



STANDARDS

Staff Report

December 2025

for Japan TC Chapter Meetings

SEMI Global 2025 & 2026 Calendar of Events

Event Name	Event Details
SEMICON[®] WEST	Oct 07-09, 2025 Phoenix, Arizona
SEMICON[®] EUROPA	Nov 18-21, 2025 Munich, Germany
SEMICON[®] JAPAN	Dec 17-19, 2025 Tokyo, Japan
SEMICON[®] KOREA	Feb 11-13, 2026 Seoul, Korea
SEMICON[®] CHINA	March 25-27, 2026 Shanghai, China
SEMICON[®] SOUTHEAST ASIA	May 05-07, 2026 Kuala Lumpur, Malaysia

SEMICON West 2025-2030

- **2025—October 7-9 | Phoenix Convention Center | Phoenix, AZ**
- 2026—October 13-15 | Moscone Center | San Francisco, CA
- **2027—October 12-14 | Phoenix Convention Center | Phoenix, AZ**
- 2028—October 10-12 | Moscone Center | San Francisco, CA
- **2029—October 9-11 | Phoenix Convention Center | Phoenix, AZ**
- 2030—October 29-31 | Moscone Center | San Francisco, CA

SEMI Global Standards Summit (GSS) 2025

@SEMICON West 2025

Date/Time: Tuesday, October 7 | 1:30 PM to 5:30 PM | North Building, 200 Level, Room 229A

Theme: **Future Standards for Connected & Sustainable Semiconductor Manufacturing**

Session Description: The Global Standards Summit is a strategic forum dedicated to identifying standards-critical areas and advancing an industry-wide standardization roadmap for the next 3- and 7-year horizons. Building on the momentum of the inaugural Summit—which spotlighted essential topics such as environmental sustainability—this year’s gathering continues that dialogue while expanding focus to include emerging challenges like supply chain traceability.

With increasing fragmentation across the global microelectronics supply chain driven by geopolitical and other disruptive forces, the need for unified standards is more critical than ever. This Summit provides a timely opportunity to convene, collaborate, and identify the standards that will address these challenges and foster greater industry alignment. We encourage you to join, engage, and help shape the future of standards.

<https://www.semiconwest.org/programs/global-standards-summit>

Global Standards Summit (GSS2025)

@ SEMICON West 2025



Agenda – October 7:

- **(1:30 PM to 1:40 PM)** Welcome & Reminders
- **(1:40 PM to 1:55 PM)** Introduction & Level-setting
- **(1:55 PM to 3:05 PM) Topic 1: Supply Chain Traceability** {Moderator: **Eric Bruce / Samsung**}
 - (1:55 PM to 2:05 PM) Session Intro
 - (2:05 PM to 2:20 PM) Semiconductor Chip Customer Perspective {**Daniel O'Loughlin / Qualcomm**}
 - (2:20 PM to 2:35 PM) Provenance (how to trace all the way up the supply chain) {**Randy Hall / Provenance Chain Network**}
 - (2:35 PM to 2:50 PM) Security (ensuring products are not tampered with or authentic/not counterfeit) {**Neal Edwards / AMD**}
 - (2:50 PM to 3:05 PM) Preventing Supply Chain Disruption {**Krish Dharma / SEMI**}
- **(3:05 PM to 3:15 PM)** Topic 1 Q&A
- **(3:15 PM to 3:25 PM)** Break
- **(3:25 PM to 4:20 PM) Topic 2: Environmental Sustainability** {Moderator: **Joy Marsalla / Lam Research**}
 - (3:25 PM to 3:35 PM) Session Intro
 - (3:35 PM to 3:50 PM) PFAS - Transparency {**Patrick Gottsacker / Intel**}
 - (3:50 PM to 4:05 PM) Energy Efficient Manufacturing {**Slava Libman / FTD solution**}
 - (4:05 PM to 4:20 PM) Environmental Sustainability Considerations in Building Future Facilities {**Nate Monosoff / Jacobs**}
- **(4:20 PM to 4:30 PM) Topic 2 Q&A**
- **(4:30 PM to 5:15 PM) Panel Session** {Moderators: **Supika Mashiro/TEL; Paul Trio / SEMI**}
- **(5:15 PM to 5:30 PM)** Wrap-up & Next Steps
- **(5:30 PM)** Adjourn

