PRELIMINARY PROGRAMME

3rd PCNS Passive Components Networking Symposium

September 7-10th 2021, Politecnico di Milano, Piazza Leonardo da Vinci 32, Milano, Italy

program schedule and timing subject to change without notice !

media partner:

jointly organised by:

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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)

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)

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 Pedeferri; Politecnico di Milano and Tomas Zednicek Ph.D.; EPCI

9:30-10:50 **Keynotes**

- *9:30-10:00* ***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 STMicroelectronics

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**

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?***; Tomas Zednicek; 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***; Tomas Blecha; University of West Bohemia in Pilsen; Czech Republic

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16:00-18:00 **Session 1. (cont.) MATERIALS & PROCESSES**

1.5. ***Reaching the next level of reliability for polymer capacitors***; Udo Merker; Heraeus Epurio; Germany

1.6. ***Tantalum supply chain: stable and reliable***; Kurt Habecker; Global Advanced Metals; USA

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

9:00-10:00h **Hot Topic Panel Discussion** ***Reliability & Sustainability of Passive Components***

Panelists (Tentative list): A.Teverovsky (Jacobs GSFC (NASA), D.Lacombe (ESA), R.Demcko (AVX), T.Ebel (SDU), L.Foelkel (Wuerth Electronic), P.Andretti (KEMET), Dennis M Zogbi (Paumanok)

10:00-10:30 **Invited Paper I.:** ***EMC Solutions for new „Power over Coax" Systems***; Uwe Mirschberger; Murata Europe; Germany

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10:50-11:50 **Session 2. QUALITY & RELIABILITY**

- ***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***; Tomas Zednicek; EPCI; Czech Republic

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

12:40-14:10 **Session 2. (cont.) QUALITY & RELIABILITY**

- ***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!***; Joaquin Jimenez and Leo Farhat; ESA ESTEC; The Netherlands
- ***2.5 Using Yield strength and Young's modulus anode characterisation for prediction of tantalum capacitors' leakage current stability***; Vladimir Azbel; consultant; Israel

14:10-14:50 **Invited Paper II.:** ***Reliability and simulation of film and aluminum electrolytic capacitors with the latest design tools CLARA and ALCAP***; David Olalla & Fabio Mello; TDK; Germany

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15:10-16:40 **Session 3. MEASUREMENT AND TEST**

- ***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

16:45 ---------- Itelcond **Gala Dinner** (bus coach to country restaurant) ----------

Sessions & Closing Day 3 10th September 2021

9:00-11:00 **Session 4. APPLICATIONS**

- ***4.1. New DC-Link Power Box And Resonant Film Capacitors For High Temperature In Industrial And Automotive Applications***; 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; AVX Corporation; USA

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11:20-13:20 **Session 5. NEW DEVELOPMENT**

- ***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?***; Jaromir Hubalek; 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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