reception**

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The Industrial Day

- 09:00h-09:20h Ludger Sax
Grid- and Grid Control Optimization in Europe
- 09:20h-10:00h Jarig Steringa
A Linear Approach to Gas and Electricity Coupling on a National Scale
- 10:00h-10:45h **Coffee break**
- 10:45h-11:25h Paul Lysakowski
Optimization of European Gas Transport - Physical Transport and Network Instruments
- 11:25h-12:05h Inci Yüksel-Ergün
Plan4res - Synergistic Approach of Multi-Energy Models for a European Optimal Energy System Management Tool
- Lunch Break**
- 13:30h-14:10h Milena Petkovic
Mathematical Programming for Forecasting Supplies and Demands in Gas Networks
- 14:10h-14:50h Uwe Gotzes
Escaping the Gigantic Gorge Or: How to Build the First Dispatcher Navigation system
- 14:50h-15:30h **Coffee break**
- 15:30h Thorsten Koch, Alexander Martin
Closing Session
- 16:00 **Reception**

