MAM2026
MARCH 23-26 • CHEMNITZ (GERMANY)

# Tentative Program

(as of 24/03/2026)

## MONDAY MARCH 23, 2026
## Workshop “Technologies for heterointegration and chiplets”
## 10:00 – 16:55

Technologies for heterogeneous integration and chiplets focus on breaking down large, monolithic chips into smaller, specialized, functional dies (chiplets) and reassembling them using advanced packaging to achieve higher performance, lower power consumption, and improved yield. Additionally, this approach enables functional diversification by integrating logic, memory, analog, sensors, and even photonics in a single package. Key technologies driving this shift include 2.5D/3D integration, hybrid bonding, and novel interposer materials.

## Invited speakers

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| 10:00-10:30 | Registration | |
| 10:30-10:45 | **Welcome and Opening** | |
| 10:45-11:30 | **Gerald Beyer** (imec, Belgium)<br>Challenges and opportunities of 3D system integration | I |
| 11:30-12:15 | **Frank Fournel** (CEA-LETI, France)<br>How wafer direct bonding mechanism enables die-to-wafer technology | I |
| 12:15-13:15 | | **Lunch** |
| 13:15-14:00 | **Klaus Vogel** (Fraunhofer ENAS, Germany)<br>Low temperature metallic wafer level bonding with selective heat input | I |
| 14:00-14:45 | **Stéphane Bernabé** (CEA-LETI, France)<br>Wafer level technologies for Heterointegration of Photonics Modules | I |
| 14:45-15:15 | | **Coffee Break** |
| 15:15-16:00 | **Jens Stolze** (Applied Materials Europe, Germany)<br>Interconnects for Heterointegration schemes on Wafer and Panel level | I |
| 16:00-16:45 | **Nathanael Joehrmann** (TU Chemnitz, Germany)<br>Multi-scale thermo-mechanics for electronics packaging | I |
| 16:45-16:55 | **Closing Remarks** | |

K. Keynote / I: Invited / O: Oral contribution

## TUESDAY MARCH 24, 2026

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| | **Session 1 - session chair: Stefan E. Schulz** | |
| 09:00-09:20 | **Welcome and Opening** | |
| 09:20-10:00 | **Keynote Presentation**<br>**Claire Fenouillet-Beranger** (CEA-LETI, France)<br>Key building blocks driving the developments of FD-SOI 10nm node | K |
| | **Session 2 – Sustainability - Session chair: Fabrice Nemouchi** | |
| 10:00-10:30 | **Amandine Saint-Blancat** (STMicroelectronics Rousset, France)<br>Eco-conception for BEOL processes: application to industrial clean room platform | I |
| 10:30-10:50 | **André Clausner** (Fraunhofer IKTS, Germany)<br>PFAS-free Polyimide Passivation Thin Films in Advanced Metallization Stacks: Advanced Characterization, FEM Modeling, and Comparison with Conventional Polymers | O |
| 10:50-11:20 | **Coffee Break / Posters / Exhibition** | |
| | **Session 3 - Simulation and Modelling - Session chair: Christophe Detavernier** | |
| 11:20-11:50 | **Tommaso Rollo** (Applied Materials Inc., Italy)<br>Material-electrical modeling of interconnect: challenges and opportunities | I |
| 11:50-12:10 | **Andreas Zienert** (Fraunhofer ENAS, Germany)<br>Simulation of Si Epitaxy in Single Wafer Reactors | O |
| 12:10-12:30 | **Daniel Dick** (Chemnitz University of Technology, Germany)<br>Investigating local stoichiometry fluctuations in nm-thin semiconductor alloys: a case study on SiGe | O |
| 12:30-14:00 | **Lunch** | |
| | **Session 4 - Packaging & 2.5/3D Integration - session chair: Takayuki Ohba** | |
| 14:00-14:30 | **Alberto Mancaleoni** (STMicroelectronics, Italy)<br>Extended Isothermal Ageing of Cu-Al Intermetallic Joints: Comparative Wear-out Study and Characterization Methods for Pure and Alloyed Copper Wires | I |
| 14:30-14:50 | **Sai Swaroop Akaram** (Fraunhofer ENAS, Germany)<br>Bond Front Kinetics and Adherence of Direct Wafer Bonding in Dielectric-Dielectric Interfaces | O |
| 14:50-15:20 | **Himendra Jha** (MKS/ATOTECH, Germany)<br>Next-Generation Electrolytes for High-Precision Micro Bump Integration | I |
| 15:20-15:40 | **Imants Cirulis** (Fraunhofer ENAS, Germany)<br>Development of the Aluminium Hybrid Bonding | O |
| 15:40-16:10 | **Tatsuya Funaki** (Institute of Science Tokyo and Murata Manufacturing Co., Ltd., Japan)<br>Chip-on-Wafer Integration Technology for Silicon Capacitor Embedded 3D Functional Interposer | I |
| 16:10-17:45 | **Poster Session / Exhibition (incl. coffee, drinks and fingerfood)** | |

