

Special Issue

AI for Smart Grid Optimization— Technological Advances and Future Perspectives

Message from the Guest Editors

This Special Issue will include high-quality papers on topics within the scope of AI applications in smart grids. We invite you to contribute an original research or comprehensive review article on a hot topic for peer review and possible publication. In this Special Issue, original research articles and reviews are welcome. The scope of this Special Issue includes, but is not limited to, the following topics:

- AI-driven power forecasting (short-term/long-term load prediction, renewable energy output forecasting, etc.);
- Intelligent power dispatch (real-time optimal dispatch, multi-energy system coordination, demand response optimization, etc.);
- Smart grid control (adaptive control strategies, fault diagnosis and self-healing, stability control, etc.);
- AI-aided grid planning (network expansion planning, distributed energy resource integration planning, infrastructure upgrading, etc.);
- Low-carbon monitoring and management (carbon emission tracking, energy efficiency optimization, green energy scheduling, etc.);
- Large model technologies in smart grids (foundation models for multi-source data fusion, scalable algorithms for grid-wide optimization, etc.).

Guest Editors

Dr. Xiaoshun Zhang

Foshan Graduate School of Innovation, Northeastern University, Foshan 528311, China

Dr. Zhenning Pan

School of Electric Power Engineering, South China University of Technology, Guangzhou 510640, China

Deadline for manuscript submissions

30 August 2026



Technologies

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 8.5



mdpi.com/si/251645

Technologies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
technologies@mdpi.com

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





Technologies

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 8.5



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



About the Journal

Message from the Editor-in-Chief

Technologies, provides a single focus for reporting on developments of all technologies, regardless of their application. It is our intention that *Technologies* becomes the journal of choice for both researchers wanting to publish their work and technologists wishing to exploit the high quality research across a wide range of potential applications. Through its open access policy, its quick publication cycle, *Technologies* will facilitate the rapid uptake and development of the research presented, ultimately providing benefit to the wider society.

Editor-in-Chief

Prof. Dr. Manoj Gupta

Department of Mechanical Engineering, National University of
Singapore, Singapore 117576, Singapore

Author Benefits

High Visibility:

indexed within ESCI (Web of Science), Scopus, Inspec, Ei
Compendex, INSPIRE, and other databases.

Journal Rank:

JCR - Q1 (Engineering, Multidisciplinary) / CiteScore - Q1
(Computer Science (miscellaneous))

Rapid Publication:

manuscripts are peer-reviewed and a first decision is
provided to authors approximately 21.8 days after
submission; acceptance to publication is undertaken in 3.9
days (median values for papers published in this journal in
the first half of 2025).