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ITF Chip into the Future

Welcome and Closing Remarks

K. Marent
EVP & Chief Marketing and Communications
Officer
imec, Leuven, Belgium



Abstract

No abstract

Biography

Katrien has an engineering degree in microelectronics. She joined imec in 1992 as analog design engineer and specialized in design of low-noise readout electronics for high-energy physics. In 1999, she became press responsible and scientific editor at imec's business development division and was responsible for authoring and editing the research organization's numerous company technical documents and publications. In 2001, she was appointed corporate communications director at imec. Her responsibilities expanded in August 2007, when she got the position of external communications director including corporate, marketing and outreach communications. In October 2016, she became VP corporate, marketing and outreach communication. Since April 2020 she is Executive Vice President & Chief Marketing and Communications Officer and member of the executive board of imec.

References

Opening Keynote

L. Van den hove
President & CEO
imec, Leuven, Germany



Abstract

Coming Soon

Biography

Luc Van den hove is President and CEO of imec since July 1, 2009. Before he was executive vice president and chief operating officer. He joined imec in 1984, starting his research career in the field of silicide and interconnect technologies.

In 1988, he became manager of imec's micro-patterning group (lithography, dry etching); in 1996, department director of unit process step R&D; and in 1998, vice president of the silicon process and device technology division. In January 2007, he was appointed as imec's EVP & COO. Luc Van den hove received his PhD in electrical engineering from the KU Leuven, Belgium.

In 2023, he was honored with the Robert N. Noyce medal for his leadership in creating a worldwide research ecosystem in nanoelectronics technology with applications ranging from high-performance computing to health.

He has authored or co-authored more than 200 publications and conference contributions.

References

Empowering Europe: capacity building through the Chips Act Chips

J. Kinaret
Executive Director
Chips Joint Undertaking (Chips JU), Brussels,
Belgium



Abstract

Joint Undertaking is leading the charge in enhancing Europe's microelectronics ecosystem through the EU Chips Act. This presentation will explore how capacity building initiatives, such as the development of advanced pilot lines, are essential for driving innovation and expanding semiconductor manufacturing in Europe. By strengthening supply chain resilience and upskilling the workforce, these efforts aim to secure Europe's technological sovereignty and support sustainable growth in the semiconductor industry. Through strategic public-private collaborations, the Chips Act is set to elevate Europe's position in the global microelectronics landscape.

Biography

Jari Kinaret was born in Finland and holds M.Sc. degrees in Theoretical Physics and Electrical Engineering from the University of Oulu in 1986 and 1987, respectively, and a Ph.D. in Physics from the Massachusetts Institute of Technology (MIT) in 1992.

Prof. Kinaret has worked in various roles at research institutes and universities in Copenhagen, Denmark, and Gothenburg, Sweden. From 2013 to 2023, he served as the Director of the Graphene Flagship, a one-billion-euro research project dedicated to exploring the potential of graphene.

In October 2023, Prof. Jari Kinaret assumed the role of Executive Director at Chips Joint Undertaking (Chips JU), a European public-private partnership that supports research, development, innovation, and future manufacturing capacities in the European semiconductor ecosystem.

References

NanoIC Pilot Line: Accelerating Beyond-2nm Innovation Across the Ecosystem

J. De Boeck
EVP & CSO
imec, Leuven, Belgium



Abstract

Autonomous vehicles, personalized medicine, 6G networks, robotics, and quantum computing are all driven by the next generation of semiconductor technologies, including breakthroughs like systems-on-chip based on beyond-2nm logic nodes. These innovations are of strategic importance since they have the potential to catalyze the transformation toward a sustainable society while fostering employment and economic growth. The whole semiconductor ecosystem will need to collaborate to enable core technological breakthroughs, elevating these to higher levels of maturity, and introducing them into cutting-edge products and services. The European Chips Act supports this through pilot lines for advanced semiconductor technologies. The pilot line for the development of beyond-2nm systems-on-chip (SoC), the NanoIC pilot line, is hosted by imec. As a world-leading semiconductor R&D hub, imec has built up a unique infrastructure over the last 40 years, including a highly advanced 300mm cleanroom for research purposes. The NanoIC pilot line will extend this infrastructure, enabling the industry to explore beyond-2nm system-on-chip technologies. These SoCs are built around the most advanced logic technology node, combined with next-generation memory and cutting-edge optical and electrical interconnects. This presentation will elaborate the benefits for the ecosystem of this truly pan-European endeavor.

