



Call for Papers

IEEE Transactions on Industry Applications

Special Issue on

Cybersecurity and resilience of networked microgrids

Networked microgrids (NMGs), as clusters of microgrids in power distribution level, are electrically interconnected and functionally interacted. The monitoring, analysis, coordination, and transaction of NMG systems heavily rely on information and communication technologies (ICTs). The integration of distributed energy resources (DERs) and their edge communication and computation capabilities has led to a rapid growth in the need for cybersecurity and resilience in NMGs. The data sharing among grid edge DERs should ensure confidentiality, integrity, availability, in order to maintain the correct control functionalities. Enhancing cybersecurity can prevent cyber-attacks and reduce the risk of malicious activity, while improving cyber-resilience can help NMG systems quickly recover from abnormal conditions or mitigate the impacts of attacks. Effective methodologies should be developed to address the problem of each stage, including pre-event prevention, during-event response, and post-event recovery. The objective of this special issue is to promote research for enhancing cybersecurity and resilience in power distribution systems, particularly for NMGs. The information provided in this special issue will benefit academic researchers and industry stakeholders in this area.

Topics of this special issue include, but are not limited to:

- Secure and resilient operation strategies for NMGs
- Secure and resilient control strategies for NMGs
- Secure state estimation for NMGs
- Trustworthy artificial intelligence for NMGs
- Machine learning for security enhancement of NMGs
- Blockchain technology for secure data sharing and storage
- Quantum-based computation methods of NMGs
- Intrusion prevention, detection, and isolation in NMGs
- System restoration strategies of NMGs





Submission Guidelines

Authors who wish to submit a paper for consideration must submit an extended abstract (2 pages, free format, PDF version) to Dr. Yu Wang (yu_wang@cqu.edu.cn). The extended abstract should also include the manuscript title and authors information. The Guest Editors will use the abstracts to select the manuscripts which will be reviewed for this Special Issue by the IEEE Industry Applications Society. Authors of the manuscripts selected for review will receive a formal invitation with detailed instructions for submission of the complete manuscript to the IAS ScholarOne Manuscripts review site. Please refer to http://www.ias.org for general information about electronic submission through ScholarOne Manuscripts.

Important Dates

- July 01, 2024: Call for papers announcement
- January 01, 2025: Deadline for extended abstract submission
- February 01, 2025: Decision notification for inviting full paper submissions
- July 01, 2025: Deadline for full paper submission for review in S1M
- January 01, 2026: Notification of final decisions
- February 01, 2026: Due date for submission of final files
- March/April, 2026: Publication date

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