

MESSAGE FROM THE DIRECTOR

Greetings Smart Manufacturing Community!

Across many industrial sectors manufacturing continues to evolve rapidly. As 2023 rolls on, with various countries announcing plans for investments in local electronics manufacturing, there is growing excitement that the adoption of Industry 4.0 technology is the key to unlocking new efficiencies. These technologies will prove invaluable to accelerate future new factories and alleviate the gaps in the availability of skilled workers.

In the last newsletter, I mentioned the grand challenge related to future semiconductor manufacturing – specifically, “**How do we translate the Smart Manufacturing Roadmap vision into actions to make the entire product life cycle more efficient, productive, and sustainable?**” The SEMI Smart Manufacturing Initiative continues to work towards addressing this challenge, and I invite you to join us in establishing the industry’s path to \$1T, path to net zero, and path to talent.

Preparation for **SEMICON WEST 2023** is moving along in top gear, and with almost 80 submissions to the Smart Manufacturing Pavilion stage where the theme of **Accelerating Future Factories**, shows the growing commitment to harnessing the power of Industry 4.0 technologies in manufacturing. Early bird registration is open and so I hope to see you at the Smart Manufacturing Pavilion to learn more about deploying Industry 4.0 technologies in manufacturing facilities enabled by CHIPS Act funding.

As you are aware, the Department of Commerce opened the application process for the CHIPS Act Funding and SEMI Global Advocacy continues to provide detailed summaries and guidance (CHIPS). SEMI Smart Manufacturing members contributed to the NIST RFI request on Manufacturing Semiconductor Institutes (RFI Response) and cross-industry efforts (NSTC White paper) to help define future programs.

SEMI continues to help meet the manufacturing grand challenge with valuable tools and services.

- **SEMI University:** SEMI officially launched its new online learning platform, to efficiently train and upskill your workforce at all levels. Smart Manufacturing/Industry 4.0 courses are planned in the near future and if you have an interest in developing course content please reach out.
- **IRAM -** The Smart Manufacturing Guidelines committee launched the Industry 4.0 Readiness Assessment Model, and preparation is underway for future refinement of the model, and deployment across the industry.
- **Semiconductor Cybersecurity Risk Rating Service:** Developed by the SEMI Taiwan Cybersecurity Committee in collaboration with TSMC and other semiconductor industry partners, SEMI Taiwan launched this service to harden the Taiwan semiconductor ecosystem’s defenses against cyberattacks.

Join us in making Smart Factories of the Future a reality!



Mark da Silva
Senior Director



REGIONAL CHAPTER NEWS

Global

The **Global Executive Committee** (GEC) held its bi-monthly meeting on Feb 9th, 2023. The committee meeting was focused on:

- Roadmap Vision – Peter Lendermann (D-SIMLAB) presented new perspectives on the SEMI Smart Manufacturing Roadmap vision and the GEC agreed to work on further refinements of the roadmap.
- Focus 2023 – The GEC requested that the initiative’s scope regarding foundation topics (Supply Chain, Cybersecurity, Future Talent, and Sustainability) be limited to focus only on intersection areas with Smart Manufacturing.

The next GEC meeting for the calendar year will be held on April 13th, 2023.

Americas



INDUSTRY 4.0 READINESS ASSESSMENT MODEL (IRAM)

Developed through a collaboration of SEMI and industry experts (Guidelines Sub-Committee), the model will help guide manufacturing operations across the semiconductor ecosystem to identify Industry 4.0 technology critical to scaling and sustaining their smart manufacturing transformation. **SEMI Smart Manufacturing Guidelines Committee will host a by invitation only, information and training session on March 30th at 8 am PST.** If you’re interested in learning more about IRAM please contact us at smartmfg@semi.org.



Smart Manufacturing Pavilion at SEMICON WEST 2023!