North America Standards Awards & Networking Event

Tuesday, October 7
6:00 PM to 7:30 PM Pacific

Panelists:

- | | |
|-----------------------------|-------------------------------|
| • Eric Bruce / Samsung | • Joy Marsalla / Lam Research |
| • Dan O'Loughlin / Qualcomm | • Patrick Gottsacker / Intel |
| • Randy Hall / PCN | • Slava Libman / FTD solution |
| • Neal Edwards / AMD | • Nata Monosoff / Jacobs |
| • Krish Dharma / SEMI | • Alex Milshteen / Intel |

Upcoming NA Meetings 2026

Updated

Event Name	Date/Venue
NA Winter Meeting	Feb 09-12, 2026 (Full Virtual)
NA Spring Meeting <i>(In conjunction with ASMC)</i>	May 11-14, 2026 Hilton Albany, New York
SEMICON West Meeting	October 12-15, 2026 San Francisco, California/USA

SEMI Advanced Semiconductor Manufacturing Conference (ASMC)

- About ASMC
 - SEMI's international technical conference for discussing solutions that improve the collective manufacturing expertise of the semiconductor industry.
 - Provides a platform for semiconductor professionals to network and learn the latest in the practical application of advanced manufacturing strategies and methodologies.
- 2025 Venue: May 5-8 | Albany, NY
- 2025 Conference Topics:

<ul style="list-style-type: none"> ➤ Advanced Process Control ➤ Advanced Equipment Process and Materials ➤ Advanced Metrology ➤ Big Data Management and Machine Learning ➤ Contamination Free Manufacturing ➤ Defect Inspection and Reduction ➤ Equipment Optimization 	<ul style="list-style-type: none"> ➤ Factory Automation ➤ High-Volume Manufacturing in the Age of AI ➤ Industrial- and Factory-Automation Design and Manufacturing Sustainability ➤ Novel Devices and Advanced Patterning ➤ Workforce Development ➤ Yield Enhancement / Methodologies
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- ASMC 2026: May 11-14 | Hilton Albany | Albany, NY





ASMC

ADVANCED SEMICONDUCTOR MANUFACTURING CONFERENCE



ASMC

ADVANCED SEMICONDUCTOR MANUFACTURING CONFERENCE

MAY 5-8, 2025 | HILTON ALBANY, ALBANY, NY

WEDNESDAY, MAY 7 CONTINUED

SESSION 13	ADVANCED PROCESS CONTROL 2	SESSION 14	WORKFORCE DEVELOPMENT
4:00	<p>13.1 Arc Detection Algorithm Using Photo Multiplier Tubes S. Kim, M. Kwak, H. Kim, S. Kim, C. Kim, M. Song, J. Lee, J. Park, Y. Kim, Samsung Electronics; J. Park, Tata Electronic</p> <p>13.2 The Utilization of Mathematical Trends to Characterize Equipment Manipulation at Process Temperature for Leveling a CVD Film C. Schweb, R. Boyne, O. Muglikar, Micron Technology</p> <p>13.3 A Novel Multi-Variate Anomaly Detection Method for Chemical Vapor Deposition Y. Khoo, K. Ang, Z. Ooi, GlobalFoundries</p>	<p>4:00</p>	<p>14.1</p> <p>Sponsored by Seeq</p> <p>Session Co-Chairs: Bradley Wood; Eric Eisenbraun, SUNY Albany CNSE; Jan Röhre, GlobalFoundries</p> <p>Curricula, Courses, Labs and Software for Maximum Semiconductor Manufacturing Experience R. Pearson, RIT Microelectronic Engineering; K. Hirschman, P. Mohseni, S. Bolster, Rochester Institute of Technology; J. Tiepelt, FabuSoc; I. Chizmar, Chain Reaction Systems</p> <p>14.2 Developing an Ambidextrous Workforce for Nanoscale Manufacturing C. Weber, J. Yang, Portland State University</p> <p>14.3 SEMI Foundation Special Presentation S. Liss, SEMI</p>
5:05-6:30	<p>PANEL DISCUSSION HIGH VOLUME MANUFACTURING IN THE AGE OF AI</p> <p>Moderator Marie Tripp, Vice President, UNISERS</p> <p>Panelists</p> <ul style="list-style-type: none"> Safa Kutup Kurt, Global Head of Plant Operations and Digital Transformation, EMD Electronic Pawitner Mangat, Vice President, Global Tapeout & Mask Ops, GlobalFoundries Ross Kunz, Data Scientist, Idaho National Laboratory Michael Passow, Senior Technical Staff, IBM Semiconductor Jason Komorowski, Senior Automation and Analytics Engineer, Intel Corporation 	<p>Sponsored by Seeq</p>	