## WEDNESDAY MARCH 25, 2026

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| | **Session 5 - Silicides and Contacts - session chair: Graziella Tallarida** | |
| 09:00-09:20 | **Lillà Ferreint-Roselli** (CEA-LETI, France)<br>Pt redistribution in Ni(Pt)Si layers obtained via total vs partial reactions and its impact on specific contact resistivity | O |
| 09:20-09:40 | **Bismiya fasni Chakkalakunnan** (IM2NP, Aix Marseille University, France)<br>Reactive diffusion in Ni-Co-Si Ternary system using Bilayer and Alloyed thin films | O |
| 09:40-10:00 | **Joelle Sephora Kafando** (STMicroelectronics, France)<br>Low-temperature formation of ultra-thin Co disilicide ($CoSi_2$) layers for advanced CMOS applications | O |
| 10:00-10:20 | **Marie Merlin** (CEA-LETI, France)<br>Study of Doping Methods and Ge-PAI Conditions on Ti Silicidation for Advanced FD-SOI Nodes | O |
| 10:20-10:40 | **Mohamed Charai** (Institut Matériaux Microélectronique Nanosciences de Provence, France)<br>The formation mechanism and kinetics of $Ni_3GaAs$ nano-thin films on GaAs | O |
| 10:40-11:10 | **Coffee Break / Posters / Exhibition** | |
| | **Session 6 - Analytical techniques, Characterisation & Reliabilty - session chair: Dominique Mangelinck** | |
| 11:10-11:40 | **Alessandro Mapelli** (Confovis, Germany)<br>Co-Registered Automated Optical Inspection and Metrology for C4/TCB Micro-Bumps with Infrared Structured Illumination Microscopy of Bonded Interfaces | I |
| 11:40-12:00 | **Patrick E. Hopkins** (University of Virginia, USA)<br>Assessment of defects and quality of thin films and interfaces with laser-based thermoreflectance thermal conductivity measurements | O |
| 12:00-12:20 | **Arno Depoorter** (Ghent University, Belgium)<br>Pole figure measurements in grazing-incidence configuration for characterizing thin film texture | O |
| 12:20-12:40 | **Emanuele Cattarinuzzi** (STMicroelectronics, Italy)<br>Shear tests of BEoL interfaces with in-situ SEM imaging | O |
| 12:40-13:40 | **Lunch** | |
| | **Session7 - Memory / Novel Devices - session chair: Samuele Sciarrillo** | |
| 13:40-14:00 | **Seppe Van Dyck** (Ghent University, Belgium)<br>TMD Superlattices for Phase Change Memory: Growth and Thermal Characterization | O |
| 14:00-14:20 | **Florent Mignerot** (Aix-Marseille Université, France)<br>Crystallization investigations of Ge-rich GST cells using in situ thermal pulses coupled with STEM-EDX and HR-TEM analyses | O |
| 14:20-14:40 | **Tobias Urban** (3-5 Power Electronics GmbH, Germany)<br>GaAs pin diodes – highly efficient and simple power devices | O |
| 14:40-15:00 | **Peer Kirsch** (Merck Electronics KGaA, Germany)<br>Magnetic Tunnel Junctions Based on Chiral Self-Assembled Monolayers | O |
| 15:00-15:20 | **Ali Ahmad** (CEA, France)<br>Ti metallization for p-GaAsSb base contact | O |
| 15:20-15:50 | **Coffee Break / Posters / Exhibition** | |
| | **Session 8 - Unit Processes - session chair: Magali Gregoire** | |
| 15:50-16:20 | **Maurice Clair** (3D-Micromac AG, Germany)<br>From Full-Field to Single-Spot: Laser-Based Processing for Microelectronics | I |
| 16:20-16:40 | **Vahide Hosseini** (Fraunhofer ENAS, Germany)<br>Low-Pressure HF Vapor MACE of Silicon Nanowires: Pt vs Pd Catalyst Effects on Morphology and Etch Rate | O |
| 16:40-17:00 | **Andrea Schulze** (scia Systems GmbH, Germany)<br>Ion Beam-Based 3D Nanopatterning for Multilayer and Micro-Optical Devices | O |
| 18:30 | **Conference dinner** | |

## THURSDAY MARCH 26, 2026

| | **Session 9 - Interconnects & Process Integration - session chair: Stefan E. Schulz** | |
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| 08:30-09:00 | **Jean-Philippe Soulié** (imec, Belgium)<br>Multilayer PtCoO2 Delafossite thin films for future interconnect metallization | I |
| 09:00-09:30 | **Nicolas Posseme** (CEA-LETI, France)<br>Benefit of post etch treatment for defectivity improvement in the BEOL | I |
| 09:30-09:50 | **Hideaki Nakatsubo** (Tanaka Precious Metal Technologies, Japan)<br>A Novel Thermally Stable Ruthenium Precursor Enabling Dense, Lower Resistivity and Inherent Selectivity against SiO2 via Atomic Layer Deposition for Advanced Interconnects | O |
| 09:50-10:10 | **Hugo Nuez** (STMicroelectronics, France)<br>Underlayer selection for TiSiN ALD deposition on Copper thin film | O |
| 10:10-10:40 | **Davide Tierno** (imec, Belgium)<br>Ruthenium Based BEOL Integration Schemes for Scaled Interconnects | I |
| 10:40-10:50 | **Closing remarks: Stefan E. Schulz** | |
| 10:50-11:30 | **Farewell coffee** | |