

## Special Issue

# Modeling, Simulation and Optimisation in Pipeline Network Analysis with Applications to Natural Gas and District Heating Systems

### Message from the Guest Editors

This Special Issue comprises papers on optimal planning, design, and operation of fluid flow pipeline systems across different energy sectors. It intends to investigate the latest challenges and opportunities for natural gas and district heating systems in the context of modeling of energy transport and storage processes, providing high system capacity and reliability and helping to mitigate integration costs of variable renewables across different energy sectors.

#### Keywords:

- Pipeline systems modeling and control
- Digitalization of fluid systems
- Energy-efficient pipeline transport
- Large-scale energy storage
- Grid flexibility and storage
- Integrated energy system concept
- Sector coupling and energy reconversion
- Fluid flow assurance and systems reliability
- Integration of renewable energies
- Sustainable energy transport system

### Guest Editors

Prof. Dr. Maciej Chaczykowski

Department of Building Installations, Hydrotechnics and Environmental Engineering, Warsaw University of Technology, 20, Nowowiejska Street, 00-653 Warsaw, Poland

Prof. Dr. Andrzej J. Osiadacz

Department of Building Installations, Hydrotechnics and Environmental Engineering, Warsaw University of Technology, 20, Nowowiejska Street, 00-653 Warsaw, Poland

### Deadline for manuscript submissions

closed (30 June 2022)



## Energies

an Open Access Journal  
by MDPI

Impact Factor 3.2  
CiteScore 7.3



[mdpi.com/si/87416](https://mdpi.com/si/87416)

*Energies*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[energies@mdpi.com](mailto:energies@mdpi.com)

[mdpi.com/journal/  
energies](https://mdpi.com/journal/energies)





# Energies

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 7.3



[mdpi.com/journal/  
energies](https://mdpi.com/journal/energies)



## About the Journal

### 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.

---

### Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and Industrial Engineering, University  
Niccolò Cusano, 00166 Roma, Italy

---

### Author Benefits

#### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

#### Journal Rank:

CiteScore - Q1 (Control and Optimization)