Fab Management Forum

Welcome Remarks

L. Altimime
President
SEMI Europe, Berlin, Germany

Abstract
Welcome Remarks

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

Essential Chips made Globally, trusted in Europe

M. Horstmann
General Manager and Senior Vice President
GlobalFoundries, Dresden, Germany

Abstract
Coming Soon

Biography
Manfred Horstmann serves as General Manager and Senior Vice President at GlobalFoundries (GF), overseeing European fabs, including GF's 300mm manufacturing facility in Dresden. He also leads the GlobalFoundries Engineering Services (GFES) teams in Singapore, Penang, Bangalore, and Malaysia, supporting GF's global manufacturing operations.Since 2020, he has transformed the Dresden Fab cluster into Europe's largest 300mm wafer facility, achieving a two and a half output increase in less than three years, boosting productivity and strategically optimizing operations. He and his team led the development and production of a highly differentiated technology portfolio (55nm-22nm) for applications in fast growing markets such as automotive, MCUs, display drivers, audio amplifiers, security chip cards, radio frequency (RF) and 5G technology.With over 27 years of experience in multiple leadership positions in spanning research, technology development, product engineering, and large-scale operations, Mr. Horstmann has held leadership roles at Advanced Micro Devices (AMD), Motorola, and IBM in Germany and the United States.Mr. Horstmann holds over 100 patents, has authored more than 200 scientific papers and serves on advisory boards for Forschungszentrum Jülich and Nanoelectronic Materials Laboratory. Mr. Horstmann earned his Diploma and PhD in Physics from Rheinisch-Westfälische Technische Hochschule (RWTH) Aachen.

References

SETT: Spain’s Commitment to Strengthening Europe’s Semiconductor Ecosystem

F. J. Ponce
CEO, SETT
Sett Sociedad Española para la Transformación
Tecnológica, Madrid, Spain

Abstract
SETT, as a Spanish public business entity, offers opportunities for public-private collaboration through co-investment in strategic projects that contribute to Europe's strategic technological autonomy.
Introducing PERTE Chip - Strategic Project for Economic Recovery and Transformation for Microelectronics and Semiconductors is a public-private initiative in Spain that seeks to boost semiconductors sector through transformative projects.
Spain promotes PERTE Chip and other co-investment instruments within a framework of stable and sustained growth, affordable energy, infrastructure, and talent—key drivers for enhancing European competitiveness and leadership in the semiconductor sector.

Biography
Francisco Javier Ponce Martínez
CEO of SETT
Industrial engineer from the Polytechnic University of Madrid and holder of a Master's Degree in Business Administration (MBA) from the Instituto de Empresa (IE). He began his professional career at the Spanish National Research Council (CSIC), holding various positions of responsibility at the CDTI (Center for Technological Development and Innovation) for more than 30 years.
He began working at the CDTI in 1992, taking on the role of International Director of the CDTI as Spanish delegate to the European Union's R&D Programs during Framework Programs III and IV until 1998. Other notable positions within the CDTI include Head of the Spanish Presidency Office of the Eureka International Program for Technological Cooperation and Head of the Studies and Promotion Department between 2001 and 2010. From 2012 to 2018, he was Economic and Financial Director, assuming the role of Director General of the CDTI from 2018 to January 2024.
In March 2024, he joined the Spanish Microelectronics and Semiconductors Society (SEMyS) as Deputy Director General.
He is currently CEO of SETT.

References

Topic Coming Soon

J. O'Donnell
Sales Team Leader
VAT Group, Global Services, Leamington Spa,
United Kingdom

Abstract
Coming Soon

Biography
Coming Soon

References

Building the Future: Global Fab Investment, Capacity Dynamics & Materials Market Outlook

C. Tseng
Sr. Director
SEMI, Milpitas, United States of America

Abstract

The global semiconductor sector stands at a critical turning point, fueled by surging demand for AI, high-performance computing, and emerging technologies. This momentum is sparking record-breaking capital investments and breakthroughs throughout the ecosystem, from cutting-edge semiconductor fabs to advanced materials development.