THURSDAY, MAY 8

7:00-8:00am	REGISTRATION & BREAKFAST		
SESSION 15	ADVANCED EQUIPMENT PROCESSES AND MATERIALS 2	SESSION 16	ADVANCED METROLOGY 3
8:00am	<p>Session Co-Chairs: Leonard Rubin, Axcelis Technologies; Susan Fan, IBM Research; Thirumalesh Damurra, Wolfped</p> <p>15.1 A New and Innovative In-Situ Plasma Etch Pin-Up Clean for Defect Reduction and Process Simplification J. Ye, B. Crandley, G. Song, Micron Technology</p> <p>15.2 Defectivity in Silicon Nitride Etching with Phosphoric Acid in a Single Wafer Processing W. Lo, A. Ramirez, M. Sankarapandian, IBM Research; T. Hinode, M. Packiam, SCREEN SPC USA</p> <p>15.3 Denuded Zone Formation by High Temperature Inert Anneal of 300 mm Cz-Silicon Wafers O. Störbeck, D. Orlov, J. Rittmeyer, A. Kretzschmar, A. Klee, L. Palika, K. Gabbard, Infineon Technologies</p> <p>15.4 Void Defect Improvement with Barrier Metal-Cu Seed and Electroplating Recipes Optimization A. Patel, P. Sittler, J. Martin, Samsung Austin Semiconductor</p>	<p>8:00am</p>	<p>16.1</p> <p>Sponsored by Nova</p> <p>Session Co-Chairs: Christopher Long, IBM Research; Igor Turovets, NOVA Measuring Instruments; Marie Tripp, UNISERS</p> <p>Contribution of Raman Spectroscopy to Strain Metrology in Trench Array Structures E. Mellet, B. Gergaud, V. Le, GEA Leti; M. Mamoux, LEPH/INPG, D. Montell, R. Duru, D. Le Curff, C. Le Maout, T. Dalleau, V. Brouzet, STMicroelectronics</p> <p>16.2 Compositional Analysis of Thick Silicon Nitride Films Using X-Ray Photoelectron Spectroscopy S. Kac, L. Carpenter, Y. Timalina, C. Baiocco, D. Harame, AIM Photonics; S. Schujman, NY Creates</p> <p>16.3 Correlation Between In-Situ Wafer-Level Temperature Distribution During the Etch Process and via Resistivity M. Ross, KLA; M. Gerson, E. Renck, E. Mattiavel, STMicroelectronics</p> <p>16.4 Cryogenic Plasma Etching Process Optimization Using a Wireless CryoTemp™ Metrology Wafer H. Zhang, P. Tie, A. Shenai, KLA; A. Alst, H. Matsusaka, Q. Xu, Lam Research</p>
9:25	COFFEE BREAK	9:25	COFFEE BREAK
SESSION 17	YIELD ENHANCEMENT / YIELD METHODOLOGIES 3	SESSION 18	FACTORY AUTOMATION
9:40am	<p>17.1 Effect of Plasma RF State 0 Pulsing Power on Micro-Loading and Cross-Wafer Uniformity in High Aspect Ratio Contact Etch J. Ye, B. Crandley, V. Subramanian, Y. Jia, C. Tsang, M. Frachel, D. MacMahon, Micron Technology</p> <p>17.2 Characterization of Single Mask MIM Capacitor with Copper Damascene Metallization Y. Peck, J. Xie, Y. Chen, L. Kwok, D. Huang, A. Kumar, M. Islam, C. Chong, GlobalFoundries</p> <p>17.3 Metal Layer Oxide Void Leading to a Reliability Failure S. Takedai, H. Sheng, D. Henke, T. Wu, S. Casey, J. Gardner, S. Lau, C. Chau, Micron Technology</p>	<p>9:40am</p>	<p>18.1</p> <p>Session Co-Chairs: Peter Vandermeulen, Brooks Automation; Thomas Beeg, Fabmatix</p> <p>Semiconductor Assembly Test Automation and Standardization Research Association Plans, Goals and Simulation Results S. Radloff, J. Young, J. Rudolph, Intel Corporation</p> <p>18.2 Simulation-Based Evaluation of Idle Vehicle Positioning on Logistics Performance in OHT Systems J. Lee, Y. Jang, Korea Advanced Institute of Science and Technology</p> <p>18.3 An Inherently Explainable Approach for Reinforcement Learning Based Dispatching in Semiconductor Frontend Fabs A. Immodino, R. Stoelckermann, Infineon Technologies</p>
10:45	<p>KEYNOTE</p> <p>MARKET UPDATE Robert Maire, President, Semiconductor Advisors</p>		
11:30	CLOSING REMARKS Co-Chairs: Katie Lutker-Lee, TTCA; Samira Bagheri, EMD Electronics		
1:30-5:30pm	WOMEN IN SEMICONDUCTORS (WIS 2025)		

