

# Tentative Program

(as of 03/03/2025)

**TUESDAY MARCH 25, 2025**

## Opening

08:00-08:15	<b>Opening - Christopher J. Wilson (imec, Belgium)</b>	
08:15-08:55	<b>Paul Besser</b> (Entegris, USA) Materials Innovations Driving AI	K
08:55-09:35	<b>Shinichi Ogawa</b> (AIST, Japan) Materials, Processes, and Characterization: Insights from the Past for Advancing Interconnect Development	K
09:35-10:15	<b>Reinhold H. Dauskardt</b> (Stanford University, USA) Directed Self-Assembly Exploiting Combustion Synthesis for Next-Generation Nanomanufacturing	K
10:15-10:45		<b>Coffee Break</b>

## Advanced interconnects

10:45-11:15	<b>Kazuyoshi Ueno</b> (Shibaura Institute of Technology, Japan) Graphene Capping for Advanced Interconnects	I
11:15-11:35	<b>Christoph Adelmann</b> (Imec, Belgium) Ru epitaxy on differently oriented sapphire substrates for advanced interconnect applications	O
11:35-11:55	<b>Ji Sang Ahn</b> (Seoul National University of Science and Technology, South Korea) Inherent Area-Selective Deposition of Low-resistivity Molybdenum Carbide Films by Thermal Atomic Layer Deposition	O
11:55-12:15	<b>Jean-Philippe Soulie</b> (imec, Belgium) PtCoO <sub>2</sub> delafossite oxide thin films for advanced interconnects	O
12:15-12:35	<b>Stephane Lariviere</b> (IMEC, Belgium) Electrical analysis of damascene patterned metal lines to evaluate patterning yield of EUV 0.33NA lithography	O
12:35-13:35		<b>Lunch</b>

## Memories devices

13:35-14:05	<b>Erika Covi</b> (Groningen University, The Netherlands) Back-end-of-line integration of emerging memory technologies for neuromorphic edge computing	I
14:05-14:25	<b>Hamid Neggaz</b> (IM2NP, Université Aix Marseille, France) Study ZnSb Phase Change Material Alloys for Nonvolatile Embedded-Memory Applications	O
14:25-14:45	<b>Seppe Van Dyck</b> (Ghent University, Belgium) Picking the Right TMD is the Key to Controlling Heat in a Phase Change Superlattice	O
14:45-15:05	<b>Amanda Mallmann Tonelli</b> (CEA, France) Optimizing ultrathin HfO <sub>2</sub> -ZrO <sub>2</sub> structures by ALD for BEOL-compatible ferroelectric non-volatile memories	O
15:05-15:25	<b>Senne Franssen</b> (imec, Belgium) Ultrahigh-density 'electrolithic' storage memory proof-of-principle with high-aspect-ratio nanometer-sized holes	O
15:25-17:30		<b>Poster Session - coffee and drinks</b>

## Power Device

08:00-08:30	<b>Mikael Östling</b> (KTH, Sweden) Wide Bandgap Device Technology for Power Efficient and High Temperature Applications	I
08:30-08:50	<b>Simone Milazzo</b> (University of Catania, Italy) Nearly-ideal Molybdenum Schottky contacts on AlGaN/GaN heterostructures	O
08:50-09:10	<b>Estève Drouillas</b> (STMicroelectronics, France) Contribution of varying accelerating voltage for S/TEM EELS and EDS analysis of AlGaN/GaN based semiconductors	O
09:10-09:40	<b>Patrick Fiorenza</b> (CNR-IMM, Italy) The role of interface chemistry and crystalline defects on the reliability of 4H-SiC MOSFETs	I
09:40-10:10	<b>Coffee Break</b>	

## Sustainability

10:10-10:40	<b>Cyril Colin-Madan</b> (STMicroelectronics Crolles, France) Eco-Design in ST: a Sustainable journey	I
10:40-11:10	<b>Isabelle Servin</b> (CEA-LETI, France) Assessment of environmental footprint of semiconductor manufacturing industry to promote more sustainable processes	I