However, this expansion occurs against a backdrop of increasing volatility, including fluctuating trade policies, tariff adjustments, and geopolitical challenges that complicate investment strategies, supply chains, and sustained industry leadership.

In this session, we will provide an in-depth review of SEMI's most recent World Fab Forecast, spotlighting worldwide patterns in capital equipment expenditures, fab development, and capacity growth projections through 2028. We will delve into the role of government subsidies and regulatory changes in redirecting new fab initiatives and transforming the international semiconductor ecosystem.

Additionally, we will assess the shifting demands for wafer fab materials as the industry navigates swift technological advancements. Participants will leave with actionable perspectives on aligning materials innovation and supply chain robustness with broader investment patterns to propel the semiconductor industry's next phase of advancement.

Biography

Clark Tseng is the Senior Director of Market Intelligence at SEMI. He is responsible for developing and executing global strategies that provide high-quality market research products and services, which monitor and analyze the dynamics of the semiconductor manufacturing supply chain.

Clark specializes in analyzing and forecasting various microelectronics industries, including IDM, Fabless, Foundry, Memory, and OSAT, with a focus on the Asia-Pacific and China markets. Additionally, he oversees SEMI's global research partnerships.

Clark has held several strategic and analytical roles in leading microelectronics companies before joining SEMI. At MediaTek, he served as Deputy Director of the Computing, Connectivity, and Metaverse Business Group. In this role, Clark provided market intelligence and competitive analysis for Computing (HPC/ASIC), Connectivity (5G/Wi-Fi), and Multimedia (XR and Auto) domains. Prior to that, he served as the division manager for Strategy and Business Development at Qimonda, where he oversaw market and competitive intelligence functions in the Asia/Pacific region. Clark began his career as an analyst at IDC, covering semiconductor, flat-panel display, and telecommunications markets.

Clark holds a Bachelor of Business Administration and a Bachelor of Arts in International Relations from National Chengchi University in Taiwan.

References

Review of the Gases & Materials incoming Supply Chain to Manufacture Chips in Europe

L. Castrogiovanni
Vice President Electronics Europe
Air Liquide, Electronics Europe, Milan, Italy

Abstract
Review of the gases & materials incoming supply-chain to manufacture chips in Europe

Biography
VICE PRESIDENT EUROPE - SEMICONDUCTORS - INTERNATIONAL EXPERIENCE - MBA - INDUSTRIAL ENGINEER

I'm a capable and inspired manager with more than 25 years of experience in industrial environments, internationally.

I have an extensive knowledge of semiconductors' industry and the process industries such as chemicals, refining, steel, hydrogen, power & utilities.

I perform in business strategy, team leadership, multi-country P&L management and industrial operations.

I'm recognized as trustful, innovative and customer oriented. I have clearly appreciated interpersonal and communication capabilities, systematically relying on emphatic listening and capturing attention with storytelling.

References

Driving Semiconductor Innovation in Europe: How AI-Powered X-ray Inspection accelerates time-to-market

I. Drolz
Co-President IXS
Comet AG, Hamburg, Germany

Abstract
Behind the semiconductor industry's rapid advancements lies a powerful yet often overlooked European supply chain. Hidden champions like Comet are redefining what's possible in advanced packaging through AI-driven 2D and 3D X-ray inspection. By combining cutting-edge imaging with Dragonfly's intelligent analytics, manufacturers can detect critical defects earlier, optimize yield, and compress development cycles. This talk will highlight how Europe's specialized ecosystem fuels global competitiveness, why advanced inspection is becoming indispensable for next-generation packaging, and how AI-powered X-ray technology is transforming time-to-market from a challenge into a strategic advantage.

