CxO Summit

Welcome Remarks

L. Altimime
President
SEMI Europe, Berlin, Germany

Abstract
Coming Soon

Biography
Laith Altimime, as President of SEMI Europe, leads SEMI's activities in Europe and the Middle East and Africa (EMEA). Altimime has P&L responsibility as well as ownership of all Europe region programs and events, including SEMICON Europa. He is responsible for establishing industry standards, advocacy, community development, expositions, and programs. He provides support and services to SEMI members worldwide that have supply chain interests in Europe. He manages and nurtures relationships with SEMI members in the region and globally as well as with local associations and constituents in industry, government, and academia. Altimime has more than 30 years of international experience in the semiconductor industry. Prior to joining SEMI in 2015, He held senior leadership positions at NEC, KLA-Tencor, Infineon, Qimonda and imec. Altimime holds an MSc from Heriot-Watt University, Scotland.

References

Opening Remarks

A. Manocha
President and CEO
SEMI, Milpitas, United States of America

Abstract
Coming Soon

Biography
Ajit Manocha is the president and CEO of SEMI. Headquartered in Milpitas, California, SEMI is the global industry association serving the electronics manufacturing and design supply chain. Throughout his career, Manocha has been a champion of industry collaboration as a critical means of advancing technology for societal and economic prosperity.
Manocha was formerly CEO at GLOBALFOUNDRIES. Prior to this he held the role of EVP of worldwide operations at Spansion and earlier served as EVP and chief manufacturing officer at Philips/NXP Semiconductors. He began his career at AT&T Bell Laboratories as a research scientist where he was granted more than a dozen patents related to semiconductor manufacturing processes that served as the foundation for modern microelectronics manufacturing. He has served on the boards of SEMI, SIA and GSA.
Today, there is a much broader scope for SEMI to help foster collaboration and fuel growth than we could have ever imagined at its inception in 1970. This scope has to be accomplished without compromising the strong foundation of SEMI – the equipment suppliers and materials makers. Manocha feels SEMI must evolve as the industry's ecosystem rapidly expands to support smarter, connected applications based on artificial intelligence, machine learning and other disruptive technologies.
Manocha is active on global advocacy and workforce development issues and has served on the President's committees for "Advanced Manufacturing Partnerships" and the President's Council of Advisors on Science & Technology (PCAST).
In 2021, VLSIresearch added Manocha to its Semiconductor Industry Hall of Fame for his leadership of SEMI efforts to address geopolitical trade tensions as well as for his initiative in navigating the many challenges of the COVID-19 pandemic impacting SEMI and the microelectronics industry. In 2020, Manocha was inducted into the Silicon Valley Engineering Hall of Fame, and VLSI named him an "All Star of the Semiconductor Industry" for his visionary leadership in 2019 to restructure SEMI to represent the expanded electronics supply chain.

References

The Chips Act and Europe's Path to a Stronger, Resilient Semiconductor Ecosystem

G. Kalbe
Acting Director of DG Connect C, Digital Excellence and Science Infrastructure
European Innovation Council, Brussels, Belgium

Abstract
Coming Soon

Biography
DG Communications Networks, Content and Technology, European Commission, Acting Director of DG Connect C "Digital Excellence and Science Infrastructure" and Head of Unit of the High Performance Computing and Quantum Technology unit
Dr. Gustav Kalbe studied Applied Physics at the Université Catholique de Louvain, Belgium. In 1991 he studied Applied Optics at the Imperial College of Science in London. In 1995 he completed his studies and earned a PhD in Physics at the Université Catholique de Louvain, Belgium.
He started his professional career as a project manager in photonic networks at the incumbent telecom operator in Belgium. He was R&D manager when he left the company.
In 1998 he joined the Directorate General Information Society & Media of the European Commission where he started working as Project Officer managing research projects of the European Framework Programs for Research. Over the years he had several assignments in quantum technologies, photonics, and cybersecurity.
In 2014 Gustav Kalbe became Head of Unit for Administration & Finance in the European Commission, in Directorate General Communications Networks, Content and Technology.
In 2016 he was appointed Head of Unit of the newly created High Performance Computing and Quantum Technology unit in Directorate General Communications Networks, Content and Technology.
In 2018 he became responsible for the establishment and operation of the European High Performance Computing Joint Undertaking. He occupied the post of Interim Executive Director of the Joint Undertaking until its autonomy by the end of 2020.
In January 2021, he was appointed Deputy to the Director of DG Connect C "Digital Excellence and Science Infrastructure".
Since May 2022 Gustav is the Acting Director of DG Connect C "Digital Excellence and Science Infrastructure".

