



IEEE ENERGY CONVERSION CONGRESS & EXPO

Vancouver, Canada  Oct. 10-14

## IMPORTANT DATES

**February 12, 2021**  
Tutorial proposal due

**April 2, 2021**  
Notification of acceptance

**June 30, 2021**  
Full tutorial materials due



## Call for Tutorials



**General Chair**  
**Giovanna Oriti**  
Naval Postgraduate School, USA

**Tutorial Co-Chairs**  
**Yue Cao**  
Oregon State University, USA

**Katherine A. Kim**  
National Taiwan University, Taiwan

The 13th Annual IEEE Energy Conversion Congress and Exposition (ECCE 2021) will be held in Vancouver, British Columbia, Canada, from October 10 to October 14, 2021. ECCE is a pivotal international event on energy conversion. A diverse portfolio of tutorials are solicited: 1) Basic knowledge in a particular subfield of power electronics or energy conversion, from components to systems; 2) Emerging technology in either fundamental breakthroughs or new applications; 3) Industry skillsets or tools with knowledge beyond textbooks or academic papers. All tutorials are held on Sunday, October 10, 2021, either morning or afternoon. Each tutorial is 3 hours long, excluding break times. Each accepted tutorial will receive one conference registration together with an honorarium of \$1,000. Note that publication of a technical paper will still require a paid full registration.

One or more of the following elements are *strongly encouraged* in the tutorial proposals: A) Industry led or co-hosted lectures; B) Interactive instructor-audience approaches, including hands-on; C) ECCE 2021 regionally oriented topics; D) Collaborative cross-disciplinary topics or teams; E) Other creative topics or formats that engage the audience.

Factors considered as *less attractive* to the audience are: a) Narrowly focused topics; b) Theory heavy lectures; c) Similar tutorial topics or teams from the immediate past ECCE or other major PELS conferences; 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, 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 power electronics based 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

### Others

- ▶ Schematic and PCB layout designs
- ▶ Post-COVID technology innovations
- ▶ Pedagogy for undergraduate learning or under-represented groups

**Proposal Submission and Review Process:** All tutorial proposals should be submitted via the ECCE 2021 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.

[www.ieee-ecce.org/2021](http://www.ieee-ecce.org/2021)

Vancouver, Canada – October 10 – October 14, 2021



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Vancouver, Canada ☰ Oct. 10-14

# 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

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### 2. Instructor Team

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

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### 3. Abstract

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

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### 4. Tutorial Outline

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

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### 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.

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### 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.

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