



IEEE ENERGY CONVERSION CONGRESS & EXPO  Detroit, Michigan, USA  Oct. 9-13

IMPORTANT DATES

February 11, 2022

Tutorial proposal due

April 8, 2022

Notification of acceptance

July 1, 2022

Full tutorials materials due

Call for Tutorials



General Chair

Emmanuel Agamloh
Baylor University, USA

Tutorial Co-Chairs

Pete Wung
University of Dayton, USA

Xu She
Carrier Corporation, USA

Xiaonan Lu
Temple University, USA

Others

- ▶ Pedagogy for undergraduate learning or under-represented groups
- ▶ Post-COVID technology innovations
- ▶ Entrepreneurship, technology transfer, business management
- ▶ Use of standards for specific applications

The 14th Annual IEEE Energy Conversion Congress and Exposition (ECCE 2022) will be held in Detroit, Michigan, USA, from October 9 to October 13, 2022. ECCE is a pivotal international event on energy conversion. It will bring together practicing engineers, researchers, and other professionals for interactive discussions on the latest advances in areas related to energy conversion.

The ECCE organizing committee invites proposals for tutorials to be presented at ECCE 2022. Each tutorial is 3 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 2022 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.

One or more of the following elements are strongly encouraged in the tutorial proposals:

- Industry led or co-hosted lectures;
- Interactive instructor-audience approaches, including hands-on demonstrations and practices;
- Application focused session on tools or methods for the practicing engineer.
- ECCE 2022 regionally oriented topics at the host city, e.g. transportation electrification;
- Collaborative cross-disciplinary topics and tutorial teams are welcome;
- Topics that engage the audience in formats that serves to communicate with the attendees.

Tutorials considered to be less attractive to the audience are:

- Topics that are too narrowly focused;
- Lectures that are not balanced between theory and application;
- Tutorial topics or teams presented previously in immediate past ECCE or other major IAS/PELS conferences;
- Tutorials that narrowly focus on presenter's own research works that are already publicly available
- 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, geothermal
- ▶ Smart grids, micro-grids, nano-grids
- ▶ Electrical energy storage, including real physics or controlled virtual storage
- ▶ Energy conversion for information technology and communication systems
- ▶ Energy harvesting and conversion
- ▶ Smart and energy efficient buildings
- ▶ Energy efficiency for advanced manufacturing
- ▶ Big data and machine learning in energy conversion
- ▶ Cybersecurity in energy conversion systems
- ▶ Transportation electrification, including aircraft and urban aerial mobility
- ▶ Battery charging technologies
- ▶ Resiliency in energy systems

Component, Converter and Subsystem Technologies

- ▶ Power electronic devices
- ▶ Power conversion topologies, modeling, and control
- ▶ Electric machines and drives
- ▶ Passive components, magnetics, and materials
- ▶ Packaging, integration, and advanced manufacturing
- ▶ EMI and EMC
- ▶ Thermal management, advanced cooling technologies
- ▶ Wireless power transfer
- ▶ High voltage power conversion, including insulation technologies
- ▶ Design automation or optimization
- ▶ Reliability, diagnostics, prognostics, and health management
- ▶ Fault-tolerant converters and systems

www.ieee-ecce.org/2022

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Tutorial Proposal Form

Format: Maximum 5 pages. All pages are formatted to 8-1/2 by 11 inch or A4 paper with margins of one inch on every side. All texts use single space, Times New Roman, black ink, and a font size of 11 or 12.

Recommended Sections:

1. Tutorial Title

2. Instructor Team

Name(s), affiliation(s), and contact information

3. Abstract

No more than 500 words. Accepted abstract will be published through the conference website, program, and proceedings.

4. Tutorial Outline

Outline shall only define the topics and subtopics. No detailed descriptions please. Time allocation and instructor breakdown by topics is recommended.

5. Lecture Style and Requirements

Briefly describe the tutorial format, which may include traditional lecture, software/hardware demonstration, interactive audience polls/quizzes, worksheets, discussion, etc. Note any equipment or space requirements beyond a laptop and projector. Also list the targeted audience and tutorial difficulty level, including any pre-requisite knowledge.

6. Instructor Biography

No more than 200 words for each person. Each biography shall include the qualifications most relevant to the proposal. Past tutorial/teaching experience and outcome can be highlighted. External website link can be included but may not be reviewed.