References

Chips Joint Undertaking: Working Together to Strengthen European Industries

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

Abstract
The Chips Joint Undertaking is funded by the European Union (represented by the EC), Participating States, and Private Members (AENEAS, EPoSS, and INSIDE Industry Associations).
The Chips JU is the European tri-partite partnership that will boost the development and adoption of advanced nano-electronic chip-technologies and systems manufactured in Europe, supporting European sovereignty, digitalisation of society, energy transition, and more, respecting the European values and this to the greater good of the European citizen society and environment.
The Chips JU will develop, together with the European nanoelectronics community and the Member States, in the coming years a strong portfolio comprising several pilot lines for advanced nanoelectronics' technologies, a design platform for the design of advanced chips, a broad set of projects that make use of those technologies to innovate all along the value chain in all industrial domains: mobility, energy, health, robotics, and of course chip manufacturing. This portfolio of actions will be supported with a network of competence centres all over Europe that will facilitate the access to those actions for European start-ups, SMEs, universities, and larger companies.

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

The Versatile Future of Semiconductor Systems

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

Abstract
The last few decades have seen a remarkable increase in technology applications, culminating in the AI revolution. Thanks to Moore's Law, technological advances are enabling more powerful applications, especially for the rapidly growing computing needs of AI. Maintaining Moore's Law and adopting new architectural approaches are key to efficiently handling the exponential increase in computing power required, leading to a demand for more flexible chip architectures and platforms.
Significant advances in the semiconductor industry have been driven by state-of-the-art infrastructure, a global ecosystem and skilled talent. Legislative initiatives such as the Chips Acts provide an ideal framework for increasing collaboration and impact in the semiconductor sector. These elements are essential for the advancement of various technology platforms, laying the foundation for advanced computing systems in future applications.

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 Tomorrow: Materials Intelligence Driving Sustainable Innovation

K. Beckmann
Member of the Executive Board and CEO
Electronics
Merck KGaA, Darmstadt, Germany

Abstract
Semiconductor Materials are the foundation upon which modern chips are built, driving advancements across industries from artificial intelligence to next-gen computing. Europe, with its strong research base, and commitment to sustainability, can play a pivotal role in driving these advancements. In this keynote, we will explore how Materials Intelligence is not only enabling innovation but is also key to addressing the sustainability challenges of our time. Through groundbreaking innovations and cross-industry collaboration, semiconductor materials are shaping the future of technology. Join us as we delve into the latest developments and discover how they are shaping the next wave of global innovation and prosperity.

Biography
Kai Beckmann, born on September 13, 1965 in Hanau, Germany, joined the Executive Board of Merck in April 2011. He is responsible for the Electronics business sector (formerly Performance Materials), which he has been leading as CEO since September 2017. In October 2018, Kai Beckmann took also over the responsibility for the Darmstadt site and Inhouse Consulting. In addition, he acts as Country Speaker Germany with responsibility for co-determination matters.
Prior to his current role, Kai Beckmann was Chief Administration Officer of Merck with responsibility for Group Human Resources, Group Business Technology, Group Procurement, Inhouse Consulting, Site Operations and Merck Business Services as well as Environment, Health, Safety, Security, Quality. In 2007, he became the first CIO of Merck, with responsibility for Corporate Information Services. From 2004 to 2007, he served as Managing Director of the Merck companies in Singapore and Malaysia, and prior to that he held senior executive responsibility for the Information Management and Consulting unit from 1999 to 2004. He began his career at Merck in 1989 as an IT system consultant.
Kai Beckmann studied computer science at the Technical University of Darmstadt from 1984 to 1989. In 1998, he earned a doctorate in Economics while working.