Biography
Isabella Drolz is the Vice President Marketing & Product Strategy at Comet AG, Industrial X-ray Systems Division. She is responsible for Market and Product Management, Global Application Solution Centers, Marketing, and the Academia Program. She oversees the product brands Comet Yxlon and Dragonfly.
The division is focused on developing CT and X-ray inspection solutions based on AI, as well as standalone software products for image processing and analysis, serving industries such as semiconductor, electronics, automotive, and research.
Isabella holds a degree in Industrial Engineering, a Bachelor of Science in International Business Administration, and an MBA from Southern Nazarene University in Oklahoma City, USA.
She has held several management positions in the mechanical and plant engineering industry, where she has driven market-oriented product development. Her strategic leadership plays a key role in positioning Comet's X-ray and CT solutions to address current and emerging industry demands, especially in semiconductor inspection and advanced packaging technologies.

References

Single Point of Failure: High Purity Quartz at the Heart of Global Chipmaking

R. Haus
Managing Director
Dorfner Anzaplan GmbH, Hirschau, Germany

Abstract
High purity quartz (HPQ) is the basic raw material to produce quartz glass, used in a wide variety of semiconductor manufacturing, such as diffusion and etching processes, photolithography and silicon monocrystal growth. The current industry structure is dominated by a very limited number of quartz suppliers and the global supply is dependent on very few deposits concentrated near the village of Spruce Pine, North Carolina. This high dependence of the semiconductor industry on a single region has introduced significant risks related to geopolitical tensions, supply chain fragility, and increasing cost pressures.

Geopolitical Risks: Trade tariffs, export bans, and supply rationing are becoming significant concerns for non-U.S. consumers.

Single-Source Fragility: Past disruptions, including COVID-19 logistics challenges (2020–2022), and Hurricane Helene (2024), highlight the need for diversification.

Market Control: Limited number of competitors follow a pricing strategy that limits competition and innovation.

Sustainability and ESG Pressures: Increased regulatory requirements and sustainability expectations necessitate above-inflation price increases to maintain compliance.

At Anzaplan unique experience in HPQ processing and plant design gained over the last 30 years and in over 100 HPQ projects considering independent impurity profiling, resource estimation, flowsheet optimization, ESG/LCA support, pilot processing, plant engineering, feasibility studies and vendor qualification can turn risk into a managed program.

Thus, the presentation will highlight the operational and commercial risks along with the Hurricane Helene event and offers a practical de-risking playbook by dual-sourcing, strategic inventory, resilience clauses, accelerated qualifications, circularity, and supplier building, to help European fabs turn a hidden bottleneck into a managed advantage.

Biography
For decades Dr. Haus' focus is on specialty minerals and rare metals with a strong academic background in Engineering Geology and Mineral Processing. After his PhD he held senior research manager positions at Karlsruhe Institute of Technology (KIT), Germany and Massachusetts Institute of Technology (MIT) in Boston, Mass.
In 2000 he was appointed managing director and in 2010 became shareholder of Dorfner Anzaplan GmbH, a leading independent analytical, consulting and engineering firm in critical minerals and metals based in Germany with projects globally. Dr. Haus completed his EMBA in 2005 and recently became chairman of Anzaplan UK, a 100% subsidiary of Anzaplan in Germany.

References

Onshoring: Ready to meet demand…Improved Supply Chain Resilience & Accelerated Route to Carbon Neutrality

K. Boeckx
Business Director Electronics
Nippon Gases, Oevel, Belgium

Abstract
Eu Semiconductor customers are not only striving for resilient supply chains but also for carbon neutrality. Their routes to net.zero emissions intensify as deadlines for Carbon Neutrality come in sight. Focus shifts beyond the fab and the pressure on suppliers to help reduce their Scope 3 emissions is on. Will combining Onshoring investments with CN programs allow us to hit 2 birds with one stone?

Biography
Katleen Boeckx is the Business Director for Electronics at Nippon Gases. She is a commercial engineer, and after several years working in telecommunications in Germany and the US, she joined Nippon Gases in 2004 as a product manager for semiconductor specialty gases.
From 2010 to 2013, Boeckx moved to operations and led the Oevel specialty gases plant in Belgium. She is now responsible for strategically growing Nippon Gases' semiconductor business in Europe. She is also accountable for providing commercial support to local business teams in all European countries, for further developing key customers and strategic supplier partnerships, and for timely adjusting the product portfolio and associated operational capabilities to the fast-changing market's needs.

