Special Issue

Artificial Intelligence Driven Solutions for Distribution Networks

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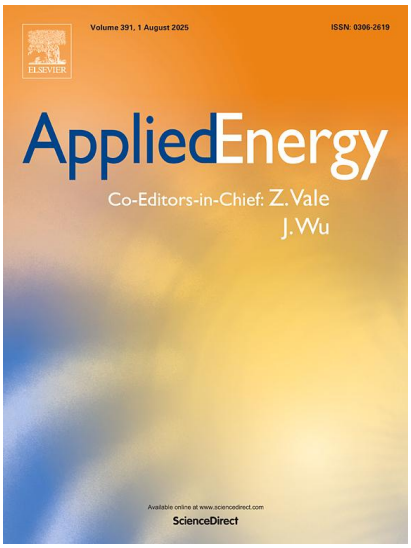

21.2 CiteScore | 10.1 Impact Factor

Supports open access

This Special Issue will contribute to facilitating the access of the academic, industry, and management communities involved in distribution networks planning and operation to novel scientific models and methods in this area.

The Special Issue welcomes demonstration of the suitability and efficiency of AI-based methods in the field and in realistic case studies with adequate complexity and dimension to represent real-world problems. We encourage professionals from academic institutions, research institutes, and industries to share their research and results on key issues of Artificial Intelligence- based methods to support distribution networks planning and operation in the new current and future contexts.

The integration of DERs in the system, optimization models for distribution networks planning and operation, and new suitable business models for the interaction of distribution networks with aggregators and energy communities are just a few examples of topics relevant for this Special Issue.

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The guest editorial team of this Special Issue invites original research papers proposing novel models and methods in the scope of the described field, focusing on but not limited to the following topics:

- AI-based models and approaches (e.g., machine learning, reinforcement learning, generative AI, etc.)
- Models and methods for the interaction of distribution networks with microgrids, aggregators, virtual power plants, and energy communities
- Wholesale and local electricity market aspects relevant to distribution networks
- Other distribution system applications relevant to modeling, planning and operation

For any inquiries about the appropriateness of contribution topics, contact Guest Editor João Soares (jan@isep.ipp.pt).