

WEBINAR SERIES

Recent Advancements in Technology and Applications of Synchrophasor Measurements: Findings of the CIGRE JWG C4/C2.62

Wednesday, February 18, 2026, at 10 a.m. PT (1 p.m. ET)

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As modern power systems evolve to accommodate increasing penetration of renewable energy, energy storage, and electric vehicle loads, real-time monitoring has become essential for maintaining system stability, reliability, and operational efficiency. Synchrophasor technology, with its precisely time-synchronized and high-resolution measurements, has enabled a wide range of advanced power system applications, including real-time situational awareness, data analytics, control, and model validation.

This webinar will present an overview of the CIGRE Technical Brochure “Recent Advancements in Technology and Applications of Synchrophasor Measurements”, developed by Joint Working Group C4/C2.62.

In today’s rapidly changing energy landscape, the integration of inverter-based resources and the displacement of conventional synchronous generation introduce new challenges to grid operation. Synchrophasor measurements provide critical insights into system characteristics that are otherwise difficult to observe in real time, such as system strength, inertia, and the early onset of instabilities. These measurements play a key role in supporting monitoring, control, and protection functions required to maintain power system integrity.

The technical brochure reviews recent developments in synchrophasor system architectures and data integration frameworks, supported by practical examples. It presents synchrophasor applications that are currently deployed in industry, along with operational experiences. The brochure also explores emerging and potential applications that leverage synchrophasor data in innovative ways and discusses enabling technologies and trends to support the needs of future power grids.

Meet the Presenter



Dr. Athula Rajapakse is a professor in the Department of Electrical and Computer Engineering at the University of Manitoba, Canada, where he leads the Intelligent Power Grid Laboratory. He received his B.Sc. (Eng.) from the University of Moratuwa, Sri Lanka, and his M.Eng. and Ph.D. degrees from the Asian Institute of Technology, Thailand, and The University of Tokyo, Japan, respectively. His research interests include power system protection, wide-area protection and control, HVDC grid protection, and renewable energy integration. He is a Senior Member of IEEE, a Professional Engineer in Manitoba, and a Fellow of Engineers Canada. He served as Convener of the CIGRE Joint Working Group C4/C2.62 on synchrophasor technology and applications and has contributed to several IEEE and CIGRE Working Groups related to power system stability, protection, and AI and ML applications.

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