

## 1. Session Title

Measurement Technology Required for the Power Electronics Industry that Leads the Decarbonized Society

## 2. Abstract

Huge investments are being made around the world to reach carbon neutrality with the aim of realizing a sustainable society. In particular, the automobile industry is undergoing electrification development on a global scale, and the adoption of inverters equipped with next-generation power semiconductors such as SiC and GaN is expanding in order to improve the performance of electric vehicles. These new semiconductor technologies are challenging the established paradigms of test instruments in terms of accuracy, bandwidth and capabilities.

This special session brings together panelists from electrical measuring instrument manufacturers and academia who have been leading the power electronics industry in connection with critical measurement technologies. Attendees of this special session will hear opinions exchanged amongst competitors and will learn of the newest test challenges as a way to foster test equipment innovation.

## 3. Session Organizers

**Organizer 1:** Dr. Christopher Scholz, Director of Marketing, HIOKI USA, Dallas, TX



Dr. Scholz is Director of Marketing at Hioki USA where he leads the marketing, product management and applications engineering departments. Christopher has more than 14 years experience in the test and measurement industry. In his current role he is responsible for application and product strategy at HIOKI USA as well as go-to-market tactics. His experiences includes product management and application engineering positions at major T&M companies as well as product development at Intel Corporation.

He received a Ph.D. in Electrical and Computer Engineering and a MS in Aerospace Engineering, both from the Georgia Institute of Technology as well as a MS degree in Mechanical Engineering from the RU Bochum, Germany.

## 4. Session Panelists/Speakers

**Panelist 1:** Dr. Masayuki Harano, Sensors Product Manager, HIOKI E.E., Ueda, Japan

**Title:** Contribution to the power electronics industry by highly accurate current measurement

**Panelist 2:** Mike Hawes, Automotive & Energy Solutions Planning Manager at Keysight Technologies

**Title:** Dynamic characterization of WBG power devices

**Panelist 3:** John Tucker, Business Manager and Power Market Segment Leader, Tektronix

**Title:** Testing Requirements Evolve for Energy-Efficient Power Electronics

**Panelist 4:** Ken Johnson, Director of Marketing, Product Architect, Teledyne LeCroy

**Title:** Measurement Comparison of Various High Voltage Probe Topologies at 48V and 500V DC Bus Rating

**Panelist 5:** Dave Gallop, Business Development Manager, Dewesoft

**Title:** Thermal Management, monitoring and safety measures

**Panelist 6:** Chris Hewson, Managing Director, Power Electronic Measurements (PEM) Ltd

**Title:** Wide-band Rogowski current measurement in next generation power electronics, present and future.

**Panelist 7:** Prof. Paul R. Ohodnicki, Jr. Assoc. Professor and Director of the Advanced Magnetics for Energy and Power Development (AMPED) Consortium, University of Pittsburgh

**Title:** Standardization of magnetic material, core, and component measurements for medium frequency and medium to high power applications in power electronics