

Spring School on Theory and Applications of Port-Hamiltonian Systems Frauenchiemsee, 23 – 28 March 2025

The port-Hamiltonian approach allows the structured modelling of complex, interconnected and heterogeneous multi-physical systems. It is the basis for control methods, which exploit the underlying physical structure or impose desired energy behaviour in closed loop. The third edition of the international spring school PHS 2025 targets PhD students, PostDocs, and advanced Master students from engineering and applied mathematics, who are interested in the state of the art, current research topics and applications in the fields

- modelling of complex multi-domain physical systems,
- structure-preserving numerical methods and their use in control,
- novel approaches for energy- and entropy-aware and optimal control.

The program consists of lectures on basics of port-Hamiltonian systems, advanced topics and application talks. A mini-course introduces to optimization and optimal control for port-Hamiltonian systems. Participants contribute with a poster on their research, as a basis for the exchange with the experts in interactive sessions.



Venue

The beautiful Benedictine abbey of Frauenwörth is located on the small island Fraueninsel in the Lake Chiemsee, around 90 km southeast of Munich, at the edge of the Bavarian Alps, halfway to Salzburg.

Speakers

Alessandro Macchelli (Bologna), Arjan van der Schaft (Groningen), Bernhard Maschke (Lyon), Birgit Jacob (Wuppertal), Claudia Totzeck (Wuppertal), Denis Matignon (Toulouse), Hans Zwart (Twente), Hector Ramírez (Valparaíso), Laurent Lefèvre (Valence), Manuel Schaller (Chemnitz), Michele Cucuzzella (Groningen), Pablo Borja (Plymouth), Paul Kotyczka (Munich), Stefano Stramigioli (Twente), Thomas Hélié (Paris), Yann Le Gorrec (Besançon).

Organizers

Paul Kotyczka (TU Munich, Germany), Bernhard Maschke (U Lyon 1, France) and the Franco-Bavarian University Cooperation Center in Munich (BayFrance) in cooperation with Birgit Jacob (U Wuppertal, Germany)

Supported by

Costs

The attendance fee, incl. full board accommodation will be max. 400 € (depending on the room category).

Application

The school is limited to 60 participants. The online application form (link on the website) is open.

Application deadline (extended): **12 January 2025**

Notification of acceptance: **19 January 2025**

Contact

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