Special Issue

Symmetry in Digitalisation of Distribution Power System

Message from the Guest Editors

In a digital distribution power system, the concepts of symmetry and asymmetry are pivotal for optimizing system performance, reliability, and efficiency. Symmetry ensures balanced operations, crucial for stable power delivery and effective fault diagnoses. In digital networks, symmetrical data flow and communication protocols enhance real-time control and monitoring, mitigating issues from distributed energy resources' variability. Asymmetrical challenges, like uneven load distribution or cyber-physical uncertainties, can destabilize operations, impacting power quality and economic operations. Leveraging symmetry in planning and design facilitates intelligent management and coregulation technologies, improving adaptability to new energy sources. Addressing both symmetrical and asymmetrical aspects is essential for integrating advanced technologies that ensure the secure, highquality, and economic operations of modern power systems amidst growing complexities.

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About the Journal

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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