References

How AI gets a body

A. Mayr
Chief of Staff
Neura Robotics GmbH, Metzingen, Germany

Abstract
tbd.

Biography
Alexander Mayr joined NEURA Robotics as Chief of Staff & Head of CEO-Office in March 2024. As a dynamic leader with a strong background in corporate development and digital transformation, he plays a pivotal role in driving the company's strategic initiatives and operational excellence during its rapid scale-up phase.
Before joining NEURA Robotics, Mayr held key positions at Younited and ATOSS Software AG, where he successfully led cross-functional projects to accelerate growth and organizational efficiency. As Founder of SPACS UG & Co. KG, he also promotes innovative workspace concepts, bridging entrepreneurship and modern work culture in rural regions.
Holding a Master's degree in Business Consulting & Digital Management from FOM University of Applied Sciences and a Bachelor's degree in HR & Organization and Marketing from WFI, Ingolstadt School of Management, Mayr combines strategic vision with a hands-on mentality; making him a driving force in NEURA Robotics' mission to shape the future of cognitive robotics.

References

Beyond Simulation: Challenging the status quo

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

Abstract

Europe's ambition to double fab capacity by 2030 is more than a growth target – it's a call to rethink how fabs and assembly lines are planned, build built and run. At Siemens, we're answering that call by combining the real and digital worlds to optimize the chip and fab lifecycle—unlocking new levels of efficiency, resilience, and transparency.

What if every decision in fab planning and operations could be validated virtually—before a single foundation is laid, a system installed, or a solution deployed? With digital twins, AI-driven analytics, and our deep semiconductor expertise, this future is already taking shape. Building the fabs of tomorrow also demands robust, future-ready infrastructure —from intelligent facility and building systems, efficient electrification solutions to resilient power grids—all seamlessly integrated.

But the transformation doesn't stop with the fab: Our PLM data backbone and EDA portfolio connect the entire chip lifecycle: from ideation and IP management, through accelerated design & verification powered by predictive simulation codes and all the way to manufacturing planning and high-yield production driven by MES and data-driven modelling.

At Siemens, we're not just imagining the future of fabs— we are realizing it. Virtually and physically.

Biography

Katharina heads Siemens' global activities for Electronics & Semiconductor, 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.

References

From Vision to Reality: How Agentic AI Enables the Autonomous Factory

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

Abstract
The semiconductor industry has achieved remarkable results through decades of disciplined optimization, yet sustaining these gains requires ever-greater effort from highly skilled engineers, operators, and managers. Traditional machine learning and data science have delivered powerful predictive models and anomaly detection, but they remain bounded by human vigilance and manual intervention.

Agentic AI represents the next leap forward: intelligent, factory-aware systems that not only analyze but also act: automating workflows, coordinating across applications, and learning from context. By evolving from contextual help to in-application assistants, to agentic data analysis, and ultimately to user- and factory-aware AI agents, fabs can transition from incremental improvements to systemic transformation. The vision is not simply higher yields or better scheduling, but maintaining world-class KPIs with significantly reduced effort, lower variability, and faster responsiveness to change.

This talk will outline the path forward for bringing agentic AI from today's proofs-of-concept into real-world fab operations. The direction is clear: leveraging agentic AI to extend scheduling optimization, dynamic factory modeling, equipment monitoring, and workflow automation beyond human-driven intervention. By building towards autonomous decision-making across complex, interconnected systems, agentic AI provides the blueprint for the truly autonomous factory.

For fab managers, this is more than a technology shift, it is a redefinition of operational excellence. Agentic AI will allow organizations to scale expertise, capture knowledge, and ensure resilience in an increasingly complex manufacturing environment. As the industry prepares for the next era of smart manufacturing, understanding and adopting agentic AI is essential to remaining competitive.

