

## ***ITEC 2024 Will Tackle Latest Issues In Vehicle Electrification***

The [IEEE Transportation Electrification Conference & Expo \(ITEC\)](#), which will be held June 19-21, 2024 at the Donald E. Stephens Convention Center in Rosemont, Illinois, has published its final program. The program includes a full slate of technical lectures (oral sessions), tutorials, short courses and keynote talks with speakers representing a range of organizations working in the transportation electrification field. ITEC 2024's panel presentations highlight many of the top-of-mind issues facing the issue today.

Panel topics include

- Sustainable Freight Transportation
- Off-Highway Vehicle Electrification
- Electric Motors are the Forgotten Link in the EV Chain
- Emerging EV Charging Technology and Policy Trends
- Advanced Battery Technology
- Grid-Tied Electric Vehicle Integration with Artificial Intelligence Advancements.

On the mornings of Wednesday, June 19 and Thursday, June 20, the conference will present a total of eight plenary sessions featuring the following keynote speakers:

- Ryan J. Kennedy, PE, co-founder and CEO of Atom Power
- Jackie DiMarco, director—Product Line Management at Ford Motor Company
- Sanjaka G. Wirasingha, R&D director for Powertrain Electrified Mobility at Valeo Americas
- Kristen Wahl, director of Energy Justice & Workforce Readiness for the Advanced Energy Technologies Directorate (AET)
- Claus Daniel, associate laboratory director for Advanced Energy Technologies (AET).
- Alex Cattelan, Chief Operating Officer for Fermata Energy
- Arshan Khan, director of Power Electronics and Electric Machines at CNH Industrial America
- Christine Andrews, Hybrid electric systems executive leader, GE Aerospace.

One of the extracurricular highlights of this year's conference is the offering of a lab tour of Argonne National Laboratory on Friday morning, June 21, 2014. More details on this tour are given below.

In addition to the oral sessions, this year's program includes short courses and tutorials with CEU credits offered, plus the panel presentations previously mentioned. The short course and tutorial topics are listed below followed by the oral sessions in Table 1.

### ***Short Courses and Tutorials***

#### **Short Courses**

- [Adaptive Geometric and Dimensions Alignment Guided Approach Design Optimization for Efficiency Improvement of WPT Systems](#)
- [Digital Control and FPGA-based Rapid Prototyping in Switched Mode Power Converters](#)
- [Energy Management Strategy Design for Fuel Cell Hybrid Electric Vehicles](#)
- [Commercial Aviation Electrification: Challenges and Opportunities](#)

**Tutorials:**

- [Using Multiphysics Tools to fit a PMSM Simulation model with Experimental Results](#)
- [Design & Optimization of High Torque Density Permanent Magnet Synchronous Machines with Optimal Weakening for Traction Applications](#)
- [Multi-Objective Design Optimization of Electric Propulsion Drive Systems for Aviation](#)
- [XiL Rapid Controls Development through Simulation of an Electrified Vehicle with AVL CRUISE M Physics-Based Models](#)

Table 1. ITEC 2024 lecture session schedule.

Time	Room 40	Room 50	Room 41	Room 44	Room 46	Room 48
Wednesday Jun 19th, 2024 14:00-15:40	A2L-A <a href="#">Fuel Cells and Hydrogen</a> (5 papers) Chr: TBA Track: 4	A2L-B <a href="#">WBG Power Electronics</a> (5 papers) Chr: TBA Track: 1				
Wednesday Jun 19th, 2024 16:20-18:00	A3L-A <a href="#">Fault Detection, Management, and Control</a> (5 papers) Chr: TBA Track: 2	A3L-B <a href="#">Fast and On-Board Chargers</a> (5 papers) Chr: TBA Track: 11				
Thursday Jun 20th, 2024 14:00-15:40	B2L-A <a href="#">DC/DC Power Conversion</a> (5 papers) Chr: TBA Track: 1	B2L-B <a href="#">Electric Motor Control</a> (5 papers) Chr: TBA Track: 2				
Thursday Jun 20th, 2024 16:20-18:00	B3L-A <a href="#">Electric Vehicle Architecture</a> (5 papers) Chr: TBA Track: 5	B3L-B <a href="#">Wireless Power Transfer</a> (5 papers) Chr: TBA Track: 11				
Friday Jun 21st, 2024 08:30-10:10	C1L-A <a href="#">Rectifiers and Inverters</a> (5 papers) Chr: TBA Track: 1		C1L-C <a href="#">Powertrain Architecture</a> (5 papers) Chr: TBA Track: 3	C1L-D <a href="#">Electrified Aircraft</a> (5 papers) Chr: TBA Track: 9		C1L-F <a href="#">Electric Machine Design</a> (5 papers) Chr: TBA Track: 2
Friday Jun 21st, 2024 10:30-12:10	C2L-A <a href="#">Heavy Duty Electrified Vehicles</a> (5 papers) Chr: TBA Track: 8		C2L-C <a href="#">Coupled Transportation: Power Grids and Micro-grids</a> (5 papers) Chr: TBA Track: 7	C2L-D <a href="#">Battery State of Charge</a> (5 papers) Chr: TBA Track: 4		C2L-F <a href="#">Thermal Management</a> (5 papers) Chr: TBA Track: 3
Friday Jun 21st, 2024 13:40-15:20	C3L-A <a href="#">Motor Drives</a> (5 papers) Chr: TBA Track: 1		C3L-C <a href="#">Electromagnetic Characterization and Interference</a> (5 papers) Chr: TBA Track: 1	C3L-D <a href="#">Impacts of Electric Vehicle Charging</a> (5 papers) Chr: TBA Track: 7	C3L-E <a href="#">HIL and Evidence-Based Design</a> (5 papers) Chr: TBA Track: 10	C3L-F <a href="#">Electrified Ships and MVDC Systems</a> (5 papers) Chr: TBA Track: 9
Friday Jun 21st, 2024 15:50-17:30			C4L-C <a href="#">AI/ML for Electrified Transportation</a> (5 papers) Chr: TBA Track: 6	C4L-D <a href="#">Battery State of Health and Aging</a> (5 papers) Chr: TBA Track: 4	C4L-E <a href="#">Emerging Trends and Applications</a> (5 papers) Chr: TBA Track: 12	C4L-F <a href="#">Battery Thermal Modeling and Management</a> (5 papers) Chr: TBA Track: 4

