



IMAPS-Benelux
Winter Event
2018

**Reliable Electronics for
Aerospace**

Thursday, 18 January, 2016

Venue :

Imec auditorium
Kapeldreef 75
3001 Leuven

*In cooperation with the
Center for Electronics Design
& Manufacturing*



Atzender:

IMAPS-Benelux
p/a Katrien Vanneste
ELIS-CMST
Technologiepark 15
B-9052 Zwijnaarde
Belgium

REGISTRATION

registration fees (includes coffee and sandwiches) :

- | | |
|--|---------|
| <input type="checkbox"/> IMAPS member (Benelux or international) | 40 EUR |
| <input type="checkbox"/> Non member
workshop fee includes 2018 membership fee | 110 EUR |
| <input type="checkbox"/> Student | 20 EUR |
| <input type="checkbox"/> Student with poster | 0 EUR |

Registrations should be made before January 16, 2018.
Cancellations after January 16 will not be refunded. After
registration, you will receive a confirmation and driving directions.

For table top presentation (for free) or a poster presentation,
please contact :

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INTERNATIONAL MICROELECTRONICS AND PACKAGING SOCIETY
IMAPS - BENELUX
BENELUX CHAPTER



PROGRAM

14.30 Registration, coffee, exhibition

15.00 Challenges of segmented supply chains in component qualification for space

Paavo Heiskanen, ESA, NL

In the past, homogeneous Integrated Device Manufacturers (IDMs) were responsible for electrical, electronic and electromechanical part development and manufacturing. Over the last 20 years things have changed, many manufacturers only retain their core competence, and heavily rely on outsourcing. The more this supply chain is segmented the more complex the qualification process becomes. This presentation focusses on the challenges of this segmented supply chain and how to deal with it in the qualification process.

15.30 Automatization for large solar panels assembly

Elie Dawidowicz, Thales Alenia Space, BE

"Industry 4.0" technologies, are developed to better control the processes to master product quality.

Solar panels being a large subsystem they represent the opportunity to identify and address technology building blocks used elsewhere in every satellite while giving enough load to be automated in a facility.

The "New Space" trend to cut down costs through a change of culture implies a new approach in our industry, where both volumes are low and standards are tailored to address one-shot production.

16.00 Technological concepts for assembly of highly reliable electronic components

Benjamin Riedmueller, First sensor, DE

Since 50 years, FSL has contributed to aerospace programs with electronics where thick-film technology, chip-and-wire processes and hermetic encapsulation are key technological drivers. Due to this experience, FSL was certified from the DLR as assembly- and testhouse for power components. Today, qualified power FET assemblies are available and the qualification for high-voltage diode assemblies is in progress. Currently, motor-driver electronics for the EnMAP mission are in production. This presentation is highlighting some of the proven technological concepts as used for the assembly of electronics for aerospace applications.

16.30 Coffee, exhibition

17.00 Light weight Hermetic Packaging

Gio Schouten, Semi Dice, NL

Low weight is of crucial importance for anything that goes into space.

The aerospace industry uses hermetic Au plated packages for housing ceramic based electronic devices and these packages are traditionally made of either heavy CuMo or CuW, for matched thermal expansion.

CPS Technologies offers a 40-60% lighter alternative in the form of hermetic packages made of AlSiC.

Brazed ceramic or glass feedthrus can be used and these packages meet the requirements of Mil-PRF-38534.

17.30 Contribution of multiphysics simulation to reliable microsystem packaging

Pascal De Vincenzo, Open Engineering, BE

For a growing number of applications having to perform in demanding conditions such as high temperature pressure sensors, automotive MEMS-micromirror, vibration based energy harvester, the need for high dimensional stability, increased accuracy and predictable performances raises the standards for the design of microsystem devices. Whether in the vibration environment of a machine or the thermo-mechanical solicitations found in Microsystems, this interdependency translates into a more frequent need of elaborate, coupled, Multiphysics analysis capabilities to study the devices' interactions with their support, package and environment during their design in order to increase their robustness.

18.00 Sandwiches - opportunity to visit the imec cleanroom

19.30 Closing