5th PCNS Seville, Spain 9-12th September 2025

FINAL PROGRAM

Program subjected to change without notice

Tuesday 9th September 2025 Workshop & CNA Tour

13:00-14:00 **Workshop I. Passive Components Technologies Update**; **Design Review of EMI filter for Power Electronics – How Components Influence the Performance;** Speaker: Frank Puhane, Würth Elektronik eiSos GmbH & Co. KG

---- break ----

14:30-15:50 **Workshop II. Key Aspects of Selection, Procurement, and Testing of Passive EEE Components for Harsh Environment Applications;** ALTER TECHNOLOGY*;* Speaker: Manuel Sánchez, ALTER Technology, EEE Parts Engineer

---- break ----

16:10-17:30 **Centro Nacional de Aceleradores tour;** Tour through university accelerator centre (registration required, no fee)

Wednesday 10th September 2025 Conference & Networking

9:00-9:30 **Welcome** University of Seville, ALTER TECHNOLOGY and EPCI

9:30-9:55 **Keynote I.** ***European Passive Components Market***; EPCIA European Passive Components Industry Association
Speaker: Luca Primavesi; Itelcond president and EPCIA member

9:55-10:00 **EPCIA Student Awards Ceremony;** EPCIA

10:00-10:30 **Speakers Introduction**

---- break ----

11:00-12:00 **TPI Technical Product Introduction Flash Presentations** - 5min short commercial presentations from manufacturers to introduce its hot product / news or invitations to exhibition booth

12:00-12:30 **Keynote II** ***Quality Challenges and Risk Mitigation for Passive Components in Harsh Environments***;
Speaker: Antonio Rodriguez Arenas, ALTER TECHNOLOGY

---------- FINGER PICK LUNCH AT EXHIBITION FLOOR ----------

13:20-14:35 **Session I. HARSH APPLICATIONS**; Chairman:

- ***1.1. Thermoset Polymer Dielectric Capacitors for Harsh Environment Applications***; Angelo Yializis; Polycharge Inc.; USA
- ***1.2. Tantalum Capacitors Technologies for Harsh Environments***; Michel Bouvier; Vishay Tantalum Division; France
- ***1.3. Murata's Silicon Capacitors: Reliable Performance in Extreme Conditions****;* Enzo Darcy; Murata Europe; France

---- break ----

15:05-15:35 **Keynote III.** ***Advances in the Environmental Performance of Polymer Capacitors***;
Philip Lessner; Philip Lessner Consulting; USA

15:35-17:15 **Session II. QUALITY & RELIABILITY;** Chairman:

- ***2.1. Enhancing E-Textile Reliability: A Comparative Study of SMD-Ribbon Joints Protections Against Sweat***; Martin Hirman; University of West Bohemia, Pilsen, Czech Republic
- ***2.2. New Generation of Metallized Film Capacitors Based on EPN for Solving Upcoming High Temperature and High Power Density Requirements***; Manuel Gómez; TDK Malaga, Spain
- ***2.3. Protecting the Quality & Reliability of Passive (and Active) Components: the J-STD-075 PSL Classification & Labeling;*** Arnaud Grivon; Thales Global Services, Meudon, France
- ***2.4. Lifetime Assessment for Capacitors in EPS Application***; Krzysztof Ptak; Nexteer Automotive, Poland

---- break ----

17:35-19:15 **Session II. QUALITY & RELIABILITY (cont.);** Chairman:

- ***2.5. Development and Validation of the New IRCA S.p.A.'s Pure-Polyimide Flexible Heater for High-Reliability and High-Performance Markets****;* Alessandra Marcer; IRCA s.p.a. Zoppas Industries; Italy
- ***2.6. Assessment of a Graphene-Based Supercapacitor: Environmental Hotspots and End-of-Life Strategies for Sustainable Energy Storage;*** Gianmarco Gottardo; Politecnico di Milano, Italy
- ***2.7. Capacitor Degradation and Failure Mechanisms: Exploring Different Causes Across Technologies;*** Frank Puhane; Würth Elektronik eiSos GmbH & Co. KG; Germany
- ***2.8. Beyond 85/85: Towards Realistic Lifetime Estimation of Polypropylene Film Capacitors in Humid Environments****;* Massimo Totaro; KEMET YAGEO Group; Italy

19:15-21:00 ---------- **YAGEO Welcome Drink** ----------

Thursday 11th September 2025 **Panel Discussion & Sessions**

9:00-10:30 **Special Session. AI and its Consequences;** Chairman: Tomas Zednicek, EPCI

