

## MOG26

### Mathematics of Networks with Physical Transport

May 20-21, 2026  
Novotel Nürnberg Centre  
Bahnhofstr. 12, 90402 Nürnberg

#### Wednesday, 20 May 2026

08:30 – 09.00	Registration
09:00 – 09:15	Opening
09:15 – 09:45	<b>Lorenz Biegler</b> (Carnegie Mellon University, Pittsburgh, USA) <i>Dynamic Real-Time Optimization for Gas Pipeline Networks with Stability and Robustness Guarantees</i>
09:45 – 10:15	<b>Stefan Ulbrich</b> (TU Darmstadt) <i>Global solution techniques for mixed-integer optimization of stationary gas networks involving ODE models and gas mixing</i>
10:15– 10:45	<b>Christoph Buchheim</b> (Technische Universität Dortmund) <i>Combinatorial optimization in function space</i>
10:45 – 11:15	<u>Coffee break</u>
11:15 – 11:45	<b>Nora Philippi</b> (PSI Software SE, Berlin) <i>Power system online monitoring and stability assessment based on measurement data in the control system environment</i>
11.45 – 12:15	<b>Wim van Ackooij</b> (Électricité de France EDF, Paris, France) <i>Accounting for network structures and uncertainty in cascading reservoir management and distribution networks</i>
12:15 – 12:45	<b>Felix Hennings</b> (Doing the Math, Netherlands), <b>Uwe Gotzes</b> (Open Grid Europe) <i>Finding feasible gas network controls that also satisfy human experts</i>
12:45 – 13:45	<u>Lunch break</u>
13:45 – 14:15	<b>Daniela Bernhard</b> (Friedrich-Alexander Universität Erlangen-Nürnberg) <i>Branch-and-cut for mixed-integer robust chance-constrained optimization</i>
14:15 – 14:45	<b>Michael Schuster</b> (Friedrich-Alexander Universität Erlangen-Nürnberg) <i>Probabilistic Robustness for Compressor Controls in Transient Pipeline Networks</i>
14:45– 15:15	<b>Line Roald</b> (University of Wisconsin-Madison, USA) <i>Minimizing carbon emissions from electricity consumption: A consumer perspective (via Zoom)</i>
15:15 – 15:45	<u>Coffee break</u>
15:45 – 17:15	Poster blitz & Poster Session
19:00	<u>Conference Dinner</u> (Restaurant im Literaturhaus, Luitpoldstr. 6, Nürnberg)

## Thursday, 21 May 2026

- 09:00 – 09:30      **Laura Vargas Koch** (RWTH Aachen University)  
*Nash Flows Over Time*
- 09:30 – 10:00     **Svenja Griesbach** (RWTH Aachen)  
*Carbon Pricing in Traffic Networks*
- 10:00– 10:30     **Tobias Harks** (Universität Passau)  
*Pricing in Resource Allocation Games*
- 10:30 – 11:00     Coffee break
- 11:00 – 11:30     **Nicola de Nitti** (Università di Pisa, Italy)  
*Feedback stabilization of entropy solutions to the  $p$ -system at a junction*
- 11.30 – 12:00     **Martin Stoll** (Technische Universität Chemnitz)  
*Physics-Informed DeepONets for drift-diffusion on metric graphs:  
Simulation and parameter identification*
- 12:00 – 12:30     **Lavinia Ghilardi** (Imperial College London, GB)  
*Optimal operation of gas networks: the Italian case study*
- 12:30 – 13:30     Lunch break
- 13:30 – 14:00     **Raul Borsche** (RPTU Kaiserslautern-Landau)  
*Kinetic Models on Networks*
- 14:00 – 14:30     **Andreas Rupp** (Saarland University, Saarbrücken)  
*Partial differential equations in hypergraphs and networks of surfaces*
- 14:30– 15:00     **Nicole Marheineke** (Universität Trier)  
*Structure-preserving approximations for nonlinear flow problems on  
networks*
- 15:00 – 15:10     Closing session
- 15:10                Snacks