Humboldt Strategic Scientific Workshops 2026:

Intelligent Planning and Control of District Heating and Cooling Systems

The Humboldt Strategic Scientific Workshop 2026 on Intelligent Planning and Control of District Heating and Cooling Systems brings together academic partners and industrial stakeholders to jointly address the technical, economic, and systemic challenges of next-generation District Heating and Cooling (DHC) systems. The workshop will focus on overcoming workforce and supply-chain bottlenecks, advancing planning methodologies under regulatory constraints, integrating renewable and waste heat sources, and leveraging digitalization, smart control, and sector coupling to enhance flexibility and resilience.

Date: April 8 – April 10, 2026
Location: Conference room of the *Studierendenwerk Oberfranken*, Universitätsstr. 30, 95447 Bayreuth
https://maps.app.goo.gl/37ZHavojQpUrt2mc7
Registration Link: https://shorturl.at/vrlcP
More information: https://www.iem.uni-bayreuth.de/en/Humboldt-Workshop_en/index.html

April 8, Wednesday, Day 1

Time	Session
09:30 – 10:00	Registration
10:00 – 10:15	Welcome Note (Prof. Dr. Vedran Perić)
10:15 – 10:25	Presentation of the Humboldt Center
10:25 – 11:10	Keynote: *From the Modeling of the Steady-state Operating Point Towards Transients in Multi-Energy Systems*, Prof. Dr. Kai Strunz, Technical University of Berlin
11:10 – 12:30	Research Landscape Overview • Prof. Dr. Vedran Perić, University of Bayreuth • Prof. Dr. Carlos Ugalde Loo, Cardiff University • Dr. Meisam Sadi, Technical University of Denmark • Dr. Thomas Lickleder, Drees & Sommer SE
12:30 – 13:30	Lunch Break
13:30 – 15:30	Technical Session 1: • *Innovative intersectoral optimisation on the example of SoLAR Allensbach,* Dr. Thomas Walter, Easy Smart Grid GmbH, • *Optimization of District Heating: Transformation, Innovation, Decarbonisation,* Dr. Ralf-Roman Schmidt, Austrian Institute of Technology, • *Digitalization Strategies for Existing and New DHC Networks with Operational Optimization via Intelligent Load Shifting,* Prof. Dr. Dirk Pietruschka, TH Aschaffenburg • *Deep and medium-deep geothermal sources for district heating networks,* Dr. Florian Heberle, University of Bayreuth, Chair or Engineering Thermodynamics and Transport Processes • *District Heating Systems Laboratory Infrastructure in Germany and Europe,* Dr. Anurag Mohapatra, Technical University of Munich, Center for Combined Smart Energy Systems (CoSES)

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	• *Geothermal collector based district heating and cooling – next steps / challenges,* Dr. David Betermann, Friedrich-Alexander University of Erlangen–Nuremberg
15:30 – 15:45	Coffee Break
15:45 – 16:15	Panel Discussion: Framing Key Questions and Themes. Chair: Prof. Carlos Ugalde Loo
16:15 – 17:00	Parallel Brainstorming Sessions: 1) Planning, Modeling and Optimization of District Heating Systems 2) Control, Digitalization and Software Solutions in District Heating Systems 3) Integration of Renewable Energy Sources and Sector Coupling
19:00	Social Dinner: Restaurant Eule, Kirchgasse 8, 95444 Bayreuth

April 9, Thursday, Day 2

Time	Session
09:00 – 09:45	Keynote: *Heat Networks: A UK Perspective,* Simon Woodward, UK District Energy Association
09:45 – 11:15	Brainstorming Session Results Presentations
11:15 – 11:30	Coffee Break
11:30 – 12:30	Technical Session 2: • *From Concept to Delivery – A Technical Consultancy Perspective on District Heating Project Development in Germany,* Dr. Thomas Lickleder, Drees & Sommer SE • Challenges and gaps at the digitalization and operation of district heating systems, Dr. Florian Reissner, Siemens AG • *Cost of Heat: the Path to Gas Parity,* Mr. Scott De Rijk, Hemiko • *Overview, Benchmarking, and Validation of Optimization Models for District Heating Network Design,* Mr. Amedeo Ceruti, Technical University of Munich, Chair of Energy Systems
12:30 – 13:30	Lunch Break
14:00 – 15:30	Technical Session 3: • *Examples from Denmark: dimensioning and establishment of district heating with heat pumps, heat accumulation and low temperature networks*, Mr. Jakob Worm, PlanEnergi • *Estimation and forecasting of thermal demand in typical UK residential dwellings,* Mr. Lloyd Corcoran, Cardiff University. • A case study of enhancing energy efficiency in battery-electric ferries through low-temperature heat pump integration, Ms. Wiebke Frenkel, German Aerospace Center (DLR) • *Transformation pathways for 3rd generation District Heating Systems,* Mr. Ulrich Ganslmeier, Technical University of Munich, Center for Combined Smart Energy Systems (CoSES) • *Towards Ultra-Efficient Heat Networks: Modeling, Optimization, Decentralized Solutions, and Smart Thermal Management,* Dr. Meisam Sadi, Technical University of Denmark
15:30 – 15:45	Coffee Break
15:45 – 16:30	Industrial Panel Discussion. Chair: Dr. Thomas Lickleder
16:30 – 17:00	Open Discussion & Action Items
17:00 – 17:15	Wrap-up and Closing Remarks

