IEEE EIC 2025

IEEE/DEIS ELECTRICAL INSULATION CONFERENCE

CALL FOR PAPERS

THE 43RD ELECTRICAL INSULATION CONFERENCE (EIC)
SOUTH PADRE ISLAND, TEXAS, USA,
JUNE 8TH - 12TH OF 2025.

SOUTH PADRE ISLAND

Nestled along the southern coast of Texas, South Padre Island offers attendees not only a world-class academic and networking experience but also the opportunity to relax and explore one of the most scenic beach destinations in the United States. Known for its tranquil beaches, warm climate, and vibrant wildlife, South Padre Island provides an ideal environment for both work and leisure.

NEAR BROWNSVILLE

Located near Brownsville, a city rich in American history, attendees can visit the Palo Alto Battlefield National Historical Park, a key site of the U.S.-Mexican War, and the Battle of Palmito Ranch, the final battle of the American Civil War. Additionally, the Laguna Atascosa National Wildlife Refuge nearby offers spectacular opportunities for hiking and wildlife watching. A major highlight for tech enthusiasts is **SpaceX**, with its launch site near Brownsville. Visitors can catch a glimpse of the groundbreaking advancements in space exploration happening just a short drive from South Padre Island. This unique opportunity allows attendees to witness history in the making as SpaceX continues its pioneering work in space travel and technology.

DISCOVER THE MEXICAN CHARM ON SOUTH PADRE

South Padre Island is rich with Mexican culture, allowing attendees to experience authentic flavors of this legendary culture. From vibrant Mexican cuisine to refreshing shots of tequila, you can indulge in some of the finest tacos and traditional "ceviche" dishes right here on the island, making it a perfect option for both food enthusiasts and those looking to embrace the international environment in South Padre.

IDEAL FOR FAMILY VISIT

This location is also ideal for a family visit. For children of all ages, there is an array of exciting activities. Younger kids will love the Gladys Porter Zoo in Brownsville, while older kids can enjoy surfing, fishing, hiking, and other outdoor adventures. Adults can unwind at the island's numerous bars, beachside lounges, and restaurants, providing plenty of options for fun and relaxation after a busy conference day.
Whether you're interested in space exploration, historical landmarks, or just want to enjoy nature and the beach, South Padre Island offers a vibrant and diverse experience for everyone.

WE'RE WAITING FOR YOU!

We look forward to welcoming you to an engaging and enriching experience at EIC 2025. Please mark your calendars and prepare for a conference filled with valuable insights and networking opportunities.

PROGRAM AND MAIN TOPICS

The conference program features relevant keynote speakers, technical and poster sessions, short courses, and more. Submitted papers should be related to one of the main application topics and the applicable sub-category.

I. Rotating Machines and Power Generation

• **Manufacturing:** Advances in design, construction, manufacturing.

• **Life Management & In-service Experiences:**
- Strategies for diagnostics, monitoring, and asset management.
- Insights from operational challenges and mitigation strategies.
- Innovative approaches to predictive maintenance, recycling, and circular economy solutions in rotating machines.

• **Failures Cases, Investigations and Repair Procedures:**
- Strategies for diagnostics and investigations cases of failures, root cause analysis.
- Insights from operational failures.

II. Power, Distribution and Instruments Transformers

• **Transformers:** Design, operation, and innovations in power and distribution transformers. Novel technologies in liquid and solid insulation as well as dry-type designs.

• **Insulation System Failures Investigation:** Case studies and failure analysis of insulation systems in transformers and other high-voltage components such as bushings and or OLTCs.

• **Instrument Transformers:** Design, construction and innovations in HV current, voltage and capacitive voltage transformers.

• **Transformer Components:** Design, construction and innovations in HV bushings and monitoring devices.

III. Emerging Technologies in Dielectrics and Insulation Materials

• **New Materials & Nanodielectrics:** Exploration of cutting-edge materials, including nanodielectrics for advanced electrical insulation applications.

• **Thermal and Dielectric performance:** Principles and innovations in dielectric material design for special application – high temperature – immunity to harmonics, etc.

• Principles, Tools and best practices to ensure insulation reliability in high-voltage equipment.

IV. Testing, Diagnostics, and Condition Assessment

• **Partial Discharge On-Line and Off-Line testing:** Research on PD in insulation systems and their impact on system reliability

• **Testing Technologies:** Novel methods for testing electrical insulation in HV equipment.

• **Diagnostics, Monitoring, and Condition Assessment:** Techniques for real-time diagnostics, condition monitoring, data acquisition, management and life expectancy estimation. Application of AI and ML in the diagnostics of HV equipment.

• **Numerical Modeling:** Electromagnetic, coupled field, and electrical field modeling for better design and performance assessment of electrical machines and insulation systems.

V. Cables, Accessories, and Power Electronics

• **Technologies for Cables and Accessories:** Latest technologies and materials used in power cables and their accessories.

VI. Renewable Energy Upgrade of existing power plants & Net Zero Efficiency Plants

• **Machine Efficiency and Losses:** Analysis of energy losses, heating, shaft currents, and strategies for improving machine efficiency.

• **Green Energy Transition:** Role of electrical insulation and rotating machines in supporting the shift to renewable energy sources.

• **Integration of Solar and Wind Power:** Technical challenges and solutions for integrating renewable energy sources into the grid.

• **Battery Storage Technologies:** Developments in battery storage systems and their impact on power generation and distribution.

VII. Outdoor Insulation

• Performance and development of outdoor insulation materials and components for various environmental conditions.

• Testing of dielectric characteristics of outdoor insulation devices.

IMPORTANT DATES

Abstract submission opens	**23 September 2024**
Abstract submission deadline	**27 October 2024**
Notification of abstract acceptance	**22 November 2024**
Registration opens	**20 January 2025**
Manuscript submission for peer review deadline	**26 January 2025**
Finalization of reviewed manuscripts deadline	**30 March 2025**

ABSTRACT SUBMISSION

Authors are invited to submit abstracts of up to 350 words on practical applications of electrical insulating systems and materials. All submissions will be done on-line using the ConfTool platform EIC 2025 - ConfTool Pro - Login. For further information and to submit abstracts, please go to the author's page on the conference website: www.ieee-eic.org.

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