Schedule

Doctoral Workshop on Theory and Application of port-Hamiltonian Systems

10 – 12 March 2026

University of Wuppertal, Gaußstraße 20, 42119 Wuppertal
Room G.15.20/34

Tuesday, 10 March

Morning Session   Chair: Birgit Jacob

9:00-9:15   **Bernhard Maschke** (Lyon):
Opening

9:15-10:00   **Andreas Frommer** (Wuppertal):
The ubiquitous Krylov subspaces in numerical linear algebra

10:00-10:30   Coffee & Tea

10:30-10:40   **Alexander Bock** (Ilmenau):
Port-Hamiltonian systems in algebraic geometry

10:45-10:55   **Aashutosh Sharma** (Wuppertal):
Goal oriented adaptivity for pH-DAEs of index-1

11:00-11:25   **Till Preuster** (Chemnitz):
Constrained stabilization of nonlinear port-Hamiltonian systems

11:30-11:55   **Honglian Mu** (Twente):
Symplectic model reduction of nonlinear port-Hamiltonian systems

12:00   Lunch

Afternoon Session   Chair: Manuel Schaller

13:30-13:55   **Pushya Mitra** (Paderborn):
Funnel control under discretization

14:00-14:10   **Loris Könitzer** (Halle-Wittenberg):
Funnel MPC for passive infinite-dimensional systems

14:15-14:25   **Matthias Menge** (Wuppertal):
Identification of pH-systems with (un-)certainty

14:30-14:40   **Pascal Heymoß** (Wuppertal):
Structured analysis of infinite-dimensional pHS with resistive ports

14:45-14:55   **Karl Worthmann** (Ilmenau):
Optimization-based control

15:00-15:30	Interactive Session
15:30-16:00	Coffee & Tea
16:00-17:00	Walk/Schwebebahn to Kunsthalle Barmen
17:00-18:00	Guided Tour "Effort+Flow"
18:00-19:00	**Hans Zwart @Kunsthalle Barmen** (Twente): An introduction to Dirac structure and pH-systems

Wednesday, 11 March

9:00-9:30	**Peter Zaspel** (Wuppertal): Benchmark platform for port-Hamiltonian systems
9:30-10:00	**Short Courses:** **Arjan van der Schaft** (G.15.34): pH DAE systems **Manuel Schaller** (G.16.09): MPC and optimal control **Hannes Gernandt** (G.15.20): Energy networks and shifted passivity
10:00-10:30	Interactive Session
10:30-11:00	Coffee & Tea
11:00-11:25	**Bernhard Aigner** (Freiberg): Evolutionary equations with state-dependent delay
11:30-11:40	**Ikram El Haskouki** (Casablanca/Wuppertal): Dissipativity properties of a class of nonlinear time-delay systems
11:45-11:55	**Rogelio Arancibia** (Wuppertal): A port-Hamiltonian delay system
12:00	Group Foto
12:15	Lunch

13:30-14:30	**Nicole Marheineke** (Trier): Decomposition and splitting schemes for time integration of pHS
14:30-14:55	**Kevin Schäfers** (Wuppertal): Hierarchical splitting methods with port-Hamiltonian applications
15:00-15:10	**Lucas Lautwein** (Trier): Application of time-integration methods for isothermal gas networks
15:15-15:25	**Murad Babayev** (Ilmenau): Numerical estimation of value functions

15:30-16:00	Coffee & Tea
16:00-16:10	**Daniel Happ** (Wuppertal): Port-Hamiltonian interacting particle systems
16:15-16:25	**Jan Lilienblum** (Magdeburg): Data-based iterative methods for model reduction of bilinear systems
16:30-16:55	**Benjamin Minogue** (Twente): Manifold framework for model order reduction on port-Hamiltonian systems
17:00-17:10	**Hannes Wagener** (Wuppertal): Controllability for boundary controlled networks of waves
17:15-17:25	**Lea Meissner** (Wuppertal): Structure-preserving approximations within implicit collocation methods for pHS
17:30-17:55	**Tolgahan Tasci** (Wuppertal): Passivity of bilinear systems
18:00-18:10	**Julian Hölz** (Wuppertal): Approximation entropy for Koopman operators
19:00	Conference Dinner