The Smart Manufacturing Pavilion Program at SEMICON West is an attendee favorite and regularly attracts more than 300 people throughout the 3-day event. Major semiconductor makers and their suppliers present their latest capabilities incorporating digital twins, automation, predictive algorithms, and more. Although not a commercial forum—the companies presenting their latest advancements in Smart Manufacturing are seen as industry thought leaders. With several global national investments in Semiconductor manufacturing, the theme for Smart Manufacturing Pavilion at West23 will be on *Accelerating Factory of the Future*. **Please register to attend and participate.**

CHIPS Updates Microelectronics Industry Global Advocacy | SEMI

SEMI Global Advocacy provides frequent webinars, and updates on upcoming funding opportunities and details of the CHIPS program in the US. The **next webinar** is focused exclusively on applications within the **state of California** with the SEMI and the state Governor’s Office of Business and Economic Development (GO-Biz) discussing specific state services and programs that can be leveraged in alignment with current and upcoming CHIPS Funding Opportunities.

Taiwan



SEMI Semiconductor Cybersecurity Risk Rating Service features **third-party risk scoring and risk posture & assessment**. Applicable to all enterprises, the service helps effectively manage the suppliers and monitor their cybersecurity posture, as well as supply chain cybersecurity benchmarking and comparisons, which is conducive to improving global supply chain cybersecurity. Among the main benefits are:

- Quantitative Risk Scores and Peer Comparison
- Self-Evaluation with General Questionnaire
- Risk Enhancement Recommendations
- Continuous Risk Ratings
- Objective Risk Ratings

To learn more about the model please visit [SEMI Semiconductor Cybersecurity | SEMI](#) or contact SEMI Taiwan Cybersecurity Service Contacts Jenny Kuo jkuo@semi.org or Helen Chen hchen@semi.org

China

The Smart Manufacturing Forum (SMF) 2022 event was held on Nov 1, 2022. Over 150 attendees gathered for the day-long event to hear speakers from Amkor, Lam Research, Schneider, Huawei, IKAS, Getech Technology, and FutureFab who showcased their latest Industry 4.0 technology.

Korea

The SEMICON Korea Smart Manufacturing Forum (SMF) 2023 event focused on Autonomous Factory of the Future was held on Feb 1, 2022. The event drew over 167 attendees to hear from 9 invited speakers. GEC committee member James Lin (UMC) provided a keynote on AI-Driven Autonomous Smart Factory of the Future, and GEC committee member & Americas Co-Chair John Behnke (Inficon) provided insights into the Digital Transformation of Semi-manufacturing. Additionally, Americas Chapter member Dr. Safa Kutup Kurt (EMD Electronics) spoke about Digital Twin Technology for process optimization.

FEATURED ARTICLES

CHIPS News

Department of Commerce recently announced the first notification of funding opportunity - [U.S. Commerce Department Opens Application Process for CHIPS Act Funding](#)

Technology News

David Meyer (CEO, Lynceus) discusses the challenges of deploying AI in chip manufacturing - [Unlocking AI in Highly Demanding Chip Manufacturing Environments](#)

Nicol Ritchie (Dataprophet) shares an AI use case for semiconductor manufacturing - [Semiconductor Manufacturing in the Industry 4.0 Era – An AI Use Case](#)

McKinsey & Co. experts share 5 proven uses cases to show how AI is creating value - [Unlocking the promise of AI in industrials](#)

Education News

SEMI announcement on the launch of SEMI University – an online learning management system - [New SEMI Online Learning Platform Delivers Semiconductor Training to Support Workforce Development for Industry Growth](#)

UPCOMING EVENTS



California CHIPS Act Support: State & Local Government Incentives Webinar | April 11, 2023 | 10:00-11:00am PT | Online

Join us as we discuss -

- How GO-Biz is providing direct support to semiconductor businesses of all sizes and scopes.
- How their multiple services may be leveraged to strengthen your project proposal plans.



Advanced Semiconductor Manufacturing Conference | May 1-4, 2023 | New York, USA

Secure your spot for the 34th annual international technical event that gathers manufacturers, equipment + material suppliers, and academia to solve manufacturing challenges.



