

# Special Issue

## Optimization Control and Energy Conservation in Smart Heating Systems

### Message from the Guest Editors

District heating is an energy service based on customers directly moving heat from available heat sources to be immediately used. Today, the fundamental idea of district heating is to use local fuel or heat resources that would otherwise be wasted (such as excess heat from industrial processes or low-grade air and soil energy) to satisfy local customer demand for heating, using a heat distribution network of pipes as a local marketplace. This Special Issue aims to gather significant research contributions focusing on and linking practical applications and scientific research on existing and new methods for smart heating, optimization control, advanced heat metering, and energy conservation in district heating systems. We also welcome all types of articles reporting original, pioneering research with experimental, theoretical, and numerical findings revealing pertinent aspects of smart heating. For more details about the special issue:

<https://www.mdpi.com/si/208847>

### Guest Editors

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### Deadline for manuscript submissions

29 August 2025



## Buildings

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CiteScore 4.4



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## About the Journal

### Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

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### Editor-in-Chief

Prof. Dr. David Arditi

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JCR - Q2 (Construction and Building Technology) /  
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