



energies



an Open Access Journal by MDPI

Towards Exascale HPC and Data Intensive Algorithms in the Energy Industry

Guest Editors:

Dr. Oriol Lehmkühl

Department of Computer Applications in Science and Engineering, Barcelona Supercomputing Center (BSC-CNS), Edificio NEXUS II, 3rd Floor, Jordi Girona, 29, 08034 Barcelona, Spain

Prof. Dr. Jaime Klapp

Physics Department, Instituto Nacional de Investigaciones Nucleares, Km. 36.5 Carretera Mexico Toluca, Ocoyoacac, Salazar 52750, Mexico

Dr. Jose Maria Cela

Department of Computer Applications in Science and Engineering, Barcelona Supercomputing Center (BSC-CNS), Plaça Eusebi Güell 1-3, 08034 Barcelona, Spain

Message from the Guest Editors

The present Special Issue explores different exascale candidate problems for the energy industry, targeting possible novel algorithms and possible modeling approaches. In this issue, we will focus on the following problems of the energy industry, specially targeting oil and gas, biofuel and wind energy:

- Geophysical exploration for subsalt hydrocarbons
- Reservoir modeling in naturally fractured reservoirs
- Multiphase flows in pipelines with heavy oil
- Molecular modeling of catalysts for heavy oil refining
- Combustion simulation tools to optimize fuel-biofuel design and performance towards more sustainable and greener transport systems
- Develop methodologies to understand and predict the multi-scale atmospheric motion relevant for the operation and performance of wind farms in complex wind situations

Deadline for manuscript submissions:

closed (30 April 2022)



mdpi.com/si/89442

Special Issue



energies



an Open Access Journal by MDPI

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.

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)

Contact Us

Energies Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/energies
energies@mdpi.com
[X@energies_mdpi](https://twitter.com/energies_mdpi)