Biography

Jo De Boeck received his engineering degree in 1986 and his PhD degree in 1991 from the University of Leuven. Since 1991 he is a staff member of imec (Leuven). He has been a NATO Science Fellow at Bellcore (USA, 1991-92) and AST-fellow in the Joint Research Center for Atom Technology (Japan, 1998). In his research career, he has been leading activities on integration of novel materials at device level and new functionalities at systems level. In 2003 he became Vice President at imec for the Microsystems division and in 2005 started Holst Centre (Eindhoven) as General Manager of imec the Netherlands. From 2010 he headed imec's Smart Systems and Energy Technology Business Unit. He is part-time professor at the Engineering department of the KU Leuven and held a visiting professorship at the TU Delft, Kavli Institute for Nanoscience (2003–2016). In 2011 he became Chief Technology Officer and in 2018 he was appointed Chief Strategy Officer. He is member of imec's Executive Board.

References

Requirements on the pilotlines under the ChipsAct for the Industry

S. Joeres
Vice President for Business Development,
Semiconductor Strategy and Strategic Projects
Robert Bosch GmbH, Munich, Germany



BOSCH
Invented for life

Abstract

No abstract

Biography

Stefan Joeres has been Vice President for Business Development, Semiconductor Strategy and Strategic Projects of Robert Bosch GmbH since 2014.

Born in Mönchengladbach, Germany, on April 15, 1977, he is married and has two children. He studied electrical engineering and information technology at RWTH Aachen (Germany).

He Graduated as Dipl.-Ing. And finalized his doctorship in 2008 about system simulation for high-frequency circuits at the RWTH Aachen.

References

Presentation of FAMES Pilot Line

S. Dauvé
CEO
CEA-Leti, Grenoble, France



Abstract

The FAMES Pilot Line is a pioneering project, aimed at advancing semiconductor technologies in Europe. FD-SOI advanced nodes (10 and 7 nm), eNVM, 3D integration, RF components, small inductors for Power Management IC (PMIC) are addressed. This initiative, led by CEA-Leti and gathering 11 RTOs in Europe, aligns with the ambition of the EU Chips Act, which seeks to bolster EU semiconductor capabilities and ensure technological sovereignty. The FAMES Pilot Line includes a significant CAPEX investment plan for advanced semiconductor pieces of equipment. The FAMES Pilot Line will be opened to user projects through open calls and custom projects, thereby creating a vibrant semiconductor ecosystem in Europe.

Biography

Sébastien Dauvé was named CEO of CEA-Leti effective on July 1, 2021, after more than twenty years of experience in microelectronics technologies and their applications, including clean mobility, medicine of the future, cybersecurity, and power electronics.

Sébastien Dauvé started his career at the French Armament Electronics Center, where he worked on developing synthetic-aperture radar. In 2003, he joined CEA-Leti as an industrial transfer manager and supervised several joint research laboratories, in particular with the multinational Michelin.

In 2007, Sébastien Dauvé became a laboratory manager, then head of an R&D department in the area of sensors applied to the Internet of things and electric mobility. During this time, he supported the dissemination of new technologies in industry, including the automotive industry (Renault), aeronautics, national defense (SAFRAN), and microchips with the industry leader Intel. He played an active role in the creation of start-ups in application fields ranging from health to infrastructure security, leading to dozens of new jobs. In 2016, he became Director of the CEA-Leti Systems Division.

From sensors to wireless communication, Sébastien Dauvé has played an active role in the digital transformation, focused on coupling energy frugality and performance. He has made cross-disciplinary approaches central to innovation by harnessing the expertise of talented teams with diverse backgrounds. Their goal is to provide technological tools for meeting the major societal challenges of the future.

Sébastien Dauvé is a graduate of the French Ecole Polytechnique and the National Higher French Institute of Aeronautics and Space (ISAE-SUPAERO).

