CALL for TUTORIALS

ECCE 2026
IEEE ENERGY CONVERSION CONGRESS & EXPO — VANCOUVER, BC, CANADA • OCT. 4-8

The **IEEE Energy Conversion Congress & Exposition (ECCE)** is the leading international event dedicated to the advancement of energy conversion technologies. ECCE brings together practicing engineers, researchers, and industry experts from around the world to engage in insightful discussions, technical sessions, and collaborative exchanges on the latest innovations and practical applications in energy conversion.

The ECCE organizing committee invites proposals for tutorials to be presented at ECCE 2026. Each tutorial is three hours long, excluding break times. **Each accepted tutorial will receive one conference registration together with an honorarium of $1,000.** Please note that publication of a technical paper will still require a paid full registration.

All tutorial proposals should be submitted via the ECCE 2026 web portal under "Call for Tutorials." Please follow the Tutorial Proposal Form on the website as a submission template. The proposals will be reviewed by a panel of subject matter experts.

IMPORTANT DATES

MARCH 1 — Tutorial Proposal Due

MAY 31 — Notice of Acceptance

JUNE 19 — Final Tutorial Materials Due

2026

One or more of the following elements are strongly encouraged in the tutorial proposals:
a) Application-focused sessions on tools or methods for practicing engineers
b) ECCE 2026 topics relevant to the host city, e.g., smart mobility, clean energy, and sustainable infrastructure
c) Collaborative cross-disciplinary topics, industry-led or co-hosted lectures
d) Engaging topics and formats that effectively communicate with the audience and involve the attendees.

Tutorials considered less attractive to the audience include:
a) Lectures that are not balanced between theory and application
b) Tutorial topics presented previously in immediate past ECCE
c) Tutorials that narrowly focus on the presenter's research that is already publicly available
d) Solicitation of a particular product or service.

Potential topic areas include but are not limited to:

Energy Conversion Systems and Applications

- Renewable energy, including under-represented ocean-wave, tidal, and geothermal
- Smart grids, microgrids, nanogrids
- Electrical energy storage, and battery charging technologies
- Energy conversion for information and communications technology
- Energy harvesting and conversion
- Smart, energy-efficient buildings
- Energy efficiency for advanced manufacturing
- Big data and machine learning in energy conversion
- Digital twins for energy conversion systems
- Resilience and cybersecurity in energy conversion systems
- Transportation electrification
- HVDC and HVDC grids
- Power electronics dominated low-inertia grids, especially grid-forming strategies and protection
- AI-assisted optimization of energy management systems
- Intelligent fault detection and predictive maintenance using AI/ML
- Co-optimization of energy conversion and robotic task execution in autonomous systems
- AI-driven demand forecasting and dynamic load balancing in grids

Component, Converter & Subsystem Technologies

- Power electronics devices and conversion topologies
- Modeling and control of power converters
- Electric machines and drives
- Passive components, magnetics, and materials–particularly for high frequency
- Packaging, integration, and advanced manufacturing
- EMI and EMC
- Thermal management and advanced cooling technologies
- Wireless power transfer
- High-voltage power conversion, including insulation technologies
- Design automation and optimization
- Reliability, diagnostics, prognostics, and health management
- Fault-tolerant converters, drives and systems
- Protection and advanced gate drives for converters
- AI-enabled control algorithms for adaptive converters
- Neuromorphic computing in converter and drive control loops
- Edge AI deployment in embedded converter platforms
- Collaborative power converters for swarm robotics and distributed robotics power systems

Others

- Pedagogy for undergraduate learning and online education innovations
- Entrepreneurship, technology transfer, business management
- Development and use of standards for specific applications
- Curriculum development for AI and power electronics integration
- Standards for AI safety and ethics in power-critical robotic systems
- Policy and regulatory frameworks for autonomous energy systems

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