



3rd PCNS Milano, Italy

7-10th September 2021

FINAL PROGRAMME

Ver.1

Pre-Event Day 7th September 2021

13:00-17:00 **Workshop: *Characterization Techniques and Life Cycle Assessment of Materials Involved in Passive Components*** S.Latorrata, G.Dotelli, L.Primavesi (registration required)

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15:30-17:00 **Paumanok Market Seminar: *Passive Components; Global Market Outlook with monthly updates of key data metrics for 2021***; Dennis M Zogbi; Paumanok Inc. (registration required, extra fee applies)

---- break ----

17:00-19:00 **Politecnico di Milano University Tour** (registration required, fee included)

Conference & Networking Day 1 8th September 2021

9:00-9:30 **Welcome** prof. Mariapia Pedferri; Politecnico di Milano and Tomáš Zedníček Ph.D.; EPCI

9:30-10:00 **Keynote I. *Passive Components in Europe***; EPCIA European Passive Components Industry Association
Ralph Bronold; EPCIA president

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10:20-10:50 ***Semiconductor development***; STMicroelectronics; **Francesco Gennaro**; Application Development Manager

10:50-11:50 **Speakers Introduction**

----- lunch -----

12:40-13:40 **Technical Introduction Flash Presentations** - 5min short commercial presentations from manufacturers to introduce its hot product / news or invitations to exhibition booth

13:40-15:40 **Session 1. MATERIALS & PROCESSES**; Chairman: Thomas Ebel

- 1.1. ***Design, documentation and test of ESCC Qualified Custom Magnetics by Technology Flow Qualification***; Lars Gregersen; Flux A/S; Denmark
- 1.2. ***Low Curie Temperature Materials, The Next Generation of High Energy Density Class II Ceramic Dielectrics?***; Tomáš Zedníček; EPCI; Czech Republic
- 1.3. ***Influence of Sweat on Joints Reliability between SMD Chip Resistors and Conductive Ribbons***; Martin Hirman; University of West Bohemia in Pilsen; Czech Republic
- 1.4. ***Modified carbon nanotubes and their applications in electronics***; Tomáš Blecha; University of West Bohemia in Pilsen; Czech Republic

---- break ----

16:00-18:00 **Session 1. (cont.) MATERIALS & PROCESSES**; Chairman: Saverio Latorrata

- 1.5. ***Reaching the next level of reliability for polymer capacitors***; Udo Merker; Heraeus Epurio; Germany
- 1.6. ***Using Yield strength and Young's modulus anode characterisation for prediction of tantalum capacitors' leakage current stability***; Vladimir Azbel; consultant; Israel
- 1.7. ***Fabrication of micro-supercapacitor for textile energy storage***; Eugenio Gibertini; Politecnico di Milano; Italy
- 1.8. ***Comparative Life Cycle Assessment of aluminium electrolytic capacitors***; Chiara Moletti; Politecnico di Milano; Italy

18:00



Welcome Drink

Panel Discussion & Sessions Day 2 9th September 2021

9:00-9:30 **Keynote III. *Is AEQ-200 Becoming the Ultimate Reliability Standard?***; Würth Elektronik; Alexander Gerfer; CTO of Würth Elektronik

9:30-10:30 **Hot Topic Panel Discussion *Reliability & Sustainability of Passive Components*** Facilitator: Tomáš Zedníček

Panelists: A.Teverovsky (Jacobs GSFC (NASA), T.Ebel (SDU), A.Gerfer (Würth Elektronik), P.Andretti (KEMET),

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10:50-11:50 **Session 2. QUALITY & RELIABILITY**; Chairman: Vlasta Sedláková

2.1 Reliability and Failure Mode in Solid Tantalum Capacitors; Yuri Freeman; KEMET Electronics; USA

2.2 Reliability Assessment of Cracks in Ceramic Capacitor in Space Condition; Tomáš Zedníček; EPCI; Czech Republic

----- lunch -----

12:40-13:40 **Session 2. (cont.) QUALITY & RELIABILITY**; Chairman: Luca Primavesi

2.3 Acceleration Factors for Reliability Assessment of Polymer Tantalum Capacitors; Alexander Teverovsky; Jacobs/ GSFC (NASA); USA

2.4 Supercapacitors: Applications in Space, Development conducted by ESA and challenges to overcome!; Joaquín Jiménez and Leo Farhat; ESA ESTEC; The Netherlands

13:40-14:20 **Invited Paper I.: Reliability and simulation of film and aluminum electrolytic capacitors with the latest design tools CLARA and ALCAP**; David Olalla & Fabio Mello; TDK; Germany

14:20-14:50 **Invited Paper II.: EMC Solutions for new „Power over Coax“ Systems**; Uwe Mirschberger; Murata Europe; Germany

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15:10-17:10 **Session 3. MEASUREMENT AND TEST**; Chairman: Lorandt Fölkel

3.1. Overcoming the Challenges of Using Sub-Milliohm SMD Chip Resistors; Stephen Oxley; TT Electronics; UK

3.2. Screening and Qualification of BME feedthrough capacitors for a space project; Aleksander Teverovsky; Jacobs/ GSFC (NASA); USA

3.3. Update on "DC-Bias Aging on MLCCs"; Ladislav Vindiš; Continental; Germany

3.4. Class II MLCCs – More Detailed Classification or More Specific Default Parameters?; Iosif Borcsa; Vitesco; Romania

17:20  **Gala Dinner** (bus coach to Alfa Romeo Museum and restaurant) -----



Sessions & Closing Day 3 10th September 2021

9:00-11:00 **Session 4. APPLICATIONS**; Chairman: Pietro Andreetti

4.1. New DC-Link Power Box And Resonant Film Capacitors For High Temperature In Industrial And Automotive Applications; Evangelista Boni; KEMET Electronics; Italy

4.2. Haptics, it used to be all about resonant frequency; Marina Innocenti; KEMET Electronics; USA

4.3. Tantalum Polymer use in GaN based applications; Ron Demcko; AVX Corporation; USA

4.4. Energy Storage Capacitor Technology Comparison and Selection; Daniel West & Ussama Margieh; AVX Corporation; USA

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11:20-13:20 **Session 5. NEW DEVELOPMENT**; Chairman: Thomas Ebel

5.1. New Miniaturized EMI-Suppression and DC-Link Power Box Unique Designs for Harsh Environment in Energy, Industrial and Automotive Applications; Hristina Kostadinova Boshkova; KEMET Electronics; Macedonia

5.2. n-stack-based dielectric films: Future of on-chip capacitors?; Jaromír Hubálek; Brno University of Technology; Czech Republic

5.3. CNF-MIM technology, enabling the worlds thinnest capacitor; Maria Bylund; Smoltek; Sweden

5.4. A way to High Voltage Polymer Aluminium Electrolytic Capacitors; Thomas Ebel; Centre for Industrial Electronics, SDU South Denmark University; Denmark

13:30 **Closing Ceremony**

----- lunch with lunch to go option -----

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