References

Topic Coming Soon

M. Germain
General Manager BU GaN & CEO
SOITEC Belgium NV, Leuven, Belgium



Abstract

Coming Soon

Biography

Dr Marianne Germain received in 1999 her PhD degree in Electrical Engineering from the University of Liege (BE), where she conducted research in close collaboration with RWTH Aachen (D), and as invited post-doc in Purdue University (US) and Würzburg University (D). In 2001, she joined IMEC, where she became in 2004 Program Manager of the “Efficient Power/GaN” program. In May 2010, she co-founded “EpiGaN”, a spin-off located in Hasselt manufacturing GaN epiwafers for electronics applications, where she acted as CEO and member of the Board of Directors. EpiGaN nv was acquired by SOITEC in May 2019, where she is now acting as General Manager of BU GaN and CEO of SOITEC Belgium NV.

References

Topic Coming Soon

C. Kutter
Director of Fraunhofer EMFT
Fraunhofer EMFT, Munich, Germany



Abstract

Coming Soon

Biography

Christoph Kutter is director of Fraunhofer EMFT, an institute of the Research Fab Microelectronics Germany (FMD), of which he is currently co-spokesperson. He also holds a professorship specializing in solid-state technologies at the University of the Federal Armed Forces in Munich. His focus at Fraunhofer EMFT is on silicon technologies, MEMS, flexible electronics, biosystem integration and heterogeneous integration of various solid-state technologies.

Christoph Kutter is currently Vice President of the VDE (Association for Electrical, Electronic & Information Technologies), a member of acatech (National Academy of Science and Engineering) and the BBAW (Berlin-Brandenburg Academy of Sciences BBAW).

From 1995 to 2012, Christoph Kutter held various management positions at Infineon Technologies AG and Siemens AG, including Head of Communications Product Development, Head of Chip Card Development and Head of Central Research. Christoph Kutter was responsible for several central improvement projects to increase efficiency in research and development as well as for the management of the company-wide innovation initiative.

From 1990 to 1995, Christoph Kutter worked as a research assistant at the High Magnetic Field Laboratory (Max Planck Institute for Solid State Physics) in Grenoble, France.

Christoph Kutter received his Dipl. Phys. from the Technical University of Munich and his Dr. rer. nat. from the University of Constance in 1995.

References

Topic Coming Soon

M. Boll
Vice President Public Policy
Infineon Technologies, Munich, Germany



Abstract

Coming Soon

Biography

Michael Boll is a seasoned professional with a strong background in law, economics, and public policy. Born near Münster, Germany, he pursued higher education in Economics and Law at the University of Münster, earning his First State Examination in 2000 and his Second State Examination in Law in 2003.

Michael furthered his academic credentials by obtaining a Master's degree in International and European Business Law (LL.M.) from the University of Exeter in 2003-2004.

Michael's professional journey began in the consulting sector, where he held various leadership positions at EUTOP and Gault Advisors. His client base was mainly from the Tech and Financial sector. He served as Director at EUTOP from 2005 to 2014, followed by a stint as Senior Manager and Partner at Gault Advisors from 2014 to 2017. He later rejoined EUTOP, taking on roles such as Director & Syndic of EUTOP International GmbH, Member of the EUTOP Asia Executive Board, and Member of the EUTOP Executive Board in Berlin from 2017 to 2020.

In 2021, Michael brought his expertise to Infineon, a leading semiconductor company, as Vice President of Public Policy. In this role, he leverages his knowledge of law, economics, and public policy to drive strategic decision-making and advocacy efforts. Throughout his career, Michael has demonstrated a unique blend of academic rigor, professional expertise, and leadership acumen. His diverse experience in consulting, academia, and the corporate world has equipped him to navigate complex policy landscapes and drive meaningful impact.

References

Wide Band Gap Pilot Line: a Major Boost for Europe's Innovation and Competitiveness

