



Optimization and Control in Energy Management: Mathematical Modeling and Simulation

Guest Editors:

Dr. Atanda Kamoru Raji

Department of Electrical,
Electronic and Computer
Engineering, Faculty of
Engineering and the Built
Environment, Cape Peninsula
University of Technology, Cape
Town 7535, South Africa

Dr. Khaled M. Abo-Al-Ez

Centre for Distributed Power and
Electronic Systems, Cape
Peninsula University of
Technology, Cape Town 7535,
South Africa

Deadline for manuscript
submissions:

closed (30 November 2023)

Message from the Guest Editors

We are pleased to invite the research community to submit a review or regular research papers on, but not limited to, the following relevant topics related to optimization and control in energy management:

- Demand side management and demand response
- Artificial intelligence optimization methods for renewable energy systems and energy management
- Frequency regulation using Virtual power plants
- Modeling and simulation for energy management
- EMS in smart electrical grids
- Algorithms
- Numerical simulations
- Mathematical modeling
- Analytical understanding
- Control Theory
- Energy-efficient systems
- Energy conservation techniques
- EMS in Mini and Micro-Grids
- Load and renewable energy generation prediction techniques
- Energy management for Smart cities and homes
- Energy management for improving power quality
- Optimization techniques and methods in energy management systems
- control methods and strategies in energy management systems





Editor-in-Chief

Prof. Dr. Francisco Chiclana

School of Computer Science and
Informatics, De Montfort
University, The Gateway,
Leicester LE1 9BH, UK

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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), RePEc, and other databases.

Journal Rank: JCR - Q1 (*Mathematics*) / CiteScore - Q1 (*General Mathematics*)

Contact Us

Mathematics Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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

mdpi.com/journal/mathematics
mathematics@mdpi.com
[X@MathematicsMDPI](https://twitter.com/MathematicsMDPI)