

Hosted by the Swiss Welding Institute (SWI)

at

Y-Parc Swiss Technopole
Rue Galilée 15, Buildings CEI 1 & CEI 2
CH – 1400 Yverdon-les-Bains
Switzerland

on

25-26 April 2018

Introduction and Objectives

The effect of the space environment on the reliability of electronic materials and devices is of continuous concern and discussion. Therefore our knowledge needs to be continually expanded in order to improve the design, reliability and safety of launchers, spacecraft and space instruments. The key drivers for technology development are future mission requirements that are currently experiencing rapid advances in the performance requirements needed for scientific instruments. The selection of materials, processes and devices for future space missions must also anticipate the causes of environmental regulations (e.g. REACH, RoHS) and utilise cleaner technologies in order to mitigate the environmental impacts of space programmes.

The focus of the EMPS Workshop is set on high-reliability manufacturing of electronic assemblies intended to withstand assembly, storage and ground test conditions and the conditions imposed by launchers and the space flight environments.

The objectives of the workshop are to promote the development and awareness of materials and manufacturing processes utilised for space applications and to foster the discussion and exchange of knowledge among the industry and research centres actively involved in space applications and other high-reliability electronics. Students and trainees are encouraged to attend and to submit a proposal for poster presentation.

We are looking forward to meeting an international audience in Switzerland in April 2018. Information concerning the SWI can be found on www.swi.ch. About 80-120 experts, including members from space agencies, space industries, research centres and universities participated in the previous workshops.

Topics

Topics particularly encouraged are:

- Reliability of PCBs, assemblies and packaging
- Joining processes such as soldering, crimping diffusion bonding and micro-welding
- Novel test methods to assess reliability and capability
- Modes of failure
- Thermal management and thermal stability
- Novel materials and emerging materials processing for electronics
- Lead-free assemblies and processes

- Printed electronics and 3D assemblies
- Non-traditional interconnections
- Applications, trends and needs
- Technology roadmaps
- Upscaling commercial manufacturing solutions to space applications

The Workshop

The Workshop will include:

- Oral presentations of 20 minutes with an extra 5 minutes for Q&A
- Permanent poster display

The working language of the workshop will be English.

The workshop will take place over two days, Wednesday 25 and Thursday 26 April. On Wednesday evening, there will be a social event for delegates and guests.

Abstract submission

Presentations will be selected on the basis of a one page abstract that describes the scope, content, and key points of your proposed presentation. **Abstracts should be submitted as email attachments to emps@port.ac.uk before 18 February 2018 with “EMPS-9 Abstract Submission” in the subject line.**

Please also include a short, one paragraph, biography of the presenter in the body of the email.

Note:

- Each presenter will have a 20 min. slot allocation in which you should be able to complete your presentation.
- Please note that the presentations will be made available as proceeding to all participants and, following the workshop, they will appear on the EMPS website: <http://emps.port.ac.uk> Therefore, you also have the possibility to send us two versions of your presentation, one for the event and a second one for the website.
- Presenters are kindly requested to arrive in the meeting room at least 10 minutes prior to the start of the session.
- The presentations should contain clear information with appropriate font size that is legible from the back of the conference room.
- Hand-outs of your presentation will not be provided to the participants.
- A PC will be available for the presentations. For performing the presentation, MS-Powerpoint or Adobe PDF Reader under Windows 7 will be used.

The timetable of events leading the workshop is as follows:

1. Deadline for submission of Abstracts: 18 February 2018
2. Confirmation of acceptance of abstracts: 2 March 2018
3. Full presentation slides provided to the organisers: 13 April 2018. Please send your presentation in PPT (Microsoft Office 2010) or PDF format to emps@port.ac.uk.

Committees

Organizing Committee

Jussi Hokka	ESA/ESTEC, the Netherlands
Misha Filip	University of Portsmouth, UK
Christian Benoit	SWI, Switzerland
Randoald Müller	SWI, Switzerland
Grégoire Bourban	SSC Swiss Space Center, Switzerland

Programme Committee

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