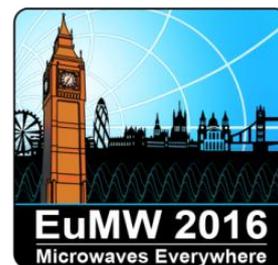




Jointly organised with



7 October 2016 - “Chip Packaging and System in Package” Workshop (WF06)

This workshop was held at the ICC at the Excel London, on the final day of the European Microwave (EuMW) Conference Week. There were over 40 attendees for this one day event, the majority being non-UK based people.

On behalf of IMAPS-UK, Andy Longford was one of the organisers of this workshop along with Thomas Zwick, of Karlsruhe Institute of Technology and Prof. Ian Robertson, University of Leeds, who was Technical Programme Chair for the whole of the EuMW event.



The workshop addressed how Microelectronic packaging technology has advanced tremendously in recent years and demonstrated how microwave, millimetre-wave and terahertz systems can benefit particularly from the ability to integrate diverse active devices (Si, SiGe, GaAs, GaN, InP, etc.) and passive components into cost-effective modules. Millimetre-waves are of immense interest for 5G systems, both for wireless backhaul and for handsets, and 60 GHz band Wi-Fi modules are already available using **SYSTEM-IN-PACKAGE** technology with integrated antenna arrays. This workshop provided delegates with an understanding of a wide range of world-leading research and development that is pushing the boundaries of what can be achieved in terms of high power and high frequency packaging. This included antenna-in-package techniques, wafer-level packaging, chip-on-chip and 3D stacking, substrate-integrated waveguides and low loss interconnects operating at frequencies up to the hundreds of GHz for wireless communications, short range radar and sensing applications.

Presentations were given by:

- Arne F. Jacob of Hamburg University of Technology, Germany on Packaging Approaches for Broadband Communication Systems.
- Philippe Descamps of Laboratoire de Microélectronique et de Physique des Semiconducteurs (LaMIPS), ENSICAEN, France on 3D System-in-Package Technology.
- Shoichi Shiba, Fujitsu Limited, Fujitsu Laboratories Ltd., Japan on MMIC Packaging Technologies for mm/submm-Wave Wireless Applications.
- Frederic Ganesello, STMicroelectronics, France on Industrial High-Volume Packaging for mm-Wave Transceivers.

- Ke Wu, École Polytechnique de Montréal, Canada On 3D System-on-Substrate Technology with Substrate Integrated Waveguides. Thomas Zwick, Karlsruhe Institute of Technology, Germany on QFN Based Packaging Concepts for Millimetre-Wave Transceivers.
- Andreas Stelzer, Johannes Kepler University Linz, Austria on eWLB Packaging with integrated Antenna in the mm-wave Range up to 240 GHz.
- Andy Longford, PandA Europe & RJR technologies, UK on Plastic Air Cavity Packages Enable Low Cost Entry for High Frequency Applications. Peter Aaen, University of Surrey, UK on Multi-Physics Modelling of Power Devices
- Dave Morris, Keysight Technologies, UK on EDA for Package/Circuit EM Modelling.

To sum up this excellent technical event, Ian Robertson, the TPC Chair stated that he had been able to briefly look at every conference and workshop paper on his computer and he really considered that some of the most impressive work at the whole conference was presented in this workshop.