

CALL FOR PAPERS SPECIAL SESSION ON

Advanced Control, Protection, and Optimization Techniques in Modern Power and Renewable Energy Systems

> for ICCAD 2026 July 7-9, 2026, Lisbon, Portugal

Session Co-Chairs:

- Dr. Arsalan Hadaeghi, Hitachi Energy, Sweden, arsalan.hadaeghi@hitachienergy.com

Session description:

This special session focuses on recent advances in intelligent control, adaptive protection schemes, and optimization methods applied to modern power and renewable energy systems. With the increasing penetration of renewable resources and the development of hybrid AC/DC and HVDC transmission networks, new challenges arise in ensuring system reliability, stability, and operational efficiency.

This session aims to gather high-quality research contributions addressing advanced techniques such as machine learning, data-driven methods, optimization algorithms, and modern control strategies applied to power system protection, HVDC systems, wind and renewable energy integration, and grid resilience enhancement.

The goal is to create a platform for researchers and industry experts to share emerging methodologies, discuss open challenges, and explore innovative solutions that support the development of secure, sustainable, and intelligent power systems.

The topics of interest include, but are not limited to:

- Protection and control strategies for AC, DC, and hybrid AC/DC grids
- HVDC and multi-terminal HVDC (MT-HVDC) control, protection, and fault detection
- Renewable energy integration (wind, solar, hybrid systems)
- Machine learning and artificial intelligence for power system monitoring and fault localization
- Optimization techniques for energy management and grid operation
- Power electronics-based systems control and protection
- Intelligent forecasting, stability prediction, and system diagnosis

SUBMISSION

Papers must be submitted electronically for peer review by: January 31, 2026 https://www.iccad-conf.com/submission/

All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).