April 10, Friday, Day 3

Time	Session
07:30 – 08:45	Organized Visit to Wunsiedel

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09:00 – 10:00	Introduction to the Wunsiedel Future Energy Lab, CEO, Prof. Dr. Dieter Brüggemann
10:00 – 12:00	Energy Park Tour
12:00 – 14:00	BAM Bistro am Markt, Marktplatz 5+7, 95632 Wunsiedel
14:00 – 16:15	Return to Bayreuth and Free Time
16:15 – 17:00	Visit to the Margravial Opera House in Bayreuth

Organizing Committee

- Prof. Dr. Vedran Perić (University of Bayreuth),
- Prof. Dr. Carlos Ugalde-Loo (Cardiff University),
- Prof. Dr. Ahmad Arabkoohsar (Technical University of Denmark)
- Dr. Thomas Lickleder (Drees & Sommer SE).

Travel details

Details for getting to the campus you may find here.
Parking Zones: Please, use the zones indicated on the map. The red marks indicate our workshop location.
In any case, the parking zone *Kreuzsteinbad* should be available.
In case you arrive by bus, please see the bus stops indicated on the map. Please, be aware that currently there are construction sites at the campus.

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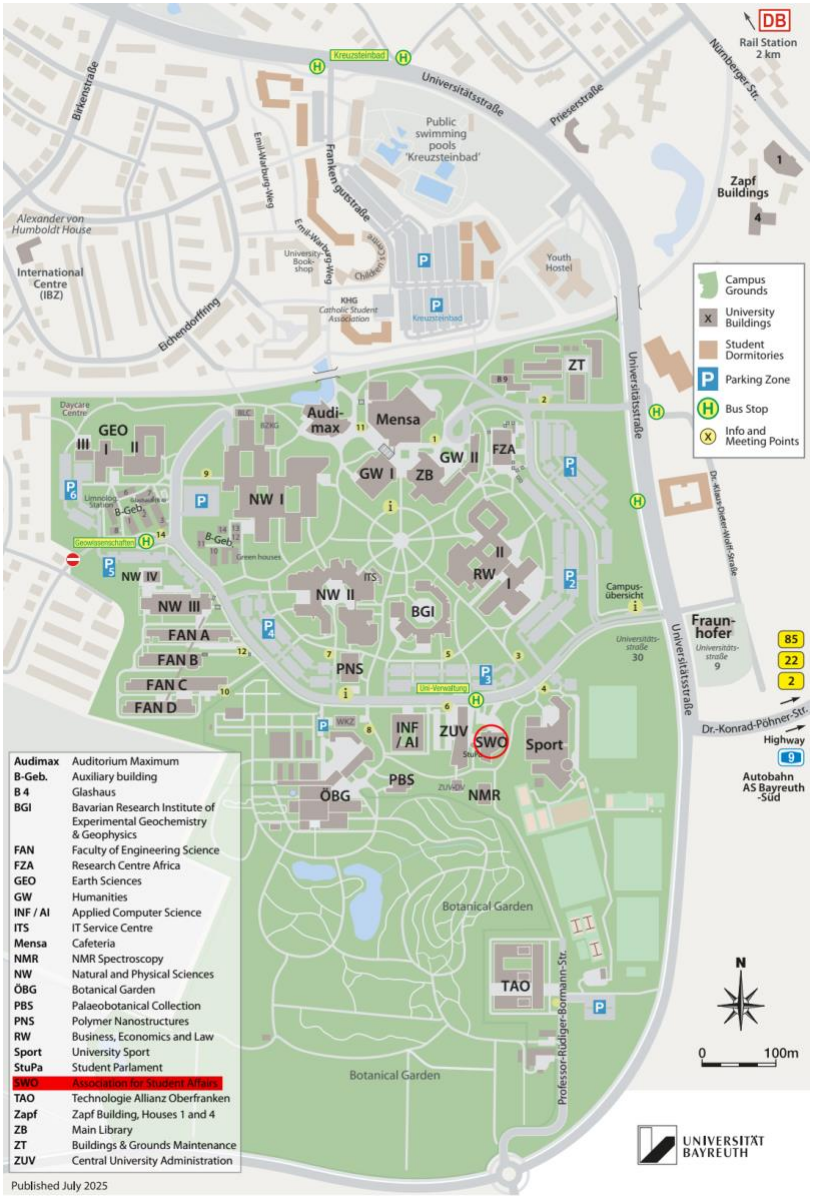

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