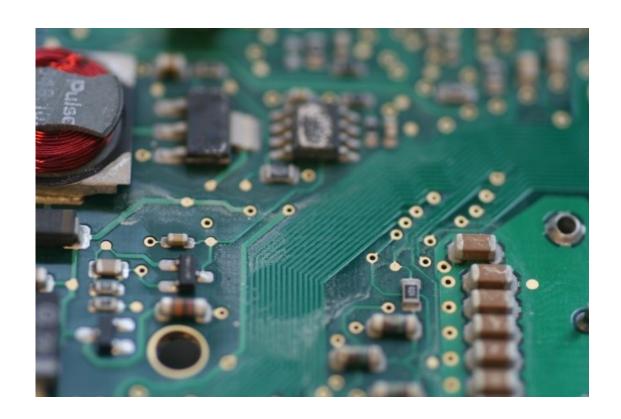
### Two day seminar on

# Climatic Reliability of Electronics Global Challenges and Perspectives

19 & 20 January 2017
Technical University of Denmark





## **Program**

### Day 1 | Thursday - 19th January 2017

| 08.30 - 09.00                             | Registration and coffee   |   |
|---|---|---|
| Session 1 Invited talks                   |   |   |
| 09.00 – 09.45                             | Introduction to the seminar<br>Overview of humidity driven<br>failures in electronics   | Rajan Ambat<br>CELCORR, DTU   |
| 09.45 – 10.20                             | Atmospheric aerosols interaction with water: overview on the role of aerosol chemistry and applications for corrosion prevention in data center | Luca Ferrero Department of Earth and Environmental Sciences, University of Milano- Bicocca, Italy |
| 10.20 – 10.55                             | Corrosion reliability of printed circuit board surface finishes under salt spray and gaseous conditions   | <b>Laura Frisk</b><br>Trelic Oy, Finland  |
| 10.55 – 11.15                             | Coffee break  |   |
| Session 2 Industry focussed presentations |   |   |
| 11.15 - 11.35                             | Controlling the humidity gives control of production and storage: Focus on electronics applications   | Rasmus Toftegaard<br>Cotes A/S, Denmark   |
| 11.35 – 11.55                             | Easy residue and corrosion failure detection  | Morten Jellesen<br>EC-RAT, Denmark  |
| 11.55 – 12.15                             | Solderability and Reliabiligy<br>Evolution of Ecofrec No Clean<br>solder Flux range   | Rodrigo Alguilar Limas<br>Inventec, France  |
| 12.15 – 13.15                             | Lunch break   |   |

| Session 3 Invited talks                   |   |   |
|---|---|---|
| 13.15 – 13.50                             | Controlling humidity effects on electronics: Importance of enclosure design   | Jens Peter Krog<br>Consultant, Grundfos,<br>Denmark               |
| 13.50 – 14.25                             | Corrosion-climatic conditions in a vehicles body: results of a multiannual long-term driving study  | Christoph Jahn<br>University of Dresden,<br>Germany               |
| 14.25 – 15.00                             | Influence on electrochemical migration due to combination of soldering processes  | Helge Schimanski<br>ISIT, Fraunhofer Institute,<br>Germany        |
| 15.00 – 15.20                             | Coffee break  |   |
| Session 4 Industry focussed presentations |   |   |
| 15.20 – 15.40                             | Coating processes and trends in the coating industry  | Lars Nielsen<br>Nordson Asymtek, Denmark                          |
| 15.40 – 16.10                             | Silicone conformal coatings for   | Jesper Houmöller,<br>Tribotec, Sweden                             |
|   | electronics   | Thotec, Sweden  |
| 16.10 – 16.30                             | From Bottom of the Sea into Deep Space  | Jan Kilen ParaTech Coating Scandinavia AB, Sweden                 |
| 16.10 – 16.30<br>16.30 – 16.50            | From Bottom of the Sea into   | Jan Kilen<br>ParaTech Coating                                     |
|   | From Bottom of the Sea into Deep Space  "Rectiverter – A New Word - and a New World - in Power Conversion" Breakthrough technology – made | Jan Kilen ParaTech Coating Scandinavia AB, Sweden  Oystein Larsen |

### Day 2 | Friday - 20th January 2017

| 08.45 – 09.00                             | Arrival and coffee  |  |
|---|---|--|
| Session 1 Invited talks                   |   |  |
| 09.00 – 09.35                             | Residue reliability of no-clean fluxes in humid environment                           | Harry Trip<br>Cobar Europe BV,<br>The Netherlands                |
| 09.35 – 10.10                             | Electrochemical migration on the interconnection networks used in microelectronics    | <b>Gábor Harsányi</b><br>BME, Budapest, Hungary                  |
| 10.10 – 10.45                             | Hydrofluoric acid induced corrosion of electronic circuits                            | <b>Lutz Muller</b> , Bosch<br>Automotive Electronics,<br>Germany |
| 10.45 – 11.10                             | Coffee break  |  |
| Session 2 Industry focussed presentations |   |  |
| 11.10 – 11.30                             | Proposal for a method on characterization of practical humidity ingress in enclosures | Kim Schmidt<br>Delta   |
| 11.30 – 11.50                             | How to do proper cleaning and coating   | <b>Torben Ryberg</b> GPV Electronics                             |
| 11.50 – 12.10                             | Conformal coating for high temperature automotive applications                        | Marie Kaing<br>Humiseal Europe Ltd.                              |
| 12.10 – 14.35                             | Lunchbreak and Match making event by B2Match  |  |

| Session 3 Invited talks |  |                                     |
|-------------------------|--|-------------------------------------|
| 14.00 – 14.35           | Critical level of water layer formation on PCBA and sequential failure | Vadimas Verdingovas<br>CELCORR, DTU |
| 14.35 – 15.10           | Comparison of ionic contamination, ion chromatography and SIR          | Thomas Möller<br>Zestron, Germany   |
| 15.10 – 15.45           | Reliability of hearing aids  | Rune Bøttzauw<br>Widex              |
| 15.45 – 16.00           | Conclusion and end of seminar  | Rajan Ambat<br>CELCORR, DTU         |

#### **Organizers**





Virksomhedsstøtte lige ved hånden