ASMC 2025 agenda as of 04/15/2025. Subject to change

WELCOME RECEPTION

Monday, May 5
6:00-7:00pm

axcelis

POSTER SESSION/RECEPTION

Tuesday, May 6
5:30-7:30pm

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www.semiamerica.org/asmc25-mobile-app

ADVANCED SEMICONDUCTOR MANUFACTURING CONFERENCE (ASMC)

MONDAY, MAY 5

8:30am-5:30pm **SEMI UNIVERSITY (SEMI U) WORKSHOP**
4:00-7:00pm **REGISTRATION**
6:00-7:00 **WELCOME RECEPTION** Sponsored by **axcelis**

TUESDAY, MAY 6

7:00am **REGISTRATION & BREAKFAST**
8:00 **WELCOME TO ASMC 2025** Joe Stockunas, President, SEMI Americas
OPENING REMARKS Co-Chairs: Katie Lutker-Lee, TTCA; Samira Bagheri, EMD Electronics
SPECIAL PRESENTATION
PRESENTATION OF THE ASMC 2024 BEST PAPER & BEST STUDENT PAPER AWARDS
OPENING KEYNOTE
POWERING AI: RISING TO THE CHALLENGE
Pavel Freundlich, Vice President and Chief Technology Officer, onsemi
9:30 **COFFEE BREAK** Sponsored by **TINFICON**

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CONTINUED

ADVANCED SEMICONDUCTOR MANUFACTURING CONFERENCE (ASMC)