## Quantum Devices and 2D Materials

11:10-11:40	<b>Pawel Michalowski</b> (Lukasiewicz Institute for Microelectronics and Photonics, Poland) Secondary ion mass spectrometry measurements of non-planar materials and devices	I
11:40-12:10	<b>Stephan Roche</b> (ICREA / ICN2, Spain) Exploring properties and applications of amorphous 2D materials in interconnects using Artificial Intelligence	I
12:10-12:30	<b>Andries Boelen</b> (imec - KU Leuven, Belgium) Epitaxial SrTiO <sub>3</sub> thin films on silicon for electro-optical quantum devices	O
12:30-13:30	<b>Lunch</b>	

## 3D integration

13:30-14:00	<b>Fumihiko Inoue</b> (Yokohama National University, Japan) Hybrid and Fusion Bonding to Enable Advanced Packaging	I
14:00-14:30	<b>Veronica Strong</b> (INTEL, Belgium) Enabling Ultra Low Temperature Hybrid Bonding for D2W Scaling	I
14:30-14:50	<b>Yuki Yoshihara</b> (Yokohama National University, Japan) Surface Analysis of SiO <sub>2</sub> for Die-to-Wafer Hybrid Bonding	O

## Simulation and Modelling

14:50-15:20	<b>Alberto Debernardi</b> (IMM Agrate Brianza, Italy) Engineering electronic and optical properties of semiconductors by tuning the population of dopant defects: first principles simulations of Chalcogen hyperdoped Si	I
15:20-15:40	<b>Marco Zignale</b> (CNR-IMM, Italy) Analytical evaluation of the interface states on SiO <sub>2</sub> /4H-SiC n-type MOS Capacitor	O
15:40-16:10	<b>Coffee Break</b>	

## Silicides and Germanides

16:10-16:30	<b>Clement Porret</b> (imec vzw, Belgium) Source/drain and silicides for nanosheet device applications	O
16:30-16:50	<b>Theo Cabaret</b> (CEA LETI, France) Nickel silicide phase change transformation upon nanosecond laser annealing	O
16:50-17:10	<b>Bert Pollefliet</b> (KU Leuven, Belgium) Crystallographic defects in orthorhombic ScSi / Si(001) contacts	O
17:10-17:30	<b>Dominique Mangelinck</b> (CNRS, Aix-Marseille Univ, IM2NP, France) A model for the redistribution of Pt during the agglomeration of Ni(Pt)Si thin films	O
19:00-21:30	<b>Conference Dinner</b>	

## Contacts

08:00-08:30	<b>Guilhem Larrieu</b> (LAAS-CNRS, France) Vertically Scaled Gate-All-Around Transistors: From Advanced Nano-Contact Engineering to Device Development	
09:30-09:30	<b>Magali Grégoire</b> (STMicroelectronics, France) 3D-stacking technologies: remaining challenges of co-integration of thin Ni(Pt)Si film and TiSix contacts.	
09:00-09:30	<b>Philippe Rodriguez</b> (CEA-Leti, France) Enabling III-V and CMOS Synergy: Advances in Contact Technology	
09:30-10:00	<b>Coffee Break</b>	

## Characterization and Modeling

10:00-10:30	<b>Patrick Hopkins</b> (University of Virginia, USA) Electron and phonon thermal conductivity and scattering rates in metal and non-metal thin films and multilayers	
10:30-11:00	<b>Romain Duru</b> (STMicroelectronics Crolles, France) Photoluminescence Imaging : Shedding Light on the Invisible Defects in Silicon	
11:00-11:30	<b>Esther Adegoke</b> (University of Limerick, Ireland) Defects in Action: Real-time TEM observation of Nickel Silicide Propagation in Silicon Nanowires	
11:30-12:00	<b>Bowen Zhang</b> (Fraunhofer IKTS Dresden, Germany) Multi-scale correlative investigations of failure mechanisms on two-dimensional crystalline materials	
12:00-12:30	<b>Cristian Mocuta</b> (SOLEIL synchrotron , France) Thin Films Characterization using Fast Data Acquisition at DiffAbs Beamline (Synchrotron SOLEIL)	
12:30-12:40	Closing	