October 2021 e-Newsletter

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Webinars from the PELS Ph.D. Thesis Talk Award Recipients

**Presenter:** Sung Yul Chu  
University of Michigan  
United States  

**Sparse Electromagnetic Measurement to Recover High Fidelity Information for Wireless Power Transfer**  
Friday, 5 November 2021  
10:00 AM ET  

[Register Here](#)

**Presenter:** Zichao Ye  
University of California Berkeley  
United States  

**Hybrid Switched-Capacitor Power Converter for More Efficient Data Center**  
Thursday, 2 December 2021  
11:00 AM ET  

[Register Here](#)
Presenters:
Brian Zahnstecher, PowerRox, USA &
Mike Hayes, Tyndall National Institute, Ireland

The Virtuous Circle of 5G, IoT and Energy Harvesting

Wednesday, 10 November 2021
10:00 AM ET

Register Here

Presenter:
Rukmi Dutta
UNSW Sydney
Australia

Breaking the Barrier for High-Speed in the Interior Permanent Magnet Machine

Monday, 15 November 2021
5:00 PM ET

Register Here

Presenter:
Santuna Kapat
IIT Kharagpur
India

Online Pedagogical Resources on Control and Tuning Methods in Switched Mode Power Converters

Wednesday, 8 December 2021
10:00 AM ET

Register Here

Presenter:
Sudip Mazumder
University of Illinois Chicago
United States

Multi-scale Control for Power Electronics

Tuesday, 14 December 2021
12:00 PM ET

Register Here

Visit the PELS Website for additional webinars

Visit the TEC Website for additional webinars

Check out the latest PELS Podcasts
A Fireside Chat with Professor Ned Mohan

Perspectives on a Career Path After (Graduate) School

Spotlighting the Future of Design Trends in Power Electronics with Dr. Alan Mantooth

Upcoming Events

Be in the know!
Click here to view the listing of upcoming PELS Chapter Events

Call for Papers

Call for Papers - Publications:

- IEEE Transactions on Transportation Electrification (TTE) - Special Issue on: Electrified Aircraft Technologies
- IEEE Journal of Emerging and Selected Topics in Industrial Electronics ("JESTIE") Special Section on “Power Electronics-Interfaced Smart Energy Storage for Emerging Electric Mobility”
- IEEE Journal of Emerging and Selected Topics in Power Electronics Special Issue on: Machine Learning Techniques in Power Electronics
- IEEE Journal of Emerging and Selected Topics in Power Electronics Special Issue on: Machine Learning Techniques in Power Electronics

Empower a Billion Lives-II

Empower a Billion Lives-II, the global competition to crowdsource scalable solutions to energy access has launched. Teams are invited from across the globe and from all walks of life, including companies, research organizations, entrepreneurial startups, as well as student teams from colleges and universities. Participating in EBL-II is easy.

Log on to www.empowerabillionlives.org and register your team. Review the requirements on the website and submit a brief 3-page Concept Paper by November 30, 2021. The selection process will lead to field trials and the EBL II Global Final, scheduled for October 2022. EBL-I awarded over $500,000 in prizes and financial support to the teams.
The IEEE/AIAA Transportation Electrification Conference and Electric Aircraft Technologies Symposium (ITEC+EATS) invites you to participate in the 2022 ITEC+EATS Student Design Challenge.

Background: Stimulated by ambitious emission reduction goals established by our modern society due to the climate, radical technologies and revolutionary design approaches are required for the future aviation sector. One way to achieve these goals resides in increased electrification of aircraft. As one future promising technology, advanced battery systems have been identified as one of the solutions for this electrification. However, the aviation sector has requirements for large amounts of electrical power at high voltage (up to megawatts) for such airborne applications. Because of the severe weight and volume constraints imposed on any aircraft design and stringent reliability and safety requirements, the design of a high-voltage/high-power distribution propulsion system for zero-emission aircraft needs a careful examination. Such skills are now essential to engineers who design aircraft of the future.

Challenge: The aim of the 2022 Student Design Challenge is to trigger increased awareness in design towards managing phenomena linked to high voltage. The main goal is to design a high-voltage/high-power distribution propulsion system for a 4 E-motor full-electric aircraft. The entry into service (EIS) is 2040 for a 9 PAX + 1 crew + luggage aircraft with a 260km range including a 50 km backup. The challenge includes electric distribution optimization, component sizing, safety considerations, and risks mitigation linked to phenomena like discharges or electric arcs. The objective is to have energy storage to supplement take off, climb, go-around, and emergencies via batteries and the 4 E-motors.

For complete information click here.
You are receiving this message because of your membership or interest in the IEEE Power Electronics Society.