

Special Issue

Approaches and Experiences of Monitoring and Control of Electrical Distribution Grids

Message from the Guest Editors

Distribution systems are at the core of the energy transformation and electrification around the world. Monitoring and control requirements, standardization, and testing are changing. Digitalization and data-driven solutions emerge. Scientific research, technical development and deployment of new technologies are proceeding at different speeds and different Technology Readiness Levels. This Special Issue aims at disseminating the most recent advancements, in the form of concepts, theory, practical implementations, lessons learnt from numerical simulation and field demonstrations. Topics of interest include, but are not limited to, the following: Methods for grid monitoring; Methods for measurement; Forecasting; Techniques/workflows for the estimation, provision and use of flexibility; Challenges, approaches and experiences of automation and digitalization of grids; Data and data spaces; Design or practical integration of AI tools for grid monitoring and control. Disruptive concepts for future distribution grids, Standardization needs, Testing and certification For more information, please scan the QR code.

Guest Editors

Prof. Dr. Ferdinanda Ponci
Institute for Automation of Complex Power Systems, RWTH Aachen University, 52064 Aachen, Germany

Dr. Marco Pau
Department of Grid Planning and Grid Operation, Fraunhofer IEE, 34121 Kassel, Germany

Deadline for manuscript submissions

28 February 2025



Energies

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 6.2



mdpi.com/si/210909

Energies
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

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





Energies

an Open Access Journal
by MDPI

Impact Factor 3.0
CiteScore 6.2



[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 Aerospace Engineering, University of Roma Sapienza, Via Eudossiana 18, 00184 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)