IEEE EI² 2024

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///// Special Session 03 /////

AI Enabling Technologies for Active Distribution Networks

○ INTRODUCTION AND TOPICS ○

With the fast development of distributed energy resources (DERs), distribution networks have not been limited as traditional end-users but has come down to a physical platform for DER decision-makings (e.g., economic dispatch, resilience-oriented restoration), a.k.a. active distribution networks (ADNs). This makes that the planning and operations of ADNs are evolving as a complex task, particularly with the increasing uncertainties from DERs (e.g., rooftop solar power and electric vehicles) and measurements and situation awarenss of tremendous DERs. Fortuanately, Artificial Intelligence (AI) technologies, which have been shown powerful in many fields (e.g., natural language processing, computer vision), have been advocated in current research as one promising way to facilitate the efficiency and security of the planning and operations of ADNs. This special session aims to gather high-quality research around AI enabling technologies for ADNs. The goal is to advance the state-of-the-art in AI-based ADNs for more efficient and reliable ADNs. Topics of interest include, but are not limited to:

• Theory and applications of explanable AI and trustworthy AI in ADNs.
• Advance measurement and AI-based situational awareness.
• AI-assisted decision-making for ADN resilience enhancement.
• AI-enabling DER optimization and coordination.
• AI-enhanced medium-term and long-term scenario forecasting for ADN planning.

○ SPECIAL SESSION CHAIRS ○

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○ PUBLICATION & SUBMISSION ○

Submissions will be reviewed by the conference technical committees, and accepted papers will be published in IEEE EI² 2024 International Conference Proceedings, which will be submitted for inclusion in the **IEEE Xplore Digital Library**, and submitted for indexing by **EI compendex** and **Scopus**.

Scan the QR code on the left or open the submission link to submit your paper.
‣ Submission link: https://easychair.org/conferences/?conf=ei22024

Submission Deadline: 31 October, 2024

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