References

INFICON: Your Path to Tomorrow's Autonomous Smart Factory

J. Behnke
General Manager Smart Manufacturing
INFICON, Syracuse, United States of America

Abstract
This presentation will provide an overview of market trends and INFICON's evolving role in the semiconductor industry, tracing its journey from a leading manufacturer of residual gas analyzers, vacuum gauges, and helium leak detectors to its current position as a thought leader in Smart Manufacturing solutions, encompassing both hardware and software. INFICON's Digital Twin technology remains a cornerstone of its integrated software applications, playing a crucial role in enhancing manufacturing efficiency and precision. The presentation will also highlight the growing influence of INFICON's AI/ML advanced analytics team, whose innovations are driving new capabilities across the company's product portfolio. These advancements, along with other cutting-edge industry developments, are laying the groundwork for the autonomous factory of the future.

Biography
Mr. Behnke has over 40 years of semiconductor industry experience. As the General Manager of INFICON's FPS Product Line and Head of its IMS Marketing team, John leads a global team that develops and deploys Smart Manufacturing software and hardware solutions which improve factories performance. INFICON's comprehensive Digital Twin of a factory enables advanced Factory Scheduling, optimized WIP movement and other advanced capabilities.

He is also a Co-Chair of the Semi North America Smart Manufacturing Chapter as well as a founding member of Semi's Smart Global Executive Committee.

Prior to his current role at FPS John served as: the President of Novati Technologies, SVP and GM of the Semiconductor Group at Intermoleculor, CVP for Front End Manufacturing and Tech Transfers at Spansion and Director of Operations at AMD's Austin Fab 25.

References

Embracing the Paradigm Shift - Addressing Value Chain Challenges in a new Landscape

B. Frenkel
Member of the Executive Board Purchase
Dr. Ing. h.c. F. Porsche AG, Stuttgart, Germany

Abstract
Barbara Frenkel reflects on the forecasts she made regarding the collaboration with the semiconductor industry at SEMICON Europa 2022. She addresses the developments that have taken place globally in the automotive industry since then. Furthermore, she discusses new challenges arising from the transformation to e-mobility and the emergence of new regulations for the automotive sector.

Biography
1963 Born in Hof (Saale), Germany

1982 A-Level Certificate of education (Abitur) in Hof 1982 Studies in chemistry at Bayreuth University and rubber technology at Hannover University

1984 Various posts in development, production, sales and quality assurance, Helsa-Werke, Gefrees

1997 Quality Auditor, Valeo Thermal Systems, Rodach

1999 Manager Supplier Development Europe, TRW Automotive, Alfdorf

2001 Head of Quality Systems and Methods of Dr. Ing. h.c. F. Porsche AG

2006 Head of Central Training of Dr. Ing. h.c. F. Porsche AG

2013 Head of Sales Network Management & Development of Dr. Ing. h.c. F. Porsche AG 2017 Head of Region Europe of Dr. Ing. h.c. F. Porsche AG

2019 Member of the Supervisory Board of Dr. Ing. h.c. F. Porsche AG

2021 Member of the Executive Board Purchases of Dr. Ing. h.c. F. Porsche AG

References

Designing Sustainable Semiconductor Materials: Engineering the Future through Breakthrough Innovation and Strategic Collaboration