Biography
Mr. Behnke has over 40 years of semiconductor industry experience. As the GM 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

AI in Action: Changing How We Work, Decide & Create

M. Lange
AI Transformation Lead & Rapid Innovation Enthusiast
Bayer AG, Digital Transformation & IT
Pharmaceuticals, Berlin, Germany

Abstract
Why AI is a Game Changer for Bayer
- How AI accelerates learning, sharing, and decision-making across Bayer
AI Transformation Journey at Bayer – Best Practices & Learnings
- Building the Bayer Generative AI Community and fostering cross-functional collaboration
- Success stories & lessons learned from implementing AI in real-world healthcare use cases
Inspiration & Outlook – The Business World in Transition
- How AI redefines roles, skills, and leadership
- The shift from human-only decision-making to AI-assisted intelligence

Biography
Maik Lange
AI Transformation Lead | Lecturer | Founder | Innovation Strategist

As AI Transformation Lead with 22+ years of experience in IT and digital marketing — and 3+ years specializing in Generative AI and the Metaverse — I drive AI initiatives from emerging trends to real-world pilot projects, with a strong focus on better patient experiences and healthcare innovation.

Since January 2023, I have been shaping the AI strategy at Bayer AG: co-founding the Generative AI Community, initiating use-case campaigns, and implementing pilot projects with state-of-the-art generative AI tools. I also build strategic partnerships with leading AI technology providers to accelerate innovation.

From 2020 to 2022, I served as Digital Trend Master at Bayer, exploring AI and emerging technologies to strengthen digital health offerings. During this time, I redefined marketing formats through podcasts, VR experiences, and interactive live sessions.
Teaching & knowledge transfer are at the heart of my work:
- Lecturer at Media University Berlin and NOVA IMS Information Management School in Lisbon
- Speaker at business summits and innovation forums
- Trainer for executives through workshops, leadership hackathons, and project weeks
- Organizer of Future Forums with institutions like Cambridge Business School

As the Founder of AI Kids Academy TinkRebels.com (launching August 1), I prepare the next generation for an AI-driven world by empowering kids with hands-on AI skills through explorer and entrepreneur programs. Beyond corporate innovation, I am an AI Creator: publishing books, podcasts, and music, while developing Generative AI Innovation Labs — creative playgrounds where new solutions are tested, scaled, and brought to market readiness.

References

X-FAB's Automation & AI Journey: Smart Manufacturing for a Competitive Edge

U. Sampermans
VP Digital Transformation
X-Fab Group, Erfurt, Germany

Abstract
AI and automation are transforming semiconductor fabs into intelligent, adaptive systems. In this presentation , we'll explore how manufacturers can harness these technologies to boost efficiency and global competitiveness. We'll dive into X-FAB's digital journey—examining the evolving role of engineers and how smart systems are reshaping operations in line with 2035 roadmap planning.

Biography
Ulrike has more than 22 years of international experience in corporate strategy, digital and automation management and business development. She has driven sustainable transformation across multiple industries.
As Vice President Digital Transformation at X-FAB, she leads the group's digitalization and automation efforts, focusing on innovation to boost efficiency, scalability, and sustainable growth.
Previously, she held senior transformation roles at BASF, Accenture, and AECOM. With global experience across five continents, she applies proven strategies to enhance digital transformation, agility, and operational excellence. Ulrike holds a diploma in International Business and IT, a Bachelor of Arts, and an MBA.

References

Semiconductor Training & Skills for the future

O. Guy
Professor
Swansea University, Centre for Integrative Materials, Swansea, United Kingdom

Abstract
The semiconductor industry is facing a shortage of talent. This presentation will highlight a number of new initiatives, developing skills, training and education programmes to attract new talent into the semiconductor sector.
The presentation will present AI powered tools for engagement and training, as well as highlighting the use of AI and Machine Learning in a wafer characterisation application.
Highlights of AI-powered skills, engagment and training solutions will be presented along with a demonstration of an interactive AI-training tool.