ITEC is aimed at helping the industry in the transition from conventional vehicles to advanced electrified vehicles. The conference is focused on components, systems, standards, and grid interface technologies, related to efficient power conversion for all types of electrified transportation, including electric vehicles, hybrid electric vehicles, and plug-in hybrid electric vehicles (EVs, HEVs, and PHEVs) as well as heavy-duty, rail, and off-road vehicles and airplanes and ships. For more information on all elements of the conference program, see the program [page](#).

In addition to the sessions listed above, the ITEC 2024 conference includes special events such as an expo reception, an industry night out, a young professionals reception, a career fair, and a Women In Engineering (WIE) luncheon. An overview of the conference program is shown below in Table 2.

Table 2. ITEC 2024 schedule at a glance.

	Wednesday	Thursday	Friday
07:30	Registration Opens		
08:30	Plenary Sessions 1 & 2	Plenary Sessions 4 & 5	Oral Sessions 9 - 12 Short Course 4
10:00	Coffee Break		
10:30	Plenary Session 3 Plenary Panel	Plenary Sessions 6 - 8	Oral Sessions 13 - 16 Short Course 4 (cont'd)
12:00	Lunch in Expo Hall Poster Session 1 in Expo Hall	Lunch in Expo Hall Poster Session 2 in Expo Hall TC4 Luncheon	Lunch in Expo Hall WIE Luncheon
14:00	Short Course 1 Panels 1 & 2 Tutorial 1 Oral Sessions 1 & 2	Short Courses 2 & 3 Panels 4 & 5 Oral Sessions 5 & 6	Oral Sessions 17 - 21
15:30	Coffee Break		
16:30	Short Course 1 (cont'd) Panel 3 Tutorials 2 & 3 Oral Sessions 3 & 4	Short Courses 2 & 3 (cont'd) Panel 6 Tutorial 4 Oral Sessions 7 & 8	Oral Sessions 22 - 25

### Lab Tour Of Argonne National Laboratory

The scientists at Argonne National Laboratory are graciously opening their doors to ITEC attendees who sign up for this amazing tour. Argonne, located in Lemont, IL, is home to groundbreaking discoveries and transformative technologies across many science domains. The research at ANL spans physics and chemistry to clean energy and transportation.

This tour will happen the morning of Friday, June 21st, 2024. Register for this tour as an optional add-on while you are registering for the conference.

### Exhibition

ITEC creates space for highly positioned engineering professionals to network, collaborate and experience cutting-edge electrification technology of transportation. Come walk the expo to find solutions ranging from high voltage test equipment to components, simulation tools and companies showcasing their latest innovations. Network with decision-makers and influencers in the transportation electrification industry.

This year's exhibitors include Advanced Test Equipment, Chroma, Dewetron, Elantas PDG, FormFactor, HBK, How2Power.com, IEEE Power Electronics Society, IEEE Transportation Electrification Council, MathWorks, Opal-RT Technologies, Pacific Power Source, Sensata Technologies, Solarcore, SUITA Electric, TDL Lambda Americas, The Ohio State University (Center for High Performance Power Electronics), and the University of Kentucky.

Other companies or organizations interested in exhibiting or sponsoring ITEC 2024 should contact the exhibits manager, [Providence Greene](#).

For other inquiries about ITEC 2024, email [info@itec-conf.com](mailto:info@itec-conf.com).