

## EI.A 2024 Workshop on Digitalization of District Heating and Cooling

### Overview

District heating and cooling (DHC) systems have traditionally operated with limited controls which lack detailed insights into supply and utilization structures, hindering optimal heat generation and network operation. Digitalization offers new opportunities for more efficient and sustainable management of DHC systems, enabling better integration of renewable sources, improved network operation, and enhanced end-user experiences. In transitioning to a 100% renewable energy system, digitalizing DHC systems is crucial, as it optimizes generation and network operations, improves heating system control in buildings, and empowers end-consumers.

This workshop will explore the impact of digitalization on the DHC industry, highlight state-of-the-art technology, and discuss challenges and opportunities for integrating digital processes into DHC systems. By focusing on the potential to enhance the 4th Generation District Heating (4GDH) system, the workshop seeks to empower stakeholders with the knowledge needed for informed decision-making and optimization of DHC performance and data utilization.

The workshop is organized by [IEA DHC Annex TS4: Digitalisation of District Heating and Cooling](#) and IEA DHC Annex TS9: Digitalization of District Heating and Cooling: Improving Efficiency and Performance Through Data Integration. The workshop is part of the [Energy Informatics Academy Conference 2024 \(EI.A 2024\)](#).

### Topics

Topics of interest include, but are not limited to:

- **Resilient and scalable digital infrastructure** for DHC systems to support advanced data analytics, real-time monitoring, and smart grid technologies.
- **Interface standardization and API development** for integration and interaction between software applications and digital infrastructure.
- **System Integration** to enhance integration across production, distribution, and consumption levels.
- **Data Security and Privacy** solutions related to data security, privacy, and ownership to unlock the potential of digitalization in DHC systems.
- **Strategies and best practices** for implementing digitalization in DHC systems.
- **Innovative technological solutions** driving digital transformation in DHC systems.
- **Emerging business models, opportunities, and challenges** arising from digitalization in DHC systems.
- **Legal aspects and policy instruments** enabling the integration of digital processes in DHC systems.
- **Case studies** highlighting successful digitalization efforts in existing R&D projects, studies, and demonstration plants.

### Organizing Committee

Dietrich Schmidt (Fraunhofer Institute for Energy Economics and Energy System Technology IEE, Germany)

Michele Tunzi (Danmarks Tekniske Universitet, Denmark)

Dirk Vanhoudt (VITO, Belgium)

Zheng Grace Ma (University of Southern Denmark, Denmark)

Bo Nørregaard Jørgensen (University of Southern Denmark, Denmark)

Kristoffer Christensen (University of Southern Denmark, Denmark)

### Important Dates

- Paper submission for workshop deadline: **31 July 2024**
- Camera-ready paper due: 21 August 2024
- Notification of acceptance: 9 August 2024
- Registration deadline: 23 August 2024

### Paper submission

EI.A 2024 workshop accepts three types of submissions:

- **Full Papers:** 12-15 pages (excluding references)
- **Short Papers:** 6-11 pages (including references)
- **Abstracts:** Maximum 250 words (excluding references)



Please check the conference webpage for the details: <https://www.energyinformatics.academy/2024-ei-a-submission>