AI.1 ***Revolutionizing the Defect Detention during the Cross-Sectional analysis for Electronics with Computer Vision***; Mari Carmen López López; ALTER TECHNOLOGY, Spain

AI.2 ***Passive Components in AI Systems***; Slavomír Pala; KYOCERA AVX, Lanskroun, Czech Republic

AI.3 ***AI Hardware Development and Its Consequences for Passive Electronic Components***; Tomas Zednicek; EPCI; Czech Republic

---- break ----

11:00-12:30 **Hot Topic Panel Discussion:** ***AI and its Consequences to Passive Components***

Panellists: passive component manufacturers & end users experts

---------- lunch ----------

13:20-13:50 **Keynote IV.** ***Space Evaluation Testing on SAW Filter Based on POI Technology)***; Kaoutar Zeljami; ALTER TECHNOLOGY, Spain

13:50-15:30 **Session III. NEW DEVELOPMENT;** Chairman:

- ***3.1*** ***Textile-Based Antennas***; Tomas Blecha; University of West Bohemia, Pilsen, Czech Republic
- ***3.2*** ***New Construction and Packaging Process for Highest Voltage Aluminium Polymer Electrolytic Capacitor;*** Tim Kruse, PhD student; Syddansk Universitet Sønderborg; Denmark
- ***3.3*** ***A New Approach to the Design of High Precision Integrated Resistive Voltage Dividers;*** Stephen Oxley; TT Electronics; UK
- ***3.4*** ***Revolutionizing High Frequency Applications: 3-Terminal XG3 Eulex Gap Capacitor;*** Colin McClennan; Quantic Eulex; USA

---- break ----

16:00-17:40 **Session IV. MATERIALS & PROCESSES;** Chairman:

- ***4.1*** ***Flaked Tantalum Powders: High Capacitance Powders for High Reliable Tantalum Capacitors***; Gordon Smith; Global Advanced Metals; USA
- ***4.2*** ***Reliability of E-Textile Conductive Paths and Passive Component Interfaces;*** Julie Hladikova; University of West Bohemia, Pilsen, Czech Republic
- ***4.3*** ***Layer-by-Layer Fabrication of Thin Polypropylene-based Dielectrics;*** Bartosz Gackowski; CIE, SDU; Denmark
- ***4.4*** ***Development and Prototyping of Nitrogen-Doped Graphene Supercapacitors;*** Veronika Šedajová; Palacký University Olomouc, Czech Republic

---- move by walk to ALTER TECHNOLOGY facility ----

18:00-19:30 --- **ALTER TECHNOLOGY Test Facility Tour** (bus coach to Gala Dinner leaves ALTER TECHNOLOGY at 19:30) ----------

20:00-23:00 ---------- **Murata Gala Dinner** (individual leave from Gala Dinner restaurant in the city center) ----------

Friday 12th September 2025 **Sessions & Closing**

9:00-10:40 **Session V. APPLICATIONS;** Chairman:

- ***5.1.*** ***High-Performance Component Strategies to Address Thermal and Frequency Challenges in Base Stations***; Che Wei Hsu; Murata Europe; Netherlands
- ***5.2.*** ***Automotive Polymer Tantalum Capacitors with capabilities beyond AEC-Q200 - Guidelines for usage on LEO Satellite Industry***; Cristina Caetano; KEMET, a YAGEO Company, Portugal
- ***5.3.*** ***Improving Switched-Mode Power Supplies Performance with Modified Thermal Interface Material***; Victor Solera; University of Valencia; Spain
- ***5.4.*** ***Resonant Capacitors in High-Power Resonant Circuits***; Moaz ElGhazali; Murata Europe; Germany

---- break ----

11:10-12:50 **Session V. DESIGN & CONSTRUCTION;** Chairman:

- ***6.1.*** ***Qualification of Commercial Off-The-Shelf Supercapacitors***; David Latif; EGGO Space, Lanskroun; Czech Republic
- ***6.2.*** ***Experimental Evaluation of Wear Failures in SMD Inductors***; Masaaki Tsujii; Murata Manufacturing Co., Ltd.; Japan
- ***6.3.*** ***How to Manage Leakage Current and Self Discharge of EDLC Capacitors***; Gerald Tatschl; Vishay; Austria
- ***6.4.*** ***Advancements in Flexible End Terminations for High-Reliability Passive Components in Electrified Vehicles***; Dean Buzby; Heraeus Electronics; USA

12:50-13:00 **Best Paper Awards & Closing Ceremony**

---------- 13:00 lunch ----------