Biography
Prof. Owen Guy FRSC is a research Professor at Swansea University. He was Head of Chemistry until August 2025 and is Director of the Centre for Nanohealth, as well as a co-director of the Centre of Integrative Materials (CISM).
Owen has over 20 years' experience in semiconductor device research (silicon, silicon carbide, graphene & MEMS technology) and is developing collaborative research and education programmes with the Compund Semiconductor Cluster in the UK.
Owen is leading new outreach initiatives to develop the talent pipeline for the semiconductor industry in the UK and Europe and is developing innovative training aids.

References

Practical Path to Autonomy: How AI Planning & Scheduling Transforms Today’s Fabs

J. Potter
CEO & Cofounder
Flexciton Ltd, London, United Kingdom

Abstract
Abstract will be provided soon

Biography
In 2016, Jamie co-founded Flexciton with a vision of transforming industrial and complex manufacturing sectors with AI and advanced optimisation technology. As CEO, he guided the company's cutting-edge solution from initial concept through development, testing, and successful commercial deployment within the semiconductor industry. Under his leadership, Flexciton transitioned from its first client implementation to serving numerous customers across the US, Europe, and Asia.

Jamie oversaw the expansion of Flexciton's product offerings from short-term scheduling to the comprehensive Autonomous Technology suite designed for complex manufacturing environments.

Beyond his role at Flexciton, Jamie is a founding member of the SEMI End-to-End Smart Manufacturing initiative and has represented the UK deep tech sector in high-level engagements, including meetings with the UK government at Downing Street. He is a top-ranked Oxford University graduate in Mathematics and Statistics and was named to the Forbes 30 Under 30 list in 2018.

References

Driving Backend Efficiency – Automation in Wafer Probing and Dicing for the European Semiconductor Industry

D. Eikelkamp
Head of Key Account Management Semiconductor
ACCRETECH (Europe) GmbH, Semiconductor, Munich, Germany

Abstract
As Europe's semiconductor industry advances toward smart manufacturing and supply chain resilience, backend automation is emerging as a key enabler of yield, flexibility, and competitiveness. This presentation shows how ACCRETECH supports this shift with wafer probing and dicing automation aligned with the EU Chips Act 2.0 and AI-ready fabs.

We showcase real-world use cases of the fully automated AP3000 prober and AD3000T-Plus dicer, which eliminate manual handling, increase throughput, and enhance process stability, repeatability, and product quality—while also reducing errors, cycle times, and resource use

Prober AP3000 automation features:
- **Automates Probe Card handling via Overhead Transport (OHT) or AGV** for hands-free probe card exchange
- **Automated FOUP Handling** for smooth wafer transfer
- **In-Process Probe Card Inspection** to maintain test quality and reduce unnecessary manual maintenance cycles
- **BigDATA Integration** for advanced fab-wide analytics

Dicer AD3000T-Plus automation features:
- **Automated Blade Exchange System (ABES)** for barcode-controlled, tool-free blade replacement
- **Automated Plate Conditioning System (APCS)** for inline chuck surface cleaning
- **Stable Performance Monitoring** across wafer types and lots

Both systems address backend challenges tied to chiplet integration, hybrid bonding, and advanced packaging. Europe's growing network of OSATs, foundries, and R&D hubs supports wider adoption of such solutions.
Automation also plays a strategic role in meeting EU Chips Act 2.0 targets, including 20% global semiconductor market share by 2030. ACCRETECH technologies enable lights-out operation, high-mix/low-volume production, and readiness for AI-driven fab control—essential for European competitiveness and sovereignty.

Key Takeaways for Fab Managers and Decision-Makers:
- Clear examples of cost, yield, and quality benefits from backend automation
- Parallel automation features of AP3000 and AD3000T-Plus
- Backend's role in building a sustainable, resilient EU semiconductor ecosystem

This presentation invites fabs to rethink backend not as a bottleneck, but as a driver of performance and innovation.