F. La Via
Research Director
CNR IMM, Catania, Italy



Abstract

The European semiconductor industry excels in market segments driven by wide bandgap material capabilities, such as automotive, industrial, and specific telecommunication areas. The growth projections of industry & automotive market segments outperform the growth of the semiconductor industry. Between 2021 and 2030, McKinsey estimated a CAGR of respectively 13% for automotive electronics and 9% for industrial electronics. Through its strong position, the European Union should drive the growth and maturation of WBG material platforms in power and telecommunication applications. A pilot line can help the Union to drive the necessary process, architecture & material innovations from lab to fab effectively. Furthermore, the ultra-wide-band gap (UWBG) semiconductors, e.g., Ga₂O₃, AlN and diamond, have become the subject of intense research with an expected increasing interest due to the compounds' outstanding physical properties. The goal of the Pilot Line is to significantly expand the competitiveness of the European semiconductors industry by strengthening the entire value chain and enabling a fast adoption of advanced WBG technologies to high-value applications. The first results coming from the WBG pilot line will be the improvement of the efficiency of the high-end portion of the advanced power discrete device portfolio in Europe, and the development of the related value chain based in Europe. The second effect will be the creation of new and very innovative product families based on modern semiconductor materials and power devices having features and performance not covered by the current market. The WBG pilot line will build on the current facilities operating in Finland, Italy, Poland, France, Germany, Austria, and Sweden, where industrial processes will be defined and optimised, and demonstrators will be qualified to be then tested on the market.

Biography

Francesco La Via was born in Catania, Italy, in September 1961. He received the M.S. degree in physics from Catania University, Catania, Italy, in 1985. From 1985 to 1990, he had a fellowship at STM, Catania. In 1990, he joined the CNR IMM in Catania as a researcher. During this time, he was a Visiting Scientist at Philips NatLab, Eindhoven, The Netherlands. In 2001 he became senior researcher of the CNR IMM and he is responsible of the research group that work on the new metallization schemes for silicon and silicon carbide. From 2003 he is responsible of the division of CNR-IMM that developed new processes for silicon carbide epitaxy and hetero-epitaxy. From 2020 he become Research Director. He is responsible of several industrial research projects and coordinator of two European projects: CHALLENGE (<http://h2020challenge.eu/>) and SiC Nano for picoGeo (<http://picogeo.eu/>). In this period, he has published more than 350 papers on JCR journals and 4 edited books. He has presented several invited contributions to international conferences and has organized several conferences and tutorials. He has 6 patents on SiC technology and growth. The main research interests are in the field of silicon carbide growth, power devices, detectors and MEMS.

References

Staying Ahead of What's Next, An Advanced Materials and Semiconductor Equipment Perspective

J. Arcamone
Vice-President of Corporate R&D
ASM, Leuven, Belgium



Abstract

As Europe strives to assert its leadership in the global digital economy, the semiconductor industry plays a vital role in driving innovation, sustainability, and growth. Advanced materials and deposition processes are the foundation for electrification & digitalization in a sustainable manner as part of the EU twin green & digital transition. The presentation will discuss how ASM's technological innovations in Europe and globally are enabling growth through materials innovation, and will also highlight the necessity to collaborate along the electronics value chain as well as through public private partnerships.

Biography

Since 2023, Julien Arcamone is the Vice-President of the Corporate R&D of ASM, the leading semiconductor equipment supplier in ALD and Epitaxy. Based in Leuven at imec, he leads teams in Belgium and Finland that develop ASM's novel ALD and epi processes that will enable future advanced logic and memory devices.

Prior to that, he was 15 years with CEA-Leti, where he started as staff research scientist in NEMS. Then he held several positions, notably VP of Business Development for Asia, his last one with Leti being Head of the Connectivity & Computing Devices Department. In that position, he managed R&D teams dedicated to active RF and quantum devices, advanced CMOS and memories devices, and their related advanced computing approaches (Edge AI, In-Memory Computing), as well as the teams in charge of developing 3D integration technologies.

He graduated in 2003 from INSA Lyon in Materials Engineering, with a focus on semiconductor materials & devices. Then, he received a PhD in Electronic Engineering in 2007 from the Autonomous University of Barcelona (Spain), and the HDR (Habilitation à Diriger des Recherches) from Grenoble-Alpes University in 2017. He is an IEEE Senior Member, and was part of IEEE MEMS conference's TPC in 2016 and 2017. Dr. Arcamone has authored or co-authored more than 80 peer-reviewed scientific publications and 1 book, and is the co-inventor of 9 patents.

References

R. Hoofman
Director imec.IC-link
imec, Leuven, Belgium



Biography

Romano Hoofman is Strategic Development Director at imec.IC-link since 2016. He is currently responsible for the innovation programs of the unit and for the coordination of the EUROPRACTICE Service.