Smart Manufacturing - Industry 5.0 Forum | May 12, 2023 | Oregon, USA

Join the conversation on market trends, forecast, outlook, industry 4.0 transition to 5.0, AI/ML, supply chain, sustainability, talent gap, and more.

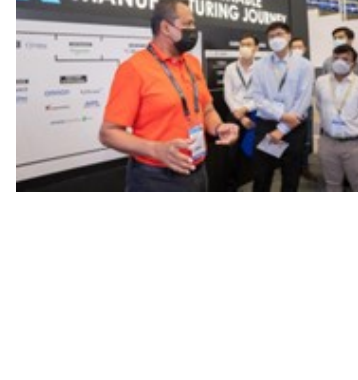
Hosted by Analog Devices

Presented by the SEMI Pacific Northwest Chapter



SMART & Sustainable Manufacturing Experience at SEMICON SEA | May 23-25, 2023 | Penang, Malaysia

- State-of-the-art SMART manufacturing solutions such as M2M connectivity, autonomous tuning, and correct, and AI.
- Green manufacturing solutions such as greenhouse gas decarbonization, circular economy, and zero waste to landfill.
- **Special this year:** Newest tech and solutions from 30 new and rising innovators and start-ups



Smart Manufacturing Forum – Factory of the Future at SEMICON CHINA 2023 | Jun 29 – Jul 1, 2023 | Shanghai, China

Learn about the development and challenges of new technologies such as AI, robotics, big data analysis, machine learning, and digital twins that are to be used in smart factories for semiconductors.

Major semiconductor manufacturers and their suppliers will showcase their latest capabilities, as well as their best practices in the smart manufacturing ecosystem, and this future-ready your smart factory journey successful, efficient, and future-ready.

Please contact

SEMICON West + FLEX | July 11–13, 2023 | California, USA

Registration & housing is now open! As we prepare to confront the big issues ahead for our industry, SEMICON West + FLEX offers multiple pass options to help customize your experience at the show.

Key themes include government investment in Chip Manufacturing, Smart Manufacturing, Smart Health, MedTech, Sustainability, Talent, Supply Chain Management, and Heterogeneous Integration.

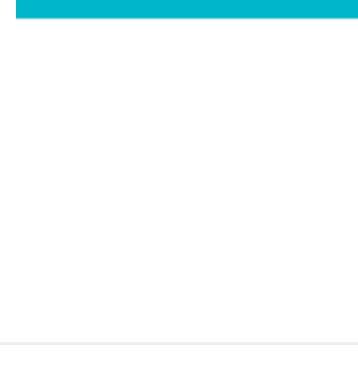


Smart Manufacturing Expo at SEMICON Taiwan | Sep 6-8, 2023 | Taipei, Taiwan

Forum Theme: AI-Driven Digital Model for Smart Manufacturing

After a successful event in 2022, the Smart Manufacturing Expo is gearing up to welcome an ever-increasing number of solution providers across the high-tech manufacturing industry, system integration, software, and hardware vendors, and smart manufacturing demand-side players. It will once again feature the **Semiconductor Cybersecurity Pavilion** showcasing solutions against hacking and viruses, offensive and defensive drills, cyber security maturity assessment, and industry standards. **Contact Helen Chen at semicontaiwan@semi.org for more information.**

HELPFUL RESOURCES



INTRODUCING SEMI UNIVERSITY

SEMI recently launched its new online learning platform, SEMI University. The platform contains **more than 360 on-demand courses created specifically for the semiconductor industry.** The curriculum addresses the needs of new industry entrants as well as experienced technical and non-technical employees at all levels, with courses covering front-end and back-end manufacturing operations, principles of chip design, workplace safety, technology trends, and more. Try the **new SEMI U** for yourself!

SEMI Advertising Opportunities Available

SEMI Global Update, SEMI.org, Regional Newsletters, Smart Manufacturing Newsletter and more. For more information please contact: Eric Rude, SEMI erude@semi.org

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