P. Barnabé
CEO
Soitec, Paris, France

Abstract
Coming Soon

Biography
Pierre Barnabé was nominated as Soitec CEO in January 2022 and joined the company four months later. He was previously Executive Vice-President in charge of Big Data & Cybersecurity at technology group Atos (2015-2021), where he also led the Public Sector & Defense division and manufacturing operations before serving as interim Group CEO in 2021. Prior to its acquisition by Atos in 2014, Pierre Barnabé was Deputy CEO of Bull. He then served as Bull's Chairman & CEO from 2015 to 2021, spearheading the company's evolution into a global leader in cybersecurity services and supercomputing. From 2011 to 2013, he was Managing Director of the Enterprise branch of SFR, the French telecoms operator, where he launched cloud computing and very high-speed broadband activities. That followed a 13-year stint during which he held various positions at Alcatel and Alcatel-Lucent, first in sales and later as Chairman & Managing Director of Alcatel-Lucent France (formerly Alcatel CIT) and Group Deputy Managing Director for Human Resources and Transformation. A graduate of the NEOMA Business School and Ecole Centrale in Paris, Pierre Barnabé began his career in 1994 in Silicon Valley, developing corporate venture capital and capital risk activities for Thales Group. He then moved to Thales headquarters in Paris, where he was in charge of strategy and acquisitions for the Communication and Command division. A member of the board of the multinational market firm Ipsos, he also served as Chairman of the Board of ENSIMAG Grenoble, the prestigious Grande École specializing in computer science, applied mathematics and telecommunications (2016-2022) and on the board of France's National Institute for Research in Digital Science and Technology (INRIA) from 2021 to 2022. Pierre Barnabé is a Knight of the French National Order of Merit.

References

Green Growth: Guiding the Future of the Global Semiconductor Industry

F. Godomel
Executive Vice President – Power Systems & Services
Schneider Electric, Paris, France

Abstract
Did you know that the use of semiconductors has doubled every three years? If this trend continues, the semiconductor industry could account for nearly 20% of global energy consumption by 2030! While ramping up semiconductor production is essential to support our technological progress, prioritizing decarbonization and sustainability is crucial. Join us in this session to learn more about how to create an efficient and sustainable fab of the future.

Biography
Coming Soon

References

Deep Tech Collaboration for Power-Efficient Semiconductors

S. Haferl
Chief Executive Officer
Comet Group, Zurich, Switzerland

Abstract
As artificial intelligence (AI) accelerates the demand for high-performance computing, the need for powerful but energy-efficient microchips becomes ever more important. Today's power-hungry chips present significant challenges across industries, from mobile devices to data centers. While advanced packaging techniques offer promising avenues for enhancing microchip power efficiency, their inherent complexity necessitates robust partnerships within the deep tech ecosystem.
Collaboration from chip design to packaging is vital for developing increasingly complex semiconductor structures and devices. Working together to create advanced inspection methods that effectively verify the integrity of sophisticated packaging solutions, minimizing defects that could lead to disfunctions and higher power consumption, is equally demanding and important. In this context, future-proof X-ray inspection solutions play a pivotal role in maintaining both performance and energy efficiency.
By fostering innovation and co-creation, the semiconductor industry can usher in the next generation of energy-efficient devices, effectively addressing the pressing challenges posed by power-hungry microchips

Biography
Born 1972, Swiss and Norwegian citizen; Master's degree in mechanical and process engineering from the Swiss Federal Institute of Technology (ETH), Zurich, PhD with work on thermodynamics and fluid dynamics. Stephan Haferl has been working for the Comet Group successfully in various management positions since 2007. His strong track record includes proven performance in business development, innovation, technology, and product management, among other areas.
Before, he held the positions of General Manager at Bartec-Meta Physics SA and Chief Operating Officer at Bartec Bacab SA.

References

Beyond Simulation: Bridging the Real & Digital World

K. Westrich
Global VP of Electronics, Semiconductors & Simulation Digital Industries
Siemens AG, Munich, Germany

Abstract
In the semiconductor industry, innovation starts by challenging the status quo. With companies tackling talent gaps and the challenge of building efficient, sustainable multi-billion-dollar fabs, Siemens sees digital twin technology as the game-changer. This powerful technology can supercharge virtual training to upskill teams faster and boost fab productivity and planning like never before. In this keynote, Siemens reveals how the digital twin is fueling breakthroughs and redefining what's possible, helping us all do more with less.

Biography
Katharina leads Siemens' global activities for Electronics & Semiconductor and Simulation, where she heads a team focused on unlocking the potential of resilient, smart, and sustainable semiconductor manufacturing across the entire value chain. As an elected member of the Governing Council of the Semiconductor Climate Consortium (SCC), Katharina reinforces her commitment to sustainability and her role in driving positive change within the semiconductor ecosystem. Her dynamic and accomplished leadership places her at the forefront of digitalization and sustainability solutions – transforming the everyday through innovative technologies.
Before her current role, Katharina served as the Head of Siemens Research & Pre-Development department. With a team of approximately 500 talented individuals, she championed sustainable practices and contributed to the development of next-generation Siemens products for Integrated Circuits & Electronics, Power Electronics, Sustainable Energy & Infrastructure, Additive Manufacturing, and User Experience. Prior to that, she held several strategic positions within Siemens and gained valuable experience in consulting and mergers & acquisitions for Siemens.
Katharina holds a Master of Science degree from the Catholic University Eichstaett-Ingolstadt.