Thursday, 12 March

Morning Session   Chair: Bernhard Maschke

9:00-10:00	**Antoine Tordeux** (Wuppertal): Modelling of pedestrian dynamics and traffic flow using port-Hamiltonian systems
10:00-10:30	Coffee & Tea
10:30-10:55	**Leander Pfeiffer** (Munich): Continuum robots: modeling, estimation, and control perspectives
11:00-11:10	**Rafay Alvi** (Wuppertal): Port-Hamiltonian formulation of Pedestrian Dynamics
11:15-11:25	**René Noffke** (Wuppertal): TLM, pHS, SPP and Me: Saddle Point Problems (SPP) in port-Hamiltonian Systems (pHS) exemplified by the Transmission Line Model (TLM)
11:30-11:40	**Stephan Kohlhaas** (Munich): Energy based control of renewable energy systems
11:45-12:00	Discussion
12:00	Lunch
13:30	Closing

List of Participants

Bernhard Aigner	TU Freiberg
Rafay Nawaid Alvi	University of Wuppertal
Rogelio Arancibia	University of Wuppertal
Murad Babayev	TU Ilmenau
Tim Bäcker	BTU Cottbus-Senftenberg
Alexander Samuel Bock	TU Ilmenau
Jannik Daun	University of Wuppertal
Abdelhakim Dahmani	University of Wuppertal
Ignacio Diaz	Université Marie & Louis Pasteur
Matthias Ehrhardt	University of Wuppertal
Ikram El Haskouki	Hassan II University of Casablanca & University of Wuppertal
Mehmet Erbay	University of Wuppertal
Anna Fischer	TU Ilmenau
Andreas Frommer	University of Wuppertal
Hannes Gernandt	University of Wuppertal
Daniel Jannik Happ	University of Wuppertal
Pascal Heymoß	University of Wuppertal
Julian Hölz	University of Wuppertal
Birgit Jacob	University of Wuppertal
Mariem Jakhoukh	University of Wuppertal
Najmeh Javanmardi	Eindhoven University of Technology
Stephan Kohlhaas	Technical University of Munich
Loris Könitzer	MLU Halle-Wittenberg
Lina Landwehr	University of Wuppertal
Lucas Lautwein	Trier University
Jan Lilienblum	Otto-von-Guericke-Universität Magdeburg
Ning Liu	University of Marie Louis Pasteur
Nicole Marheineke	Trier University
Bernhard Maschke	Université Claude Bernard Lyon 1
Lea Sophie Meissner	University of Wuppertal
Matthias Menge	University of Wuppertal
Benjamin Minogue	University of Twente
Pushya Mitra	University of Paderborn
Marius Mönch	Trier University
Hongliang Mu	University of Twente
René Noffke	University of Wuppertal
Leander Pfeiffer	Technical University of Munich
Till Preuster	Chemnitz University of Technology
Marco Roschkowski	University of Wuppertal
Kevin Schäfers	University of Wuppertal
Manuel Schaller	Chemnitz University of Technology
Merlin Schmitz	University of Wuppertal
Aashutosh Sharma	University of Wuppertal
Sarid Tanski	University of Wuppertal
Tolgahan Tasci	University of Wuppertal
Filippo Testa	University of Twente
Antoine Tordeux	University of Wuppertal
Claudia Totzeck	University of Wuppertal
Arjan van der Schaft	University of Groningen
Hannes Wagener	University of Wuppertal
Alexander Wierzba	University of Wuppertal
Karl Worthmann	TU Ilmenau
Yannik Wotte	University of Twente
Peter Zaspel	University of Wuppertal
Hans Zwart	University of Twente