Tektronix®

Precision in Power Conference 2026

Tuesday, 21 April | 9:00 – 17:00
British Motor Museum Gaydon

Attendees will have all-day access to the Tektronix showrooms to explore our solutions and meet our experts.

- **9.00 - 9.30 am**
  Welcome, registration and Coffee

- **9.30 - 10.00 am**
  Opening speech

- **10:20 - 11.00 am**
  Unlocking Battery Health: Advanced Test Workflows & High-Speed EIS
  This session explores how today's most advanced battery test workflows are designed—from single-cell characterisation all the way through module and pack validation. Attendees will discover how Rapid EIS and precision sourcing technologies dramatically accelerate the understanding of cell health, ageing behaviour, and performance variability. The session also highlights how these fast, accurate techniques are applied across both R&D environments and high-throughput manufacturing test setups.
  Presented by: Guido Eckers

- **11.30 - 12.15 pm**
  Precision at Speed: Python-Driven Automation for Double-Pulse Testing
  This session introduces how Python-based automation transforms Double Pulse Testing (DPT) — a critical method for analysing the dynamic switching behaviour of power semiconductor devices, especially SiC and GaN technologies. Attendees will learn how automated DPT ensures consistent extraction of key switching parameters, including switching energy, dv/dt, di/dt, and voltage/current overshoot. The session also demonstrates how software-driven workflows streamline device comparison, support regression testing, and accelerate engineering insight—all without sacrificing measurement fidelity.
  Presented by: Sushil Vohra

- **12.15 - 1.15 pm**
  Lunch & Networking

1.15 - 2.00 pm
From Noise to Accuracy: Optimising Shunt-Based Current Measurement
This session explores the key challenges of measuring fast, low-level currents in modern power electronics and the techniques that ensure accurate, trustworthy results. Attendees will learn when shunt-based measurement methods are the preferred approach, how isolation and bandwidth influence performance, and how to minimise noise and common sources of error. The session provides practical guidance for achieving high-fidelity current measurements in demanding switching environments.
Presented by: Pierre Dupont

2.15 - 3.00 pm
The impact of phase errors in power measurement
Power Analysers are key measurement devices to validate the performance of designs, but frequency dependence of current sensing is becoming the cause of measurement errors. With the increasing use of SiC and GaN semiconductors in power electronics, switching frequencies have risen, which increases the impact of phase errors on accurate power measurement. This can lead to inconsistent power efficiency measurements and in some cases even efficiencies that exceed 100%.
In this session, Hioki will address what phase errors are, how they affect measurements, and what you can do to avoid them and can get accurate and repeatable measurements.
Presented by: Roy Hali, Senior Application Engineer HIOKI Europe GmbH

3.30 - 4.15 pm
From Manual Variability to Machine-Level Precision: Automated Device Characterisation
This session explores how automated approaches transform power semiconductor characterisation by standardising workflows, reducing test variability, and enabling consistent comparison of device behaviour across operating conditions. Attendees will learn how automated test processes reveal deeper insight into performance limits, switching behaviour, and device-to-device variability. The session highlights how automation accelerates design confidence, streamlines validation, and ensures more reliable engineering decisions.
Presented by: Derek MacLachlan

4.15 - 5.00 pm
Q&A session with all panelists

Demo Stations – What Attendees Will See and Learn

Battery Cell Testing with BIM
Attendees will see a live battery factory style test setup and learn how controlled charge discharge cycling and precision measurement are used to characterise cells. The demo shows how Rapid EIS accelerates insight into battery behaviour and supports validation and ageing studies.

Current Measurement Techniques
Attendees will learn how different current measurement techniques compare in real applications. The demo highlights how shunt based measurement using isolated probes improves accuracy, bandwidth, and noise immunity compared to traditional probes and DMMs.

DC DC Converter Testing
Attendees will observe practical measurement setups for DC DC testing and learn how voltage, current, and switching measurements are used to validate performance and identify issues during development.

Automated Semiconductor Characterisation
This demo shows how an automated test environment can be built using DC precision instrumentation. Attendees will learn how scripting and modular hardware enable repeatable test execution, data capture, and flexible automation for power and semiconductor applications.

Practical In Vehicle Debugging
Attendees will learn how mixed signal oscilloscopes are used for real world system bring up and debugging. The demo covers power rail checks, bus decoding (e.g. CAN/LIN), and signal integrity analysis commonly required during early development and troubleshooting.

Automated Double Pulse Testing
See how automated double pulse testing simplifies the characterisation of modern power semiconductors. This demo shows how automation delivers repeatable switching measurements, faster insight into device behaviour, and consistent results across test conditions—reducing setup time and engineering effort.