TUESDAY, MAY 6 CONTINUED

SESSION 1		YIELD ENHANCEMENT / YIELD METHODOLOGIES 1		SESSION 2		ADVANCED METROLOGY 1	
		Session Co-Chairs: Aaron Smith, Texas Instruments; Ishfaq Ahsan, IBM Research; Rooshmi Meta, Samsung Austin Semiconductor				Sponsored by <i>Nova</i> Session Co-Chairs: Dr. Delphine Le Cunff, STMicroelectronics; Igor Turcovets, NOVA Measuring Instruments; Saffi Usmani, EMD Electronics	
9:50am	1.1	Process Optimizations for GDDR SGRAM in Automotive Applications M. Davis, A. Mantri, B. T. Bahadur, V. Kolko, S. Molina, K. Watanabe, B. Yao, G. Wang, G. Sung, Micron Technology		9:50am	2.1	OCD-Machine Learning Based Metrology for Copper Pad Surface for Hybrid Bonding Integration J. Graslund, STMicroelectronics	
	1.2	Elimination of 3D NAND Through-Array Contact Shortage on Yield Enhancement Y. Chiu, K. Lu, C. Tsai, H. Lee, N. Lian, T. Yang, K. Chen, C. Lu, Macronix International			2.2	DUV-Vis-IR Optical Metrology Enhancements with Machine Learning J. Roberts, A. Ntargas, N. Pallikarakis, K. Florios, n&k Technology; M. Coll, STMicroelectronics	
	1.3	SiGe Base Engineering in HBTs for Improving Breakdown and ICES Leakage Characteristics S. Juyal, J. Chow, M. Chai, GlobalFoundries Singapore			2.3	GPU-Accelerated Feature Extraction for Vision AI: Autonomous Image Segmentation and Smart Pattern Recognition for Scalable Real-Time AI Processing with 6.6x Faster Performance and 63% Higher Accuracy K. Ahi, G. Fenger, S. Sriram, S. Wu, Siemens EDA	
	1.4	DNN-based Predictive Digital Twin for FHE Manufacturing P. Doerschuk, A. Lal, Cornell University			2.4	In-Line Raman Spectroscopy for Semiconductors Strain Engineering and Control Z. Szekeres, P. Bellanger, L. Badeeb, B. Bolla, N. Laurent, B. Gombklotz, G. Niduvuri, A. Pongracz, M. Dallery, R. Petrovski, B. Elie, B. Somogyi, Sematech Semiconductor Physics Laboratory; D. Borge, M. Gallard, J. Hartmann, P. Hauchecorne, V. Le, V. Loup, E. Nolot, J. Sturm, A. Sediri, University Grenoble Alpes; CEA Leti, A.L. Farago, Mediso Medical Imaging Systems	
	1.5	Inline Defect and Logic and Memory Diagnostic Net Path Overlay Analysis Method H. Liu, E. Green, L. Loh, H. Joshi, J. Cheng, H. Guan, A. Pinto, Intel Corporation			2.5	Enabling 3D Integration: Full Pattern Wafer Die Shape Characterization Using Wave Front Phase Imaging at 8um Lateral Resolution M. Jimenez-Gomis, K. Ivanov-Kurtev, J. Trujillo-Sevilla, S. Pauliac-Vaujour, J. Rodriguez-Ramos, Wopitex	
11:35	NETWORKING LUNCH			11:35	NETWORKING LUNCH		

SESSION 3		ADVANCED PROCESS CONTROL 1		SESSION 4		INDUSTRIAL- AND FACTORY-AUTOMATION DESIGN AND MANUFACTURING SUSTAINABILITY	
Session Co-Chairs: Agnes Rousry, Mines St Etienne, Daniele Pagano, STMicroelectronics, Raymond Van Roijen, onsemi				Session Co-Chairs: Peter Vandermeulen, Brooks Automation; Thomas Beag, Fabronics			
1:15pm	3.1	Using Machine Vision for Fault Detection of Dry Resist Top Film Peeling		1:15pm	4.1	Impact of Lot Arrival Density Fluctuations on Cycle Time Control	
	3.2	R. Good, C. Wan, T. Krausslein, J. Pauller, R. Maxwell, GlobalFoundries Implementation & Application of Coherent Control Systems: Digital Twin (High Frequency Open Loop) with Run-to-Run (Low Frequency Closed Loop)			4.2	M. Joki, K. Miyaguchi, J. Wynne, T. Ide, IBM Research A Novel Stochastic Modeling Language Adapted to R&D Automation Development	
	3.3	P. Kitcher, K. Sarang, H. Allen, S. Drandapani, Applied Materials A Study on Bare Endpoint Profile Transformation Caused by Different Metal/Via Reticule Transmission Ratio in Oxide Trench Etch Processes			4.3	V. Fischer, O. Landre, B. Vuallat, CEA Leti An Industry Plan for Cybersecurity	
	3.4	D. Huang, S. Mediratta, GlobalFoundries Singapore IP-Aware Federated Manufacturing Intelligence: Enabling Secure and Collaborative Semiconductor Manufacturing			4.4	B. Korn, Applied Materials; A. Seward, Tokyo Electron America; D. Suerich, PEER Group; M. Padmanabhan, SEMI Reduction of Energy Consumption Through Fab Environment Control	
L. Garcia, S. Rini, NYCU; S. Chang, Lam Research; Y. Hsu, National Taipei University of Technology				R. Van Roijen, A. Chewning, N. Olsinski, O. Kwon, onsemi			
COFFEE BREAK				COFFEE BREAK			
2:40				2:40			

