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Advanced Control of Thermal Power Plants for Safe, Economic and Flexible Operation under High Penetration of Renewable Energy Sources

Guest Editors:

Prof. Dr. Kwang Y. Lee

Department of Electrical and Computer Engineering, Baylor University, Waco, TX 76798, USA

Dr. Yrjö Majanne

Faculty of Engineering and Natural Sciences, Tampere University, FI-33014 Tampere, Finland

Dr. Xiao Wu

National Engineering Research Center of Power Generation Control and Safety, School of Energy and Environment, Southeast University, Nanjing 210096, China

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Message from the Guest Editors

This Special Issue will contribute a practical and comprehensive forum for exchanging novel research ideas or empirical practices that bridge the modelling, simulation, and control of thermal energy systems. Articles that analyze aspects of thermal energy systems, involving, for example, conventional power plant, innovative thermal power generation, fuel-cell plants, hybrid power and heat energy systems, coupled energy and transportation systems, and battery, flywheel, and pumped-hydro energy storage systems, on the basis of one or more of the following topics, are welcome in this Special Issue:

- Power plant modelling, simulation, and control
- Advanced control and optimization
- Artificial intelligence and machine learning
- Combined heat and power (CHP) generation
- Cyclic operation of thermal power plants
- Modelling and control of thermal networks
- Multi-energy hub modeling and operation
- Integrated operation of thermal power plants with renewable generation and energy storage systems
- Coupled power and transportation systems via electric vehicles
- Carbon capture systems
- Fuel-cell power plants
- Energy storage systems
- Advance pumped-storage hydro plants

Special Issue



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Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and
Aerospace Engineering,
University of Roma Sapienza, Via
Eudossiana 18, 00184 Roma, Italy

Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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Energies Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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