Biography
Dominik Eikelkamp is a technology-driven sales leader with over 10 years of experience in the semiconductor industry, specializing in high-precision equipment and fully automated manufacturing solutions. His work is centered on enabling "lights-out" factory environments—integrating advanced machinery, MES platforms, and data-driven control systems to drive efficiency, traceability, and resilience in production.
Throughout his career, Dominik has partnered with leading semiconductor and electronics manufacturers across Europe to design and implement intelligent factory concepts. He brings deep practical experience in

automation planning, including the integration of both front-end and back-end semiconductor tools such as CMP, probing, dicing, and grinding systems, as well as the configuration of SMT production lines and factory-wide software ecosystems.

He is known for bridging technical understanding with business strategy—leading multinational projects, managing key accounts, and advising executive stakeholders on the deployment of scalable, autonomous production systems. His ability to align complex automation technologies with long-term operational goals has made him a trusted advisor in both greenfield and retrofit factory transformations.

Dominik holds a Bachelor of Engineering in Environmental Technology and brings a systems-thinking approach to the evolving challenges of semiconductor manufacturing.

References

Strain Monitoring for High-Performance Semiconductor Devices by in-line Raman spectroscopy

Z. Szekrényes
Head of Optical Spectroscopy & Inspection Department
Semilab Zrt., Optical Spectroscopy & Inspection Department, Budapest, Hungary

Abstract
The growing demand to precisely control the various parameters and material properties of the next-generation semiconductor devices paves the way for spreading the application of new materials and metrologies in the semiconductor industry. Fast, non-invasive, and non-destructive measurement techniques are essential to provide valuable information on material properties and enable innovation in device performance.
At SEMICON Europe, Zsolt Szekrényes will present Semilab's latest research on cutting-edge in-line metrology for next-generation Fully Depleted Silicon-On-Insulator (FD-SOI) devices. His talk will highlight the use of Raman spectroscopy to evaluate strain and crystalline quality of ultrathin Si and Ge layers on Si wafer.

Biography
Zsolt Szekrényes is the head of optical spectroscopy & inspection department in Semilab and joined the company 10 years ago, in 2015. He holds a Diploma in Physics and a PhD in Material Science and Technology. He also contributed to multiple publications and conferences.
With his wide knowledge in optical metrologies, he supervises various metrology developments and research in the fields of spectral photoluminescence, Raman spectroscopy and other imaging inspection technologies delivered for microLED, compound and semiconductor industry.

References

Optimized Real-Time Production Scheduling in 300mm Fabs

S. Knopp
CTO
Planimize, Gardanne, France

Abstract
Scheduling decisions are critical in semiconductor manufacturing, especially in fully automated fabs. The Planimize Schedule Optimizer provides 24/7 real-time scheduling to steer activities in work centers such as photolithography and diffusion/cleaning. At its core is a powerful algorithm, based on years of academic research, capable of generating optimized schedules for thousands of lot steps in under one minute. It handles the full range of operational constraints, including mask handling, lot transportation, batching, and time constraints. Schedules are evaluated with all dependencies between lot steps taken into consideration. KPIs such as equipment throughput, cycle time, transport efficiency, and production targets are improved by considering them as optimization objectives in a mathematical model. The software is designed for seamless integration into existing MES environments. The Planimize Schedule Optimizer has been running continuously and reliably since 2023 in fully automated 300mm front-end fabs in Europe. In this talk, we present an overview of the algorithm and the real-world implementation of the software in production fabs.

Biography
Sebastian Knopp co-founded the company Planimize in 2021 where he currently serves as CTO, focusing on the development of optimization software to enhance factory efficiency. He completed his PhD Thesis on scheduling in semiconductor manufacturing (Saint-Etienne, France, 2016) and has a degree in computer science (Karlsruhe, Germany, 2006). Before founding Planimize, he worked at different companies on optimization software in the domains of logistics and education.