SESSION 5		CONTAMINATION FREE MANUFACTURING		SESSION 6		BIG DATA MANAGEMENT AND MACHINE LEARNING	
		Session Co-Chairs: Chris Ebert, Linde, Christopher Long, IBM Research; Jennifer Bragg, Siddhant Sharma, Entegris				Session Co-Chairs: Marc Bergendahl, IBM Research; Shalidya Chakravorty, GlobalFoundries	
3:00	5.1	A New Continuous Plasma Process For Defect Reduction in Di Water and Megasonic in Final Rinse Process J.Ye, D. Egbeyemi, A. Fang, W. Simpson, Micron Technology		3:00	6.1	Sequence-Aware In-line Measurement Attribution for Good-Bad Wafer Diagnosis K. Miyaguchi, M. Joki, R. Sheraw, T. Ide, IBM Research	
	5.2	Yield Loss Due to the Interaction Between Dissolved Oxygen in Di Water and Megasonic in Final Rinse Process A. Dineshan, Z. Yiwen, T. Sean, L. San, GlobalFoundries			6.2	Process-Aware Digital Twins for Nanofabrication Processes C. Lau, S. Ding, Y. Xie, A. Lal, P. Doerschuk, Cornell University; B. Davaji, Northeastern University	
	5.3	Particle Control for Low-Energy Boron Implantation P. Geisbuhler, D. Burner, C. Free, K. Wenzel, L. Kim, O. Kim, B. Son, Axcelis Technologies; H. Cha, S. Na, SK hynix			6.3	A Tool Grouping-Based Approach to Remaining Useful Life Prediction for Predictive Maintenance in Semiconductor Manufacturing T. Wright, M. Uthigrove, S. Monesire, University of Central Florida	
	5.4	Investigation of the Radially Spreading Micro-Bubble Defect Due to Contamination from SEM J. Jeong, E. Ko, Y. Kim, Samsung Electronics			6.4	Wafer Defect Root Cause Analysis with Partial Trajectory Regression K. Miyaguchi, M. Joki, R. Sheraw, T. Ide, IBM Research	

4:30 **TUTORIAL**
MATERIALS INTELLIGENCE: ENABLING THE FUTURE OF TECHNOLOGY
Lu Gan, Senior Director, Head of Technology Strategy and Roadmap, EMD Electronics

5:30-7:30 **POSTER SESSION / RECEPTION**

Scan the QR Code for
Poster Session Information



WEDNESDAY, MAY 7

7:00-8:00am	REGISTRATION & BREAKFAST
8:00	KEYNOTE STRATEGIC DIRECTIONS FOR ELECTRONICS PACKAGING Subramanian S. Iyer, Director, UCLA CHIPS—Distinguished
8:45	COFFEE BREAK

