

PSMA Capacitor Committee and IEEE PELS Capacitor Workshop:
The Impact of Wideband Technologies on Application of Capacitors
- A Deep Dive on Capacitor Technology -
Date: Saturday March 16, 2019
Anaheim, California

Registration, Technical Demonstrations and Breakfast (7:00-8:00)

Introductions (8:00-8:05)

Keynote (8:05-8:30)

Topic	Presenter
GaN Technologies	Gene Sheridan, Navitas Semiconductor

Session I (8:30-10:00)

Topic	Presenter
Supercapacitors - Getting a clear picture of EDLC, Gold, Hybrid and more	Rene Kalbitz, Würth Electronics
All about Tantalum caps, future developments, escape from MLCC crisis, what's coming next?	Wilmer Companioni, KEMET Electronics Corporation
Horizontal Aluminum Polymer Chip Capacitors - SP-Caps - A technology to overcome the MLCC crisis?	Satoshi Ogano, Panasonic
Loss Modeling of Ceramic Capacitors under high DC bias voltage and AC current ripple in high density power converters	Robert Pilawa, University of California, Berkeley

Session II (10:20 - 12:00)

Topic	Presenter
Ceramics - specialties e.g. soft / flex term, high power, high voltage and more	Wilmer Companioni, KEMET Electronics Corporation
Understanding Requirements for High Frequency AC Harmonic Filter Capacitors	Hector Casanova, CDE
Supercapacitors, Applications and PROS & CONS	Brendan Andrews, Tecate
Capacitor implementation in low voltage (< 1000 VAC) variable frequency drives	Ranga Tallam, Rockwell Automation
Challenges of implementing capacitor technology in automotive applications	Thomas Ebel, South Denmark University

Technical Demonstrations and Lunch (12:00-2:00)

- Test Board based on GaN technology; Navitas Semiconductor
- The Film Capacitor Tech for DC Link; Xiamen Faratronic Co. Ltd.
- Tantalum & Ceramic Capacitor Technologies; KEMET Electronics Corporation
- 150W buck / boost converter & Efficiency comparison MLCC vs. H-Chip Aluminum; Würth Electronics
- Supercaps in a wireless power transfer application; Würth Electronics
- Life testing e-Motorbike drive train; Rohde & Schwarz
- Life time Diagnostics using Electromagnetic spectrums; Miami University

Session III (14:00-15:30)

Topic	Presenter
Feature: New DC Link Cap Technology - Forward thinking Approach on Polymers	Future Technology Worldwide, Fred Weber
DC Link Capacitors in eMobility applications	Patrick Wheeler, University of Nottingham
DC Link Capacitors, Technology outlook, now and future developments	Faratronic, Michael Dombrow
High Power Converter	Frank Puhane, Würth Electronics
Conditional Monitoring Techniques for Capacitors	Mark Scott, Miami University

Session IV (16:00-17:00)

Thermal modeling and characterization of capacitor banks used in MW power	Huai Wang, Aalborg University
Lessons Learned of MLCC allocation - what are alternatives?	Panel Q&A

Networking Hour and Technical Demonstrations (17:00-18:00)