Short Version:
Katharina heads Siemens' global activities for Electronics & Semiconductor and Simulation, leading a team dedicated to unlocking the potential of resilient, smart, and sustainable semiconductor manufacturing across the entire value chain. As an elected member of the Semiconductor Climate Consortium (SCC) Governing Council, Katharina reinforces her commitment to drive positive change within the semiconductor ecosystem. Her dynamic leadership places her at the forefront of digitalization and sustainability solutions – transforming the everyday through innovative technologies.
Previously, Katharina held various strategic positions within Siemens, including heading the Research & Pre-Development department. She championed sustainable practices and contributed to the development of next-generation Siemens products.
She holds a Master of Science degree from the Catholic University Eichstaett-Ingolstadt.

References

Accelerating Innovation with Industry-grade Platforms

C. Mazure
Chief Strategy Officer
Institute of Microelectronics – A*STAR, Singapore,
Singapore

Abstract
Shortening the time from innovation to industrialization is essential. A*STAR, Singapore, is accelerating the development of More-than-Moore applications through its R&D Catapult platforms. The platforms enable design-process-packaging co-optimization for early feasibility studies to prototyping for academia, public agencies and companies. We highlight 3 Catapult platforms: advanced packaging, piezo-MEMS and SiC.
Advanced packaging: Our advanced packaging platform addresses semiconductor system scaling towards trillions of transistors in a single energy efficient package. We offer advanced fan-out wafer level packaging, 2.5D interposers, chip-to-wafer micro-bump 3D integration, wafer-to-wafer hybrid bonding and chip-to-wafer hybrid bonding to meet the needs of Power-Performance-Formfactor-Cost (PPFC) in semiconductor systems.
Piezo-MEMS: We have established the world's first Piezo-MEMS ‘Lab-in-Fab’ platform, where R&D and manufacturing are performed in the same fab – the same equipment, talent and recipes. This enables quicker, less costly and derisked development and commercialization of MEMS devices.
SiC: Our 200mm SiC platform is vertically integrated from epitaxy to power module packaging and testing for reliability and performance. We use superjunction trench MOSFETs as our R&D vehicle, making it available for the first time to academic and fabless innovators.

Biography
Dr. Carlos Mazure has been working close to A*STAR as an advisor since May 2021. On July 2024 he joined the Institute of Microelectronics – A*STAR as Chief Strategy Officer.
With 40 years of experience in the global semiconductor industry, Dr. Carlos Mazure is presently member of several international advisory committees and company boards in Singapore and Europe.
Chairman and Executive Director of the SOI Industry Consortium since July 2014 through December 2020. Under his leadership the SOI Industry Consortium has been promoting with the SOI ecosystem the development of the SOI platforms worldwide and helping accelerate the SOI market growth. The SOI Industry Consortium joined the industry association SEMI in January 2021, where Carlos Mazure was an advisor till December 2021 Carlos Mazure was with Soitec till October 2020. Executive Vice President and Advisor to the CEO since April 2019, and EVP & CTO, Head of Corporate R&D and CTO at Soitec from January 2001 through March 2019.
Prior to Soitec, from 1994 through 2000 Carlos was with Infineon (Munich, Germany), and initiated Infineon/Toshiba FeRAM Alliance in Japan. From 1993 through 1994 he worked for IBM/Infineon DRAM Alliance (Fishkill, NY); and from 1990 through 1993 at Advanced Products Research and Development Laboratory (APRDL), Motorola (Austin, Texas) on BiCMOS ultra fast SRAMs. Carlos started his career at the Siemens Corporate R&D in Munich, Germany, in 1984.
Carlos Mazure is IEEE Fellow, PhD from the Technical University Munich,

References