

## Special Issue

# Situation Awareness for Smart Distribution Systems

### Message from the Guest Editors

As a key application of smart grid technologies, the smart distribution network (SDN) is expected to present a high diversity of equipment and complexity of operation patterns. Situational awareness (SA), which aims to provide critical visibility of the SDN, will be the enabling technology in the assurance of stable SDN operations, and inadequate SA has been identified as one of the causes of several recent large-scale electrical disturbances worldwide. The objective of this Special Issue is to address issues related to the challenges and solutions of SA in future SDNs, including but not limited to situation perception (e.g., non-intrusive load monitoring), situation comprehension (e.g., three-phase affine power flow analysis of distribution networks), situation prediction (e.g., load demand forecasting), and the evaluation of existing and emerging SA in place (e.g., the implementation of effectiveness evaluation). Applications of SDN situation orientation are also a focus of this Special Issue.

---

### Guest Editors

Dr. Leijiao Ge

Dr. Jun Yan

Prof. Dr. Yonghui Sun

Dr. Zhongguan Wang

---

### Deadline for manuscript submissions

closed (25 February 2022)



## Energies

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 8.3



[mdpi.com/si/89793](https://mdpi.com/si/89793)

*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 8.3



[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)