Stéphane Dauzère-Pérès is Professor at Mines Saint-Etienne in its site of Gardanne, France. He received the Ph.D. degree from Paul Sabatier University in Toulouse, France, in 1992 and the H.D.R. from Pierre and Marie Curie University, Paris, France, in 1998. He was a Postdoctoral Fellow at M.I.T., U.S.A., in 1992 and 1993, and Research Scientist at Erasmus University Rotterdam, The Netherlands, in 1994. He has been Associate Professor and Professor from 1994 to 2004 at the Ecole des Mines de Nantes, France. His research interests broadly include modeling and optimization of operations at various decision levels (from real-time to strategic) in manufacturing and logistics, with a special emphasis on production planning (lot sizing) and scheduling, and on semiconductor manufacturing. He has published more than 115 papers in international journals and has contributed to more than 250 communications in national and international conferences. Stéphane Dauzère-Pérès has coordinated numerous academic and industrial research projects, including 4 European projects and 31 industrial (CIFRE) PhD theses. He was runner-up in 2006 of the Franz Edelman Award Competition, and won the Best Applied Paper of the Winter Simulation Conference in 2013 and the EURO award for the best theory and methodology EJOR paper in 2021.

References

Automation – Mark the Turning Point

H. Nakajima
Sr. Mgr. International Sales
Murata Machinery Ltd., Clean FA Division, Osaka,
Japan

Abstract
It has been more than 25 years since the world's first 300mm Automated Material Handling Systems (AMHS) was installed here in Europe. Meanwhile, AMHS have become widespread and common application with the industrial standardization on 300mm semiconductor manufacturing. As the number of process steps at device manufacturers increase, become more complex, and factories continue growing increasingly larger in size, AMHS have become an essential factory infrastructure for the current semiconductor manufacturing. Improving productivity, stabilizing yields, reducing labor costs, relieving from labor shortage, and ensuring worker's ergonomic safety are universal themes not only for semiconductor device manufacturers but across the entire manufacturing industry. As resolving these issues leads to improved company branding and customer trust, the need for automation is spreading throughout the manufacturing industry. This presentation will briefly touch on the evolution and transition of the 300mm AMHS to date, several use cases for such mature 300mm AMHS technology to the other fields as well as the landscape of recent AMHS industry.

Biography
Hidei Nakajima
Internaltional Sales
Murata Machnery Ltd.
Clean FA Division

References

Turning Disruption into Advantage: Europe’s Opportunity to Shine.

J. West
Chief Analyst, Semiconductor Equipment
YOLE GROUP, ROD, Villeurbanne, France

Abstract
The rapid rise of fabless chipmakers, combined with government interventions such as subsidies, tariffs, and protectionist policies, is reshaping global competition across the semiconductor supply chain. In this volatile environment, companies with manufacturing assets must strike the right balance between technology leadership, operational agility, and cost efficiency to remain competitive.

This presentation examines how European chipmakers can leverage the region’s highly skilled workforce and deep manufacturing expertise to capitalize on emerging disruptive technologies and external market forces to strengthen their position in the global market.

Biography
John West is Chief Analyst, Semiconductor Equipment at Yole Group.
He has over 20 years of industry experience and a successful track record in various strategy and consulting projects.
John has a Bachelor's degree in Medical Physics from King's College London and an MBA from Cranfield School of Management.

References

Cutting Edge in Europe – how MEMS, medical and specialities shape our fabs

E. Abel
VP Engineering
Robert Bosch GmbH, ME-SE, Reutlingen, Germany

Abstract
Big is beautiful! Not only small nodes and digital logic can fill fabs and lead to good business cases. For many speciality processes the challenges lie elsewhere – in use and processing of new materials and coatings, integration of complex 3D topologies and taking processes to 300mm to enable integration with modern ASIC wafers. This requires different machines, skills and collaboration models for developers and fabs which can lead to exciting new products and high rewards.

Biography
Emma is VP Engineering at Robert Bosch GmbH in Reutlingen Germany and heads R&D for MEMS Sensors there. She joined the Bosch Group in 2002, and has since held various positions in field of MEMS, semiconductors and sensor R&D within various business units within Bosch
She is a MEMS enthusiast, with previous roles including inertial sensor development, functional safety and MEMS Sensor industrialization for consumer electronics. Her current focus is on diversification in MEMS Sensors and their use in intelligent systems.
Emma received her Masters Degree in Electronic and Electrical Engineering from the University of Strathclyde, in UK

References