

WEDNESDAY, 9 APRIL 2014

Session 1 Trends in Microelectronic 3D Integration, SiP, WLP and Resulting Demands on Material Diagnostics and Quality Assurance

11:00 Welcome

11:10 **System Integration – Packaging Makes the Difference**
Klaus Pressel, Infineon Technologies AG, DE

11:50 **Advanced Packaging Failure Analysis – A Foundry Perspective**
Moritz Andreas Meyer, GLOBAL FOUNDRIES Inc., DE

12:15 **3D Integrated Sensors – Chances for European Manufacturers**
Franz Schrank, ams AG, AT

12:40 Lunch Break / Industrial Exhibition and Networking Opportunity

Session 2 Material Diagnostics and Failure Analysis Examples for 3D Integrated Technologies

14:00 **Reliability Risks in 3D Integration Technologies and Related FA Challenges**
Ingrid de Wolf, Interuniversity Microelectronics Centre IMEC, FR

14:40 **Challenges and Failure Risks in High Density Metal-to-Metal Interconnects for 3D Integration**
Dorota Temple, RTI International, USA

15:05 **Wafer Bonding for 3D and CMOS Applications: Challenges in Process Qualification and Reliability Testing**
Viorel Dragoi, EV Group, AT

15:30 **Coffee Break / Industrial Exhibition and Networking Opportunity**

16:15 **3D Defect Localization Techniques from SiP to IC: Status and Challenges**
Philippe Perdu, Centre National d'Etudes Spatiales CNES, FR

16:40 **Advanced Techniques for Physical Failure Analysis of TSV Interconnects**
Frank Altmann, Fraunhofer IWM/CAM, DE

17:05 **Wrap up Day One**

17:15 **Drinks Reception / Industrial Exhibition and Networking Opportunity**

19:00 **Networking Dinner at Restaurant »Zum Mohr«
Dinner Lecture: UNESCO World Heritage I
Nebra Sky Disc – The cultural background**
Dr. Bernd Zich, State Museum for Prehistory, Halle (Saale)

THURSDAY, 10 APRIL 2014

Session 3	New Equipment Solutions for Diagnostics and Quality Control
08:30	Welcome
08:40	Addressing Fault Isolation Challenges Using Magnetic Field Imaging: Novel 3D and SDR Techniques <i>Antonio Orozco, NEOCERA LLC., USA</i>
09:05	Non Destructive Fault Localization on Complex Packages Using EOTPR Technique <i>Antoine Reverdy, Sector Technologies / Teraview Ltd., FR</i>
09:30	4D X-ray Microscopy (XRM), In Situ Imaging of Practical Volume Samples <i>Pete Lander, Zeiss X-ray Microscopy Group, UK</i>
09:55	High Resolution Scanning Acoustic Microscopy for Inspection and Failure Analysis of 3D System Integration Technologies <i>Peter Czurratis, PVA Tepla Analytical Systems GmbH, DE</i>
10:20	Coffee Break / Industrial Exhibition and Networking Opportunity
11:00	Different Analytical Work Flows for Efficient Failure Analysis of 3D-Integrated and Packaged Devices <i>Laurens T. Kwakman, FEI Company, USA</i>

11:25 **Optimal Strategies for Fast and Precise FIB Cross Sections of 3D Integrated Device Structures**
Tomáš Hrnčíř, TESCAN Orsay Holding, CZ

11:50 **Novel Laser Tool for High-Throughput Microdiagnostics Sample Preparation**
Uwe Wagner, 3D-Micromac AG, DE

12:15 **Lunch / Industrial Exhibition and Networking Opportunity**

Session 4 **Innovative Methods for Material Diagnostics, Failure Analysis and Reliability Testing**

13:00 **Optical Inspection for 3D-WLP Processing**
Wolfram Steller, Fraunhofer IZM-ASSID, DE

13:25 **Sub Micrometer Imaging of Defects in Interconnections by X-Ray Tomography in a SEM**
David Laloum, STMicroelectronics N.V., FR

13:50 **High Resolution Strain Measurements in Through Silicon Vias Using Electron Backscatter Diffraction**
Michael Krause, Fraunhofer IWM Halle/CAM, DE

14:15 **In Operando SEM Observation of Electromigration-Induced Voids in 3D Structures**
Simon Gousseau, CEA Léti, FR

PROGRAM

- 14:40** **X-Ray CT for 3D SiPs - Actual Benefit and Future Requirements**
Sabine Weiss, Infineon Technologies AG, DE
- 15:00** **Coffee Break / Industrial Exhibition and
Networking Opportunity**
- 15:30** **Lab Tours and Tool Demos**
- 17:00** **End of Workshop**