



2026 IEEE 8th International Conference on Condition Assessment Techniques in Electrical Systems

18th to 20th December 2026



2026 IEEE 8th International Conference on Condition Assessment Techniques in Electrical Systems (CATCON 2026) is technically co sponsored by IEEE Kolkata Section and Financially Co-sponsored by IEEE Dielectrics and Electrical Insulation Society Chapter and IIT(ISM), Dhanbad and is organized by Indian Institute of Technology (Indian School of Mines), Dhanbad. It will be held during December 18 to 20, 2026 at Indian Institute of Technology (Indian School of Mines), Dhanbad.

This conference is being organized for the eighth time, which is in line with the present day requirements in the global scenario of various condition assessment techniques for a variety of electrical systems. Its goal is to provide a broad coverage and dissemination of fundamental research in condition monitoring and assessment among researchers, academics, industry and practitioners Around 200 delegates are expected to attend and will be one of the biggest gatherings in this field of research. The technical program of 2026 IEEE CATCON will consist of tutorials, invited talks, posters and oral presentations. Research papers describing original work on theories, methodologies, abstractions, algorithms, industry applications and case studies are invited.

➤ The topics include but are not limited to

Track #1. Enhanced Monitoring and Diagnostics of HVDC and UHVAC Transmission Assets : PD, dielectric response, and on-line diagnostics, Space charge, DC aging, polarity reversal Bushings, transformers, liquid insulation monitoring, Pollution, corona, surface degradation, Modeling of UHVAC/HVDC insulation stress

Track #2. Predictive Diagnostics of Electrical Equipment in Mining and Heavy-Industry : PD, PDC, dielectric spectroscopy, Thermal, environmental, mechanical aging, Transformers and oil-filled equipment, RUL estimation and degradation modeling

Track #3. Performance-Oriented Monitoring of Electrified Transport and Decentralized Energy Systems : Converter-fed motor insulation diagnostics, Fast switching, dv/dt-induced aging, Traction, EV charging, DER insulation challenges, Performance–reliability modeling

Track #4. AI and Digital Twin-Enhanced Decision Support for Insulation Prognostics : AI/ML for PD and dielectric data interpretation, Physics-informed ML, digital twins, Aging-aware prognostics and RUL estimation, Decision support for networked assets

Track #5. Smart Monitoring Frameworks for Power Electronic Converter-Driven Infrastructure : High-frequency stress, EMI, insulation aging, Embedded sensing, online monitoring, Advanced materials for converter environments, Nanodielectrics, SSTs, IoT-based frameworks

➤ Organizing Committee

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➤ Conference deadlines

✓ Full paper submission portal opens: April 15, 2026

✓ Full paper Submission portal closes July 15, 2026

✓ Notification of Acceptance : October 15, 2026

✓ Camera ready paper submission: November 18, 2026

❖ IEEE CATCON 2026 will consider full paper within the scope of the conference for review. Full papers can be submitted from April 15,2026 till July 15, 2026. However, those who wish to submit abstracts are welcome to submit, for early processing of visa etc. (ABSTRACT SUBMISSION IS NOT MANDATORY FOR FULL PAPER SUBMISSION)

❖ Accepted full papers will be published in the proceedings The organizers are planning to publish all accepted papers in **IEEE Xplore**

❖ Detailed instructions for preparation, submission of paper and all conference related information can be found at

<https://catcon2026.iitism.ac.in>

➤ Registration Details

Registration fee, which includes the conference registration kit, participation in all the sessions of the conference, lunch and inter session refreshments and gala dinner (IEEE Members) is as follows

Category	Indian Delegates (in INR)	Foreign Delegates (in USD)
Student / Academic Institute Delegates	11800 (upto Nov. 30, 2026)	472 (upto Nov. 30, 2026)
	12980 (after Nov. 30, 2026)	531 (after Nov. 30, 2026)
Industry / R&D Professionals	16520 (upto Nov. 30, 2026)	472 (upto Nov. 30, 2026)
	17700 (after Nov. 30, 2026)	531 (after Nov. 30, 2026)

For Sponsorship related details please visit:

<https://catcon2026.iitism.ac.in/sponsorships.php>

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