He started his career in industry, where he worked as a Principal Scientist at Philips Research and later on NXP Semiconductors. He covered many different R&D topics, ranging from CMOS integration, advanced packaging, thin film batteries, photovoltaics and (bio)sensors.

Romano received his PhD from the Technical University of Delft in 2000, where he investigated charge transport in semi-conducting polymers. He has authored more than 30 publications and holds more than 10

patents in various research areas.

References

K. Marent
EVP & Chief Marketing and Communications
Officer
imec, Leuven, Belgium



Biography

Katrien has an engineering degree in microelectronics. She joined imec in 1992 as analog design engineer and specialized in design of low-noise readout electronics for high-energy physics. In 1999, she became press responsible and scientific editor at imec's business development division and was responsible for authoring and editing the research organization's numerous company technical documents and publications. In 2001, she was appointed corporate communications director at imec. Her responsibilities expanded in August 2007, when she got the position of external communications director including corporate, marketing and outreach communications. In October 2016, she became VP corporate, marketing and outreach communication. Since April 2020 she is Executive Vice President & Chief Marketing and Communications Officer and member of the executive board of imec.

References

Panelist

T. Heurung
CEO Siemens Electronic Design Automation
GmbH & Technical Director EMEA
Siemens EDA, Munich, Germany

The Siemens logo, consisting of the word "SIEMENS" in a bold, blue, sans-serif font.

Abstract

Panelist

Biography

Since graduating with a degree in electrical engineering in 1997 from Friedrich-Alexander University in Erlangen, Thomas Heurung has been assisting customers in solving various challenges in industrial applications. His first engagements were with the development of electrical systems for automobiles and airplanes, embedded software for distributed control systems, and eventually moved on to the development of complex electronic systems and components.

After transitioning from Synopsys to Mentor Graphics in 2004, which became part of Siemens AG in 2017 and is now known as Siemens Electronic Design Automation, he held various responsibilities such as global business development and establishing and leading technical sales in Europe and India for the Capital and Volcano product lines.

Since 2020, he is serving as Technical Director, responsible for the technical sales of semiconductor and electronic systems development tools at Siemens EDA in EMEA.

References

Panelist

F. Le Grevès
President STMicroelectronics France and
Executive Vice President, Europe & France Public
Affairs
STMicroelectronics, Paris, France



Abstract

Panelist

Biography

Frédérique Le Grevès is President of STMicroelectronics France and STMicroelectronics' Executive Vice President, Europe & France Public Affairs since March 2021. During her career, she has held various positions in management committees of companies in the automotive sector – Aptiv, Nissan Motors, Renault Group, Renault Nissan Mitsubishi Alliance - both in Europe and the United States. In April 2022, she was appointed President of the “Electronic Industry” Strategic Committee (CSF) in France, in July 2022, she was appointed Vice-President of the Electronics Branch of the FIEEC (Federation of Electrical, Electronic and Communication Industries) and in December 2023, Vice-President of the European Semiconductor Industry Association (ESIA).

References

Panelist

C. Frey
Vice-President of EU engagements & Managing
Director
ARM, Cambridge, United Kingdom



Abstract

Panelist

Biography

Currently based in Sophia Antipolis France, he has been the Managing Director of Arm France since 2014. Under his leadership, Arm's French entity has experienced significant workforce growth, multiplying its staff by four. He also serves as Vice-President of European Engagements. In this role, he focuses on strengthening Arm's presence within the European semiconductor ecosystem.

In 2024 he became an operating Partner at C4 Ventures investment fund, where he brings his 30 years of experience in the semiconductor industry, operations, and management in an international context.

He holds a MS degree from PHELMA Grenoble and has held various roles in design, management, and program management at STMicroelectronics in Crolles, France, for 12 years. He played a key role in establishing the Crolles2 alliance with Philips and Motorola, an experience that led to his first international professional immersion in Austin, Texas. He then took the opportunity to join the startup SOISIC, where he served as Vice-President of Engineering before the company was acquired by Arm in 2006.

At Arm, he further enriched his international experience with a four-year stay in Silicon Valley, California. As Vice-President of Operations for the Physical IP division, he oversaw project management and quality control teams while managing the division's operational budget.

Then, as VP of workplace, he coordinated the management of Arm buildings globally for five years, including crisis management during the COVID-19 pandemic.

References