

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	Lorenz Biegler (Carnegie Mellon University, Pittsburgh, USA) <i>Dynamic Real-Time Optimization for Gas Pipeline Networks with Stability and Robustness Guarantees</i>
09:45 – 10:15	Stefan Ulbrich (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	Christoph Buchheim (Technische Universität Dortmund) <i>Combinatorial optimization in function space</i>
10:45 – 11:15	<u>Coffee break</u>
11.15 – 12:00	Wim van Ackooij (Électricité de France EDF, Paris, France) <i>Accounting for network structures and uncertainty in cascading reservoir management and distribution networks</i>
12:00 – 12:45	Felix Hennings (Doing the Math, Netherlands), Uwe Gotzes (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	Daniela Bernhard (Friedrich-Alexander Universität Erlangen-Nürnberg) <i>Branch-and-cut for mixed-integer robust chance-constrained optimization</i>
14:15 – 14:45	Michael Schuster (Friedrich-Alexander Universität Erlangen-Nürnberg) <i>Probabilistic Robustness for Compressor Controls in Transient Pipeline Networks</i>
14:45– 15:15	Line Roald (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) <i>Nash Flows Over Time</i>
09:30 – 10:00	Svenja Griesbach (RWTH Aachen) <i>Carbon Pricing in Traffic Networks</i>
10:00– 10:30	Tobias Harks (Universität Passau) <i>Pricing in Resource Allocation Games</i>
10:30 – 11:00	<u>Coffee break</u>
11:00 – 11:30	Nicola de Nitti (Università di Pisa, Italy) <i>Feedback stabilization of entropy solutions to the p-system at a junction</i>
11.30 – 12:00	Martin Stoll (Technische Universität Chemnitz) <i>Physics-Informed DeepONets for drift-diffusion on metric graphs: Simulation and parameter identification</i>
12:00 – 12:30	Lavinia Ghilardi (Imperial College London, GB) <i>Optimal operation of gas networks: the Italian case study</i>
12:30 – 13:30	<u>Lunch break</u>
13:30 – 14:00	Raul Borsche (RPTU Kaiserslautern-Landau) <i>Kinetic Models on Networks</i>
14:00 – 14:30	Andreas Rupp (Saarland University, Saarbrücken) <i>Partial differential equations in hypergraphs and networks of surfaces</i>
14:30– 15:00	Nicole Marheineke (Universität Trier) <i>Structure-preserving approximations for nonlinear flow problems on networks</i>
15:00 – 15:10	Closing session
15:10	<u>Snacks</u>