SESSION 7A		ADVANCED EQUIPMENT PROCESSES AND MATERIALS 1		SESSION 8		SMART MANUFACTURING	
Session Co-Chairs: Olaf Storbek, Infineon Technologies; Thirumalesh Bannuru, WolfSpeed; Thirumalesh Bannuru, WolfSpeed						Sponsored by <i>Inficon</i> Session Co-Chairs: Doug Suerich, PEER Group; Robert Pearson, RIT Microelectronic Engineering; Stefan Radloff, Intel Corporation	
9:05am	7.1	Effect of In-Situ Native Oxide Clean on Point Defect Behavior in Si-Amorphized Ion-Implanted Si A. Rivera, K. Jones, University of Florida; N. Kennedy, C. Hatem, Applied Materials		9:05am	8.1	From Variations to Precision: Modeling and Optimization of Inner Spacer Etch in GAA FETs P. Kumar, S. Bana, Applied Materials; O. Maheshwari, N. Mohapatra, Indian Institute of Technology Gandhinagar	
	7.2	Optimization Epitaxy Process to Reduce Hotspot Problem K. Cheng, Y. Li, J. Huang, GlobalFoundries Singapore; W. Lew, NanYang Technological University			8.2	Improving Machine Calibration Performance Through Systematic Feature Design in Semiconductor Manufacturing M. Sumiya, Y. Kamaj, S. Matsuda, Hitachi High-Tech; W. Li, University of Cincinnati; D. Ji, J. Lee, University of Maryland, College-Park	
	7.3	Purion vs Paradigm Process Matching: Copy Exact Process or Copy Exact Output? A. Isaacs, B. Isaacs, T. Budri, B. Wofford, G. Neer, R. Smith, Texas Instruments			8.3	AI-Powered Etching Architecture Refinement from Small Data in 3D NAND Development C. Tsai, Z. Yang, M. Huang, M. Wu, K. Lu, H. Lee, N. Lian, T. Yang, K. Chen, C. Lu, Macronix International	
SESSION 7B		DEFECT INSPECTION AND REDUCTION			8.4	General Framework for Processing Time Prediction and Machine Availability for All Fab Equipment T. Korabi, G. Goossens, A. Kaushik, J. van Heugten, J. Bedorf, minds.ai; S. Chakravorty, D. Palati, J. Thomas, S. Ramakrishnan, J. Delong, T. Hewlett, GlobalFoundries	
Session Co-Chairs: Alexa Greer, KLA; Srividya Jayaram, Siemens EDA; Shrawan Matha, IBM Research					8.5	Neurosymbolic AI-Driven Zero-Defect Manufacturing in Semiconductor Assembly: A Hybrid Framework M. Shenoy, F. Ameri, S. Sahasrabudhe, Arizona State University	
10:05	7.1	Full Wafer Inspection for Voltage Contrast Systematic Defects Using High-Throughput Point Scan O. Patterson, Intel Corporation			BOXED LUNCH & ROBOTICS DEMONSTRATION 		
	7.2	Accelerated Defectivity Monitoring in High-Volume Manufacturing via Unsupervised AI Techniques H. Overduin, M. Pasqualini, A. Girmaud, G. Cui, C. Regnier, STMicroelectronics; V. Ramakrishna, S. Anurag, S. Tummalaipati, A. Tiwari, P. Deevanapalli, B. Ries, A. Menon, D. Anas, P. Sharma, P. Parisi, H. Kopel, KLA		11:10			
	7.3	AI-Powered Anomaly Detection: A Robust, Pattern-Agnostic Faster R-CNN with Scalable GPU-Accelerated Deep Learning for High-Fidelity Computer Vision Defect Identification (mAP: 79%, mAR: 77%, F1: 74.5%) H. Hatan, A. Eideskov, A. Essam, G. Fenger, K. Ahi, N. Greenelch, H. Samir, S. Jayaram, W. Stewart, Siemens EDA					
11:10		BOXED LUNCH & ROBOTICS DEMONSTRATION Sponsored by 					
SESSION 9		YIELD ENHANCEMENT / YIELD METHODOLOGIES 2		SESSION 10		ADVANCED METROLOGY 2	
Session Co-Chairs: Jeff Ye, Micron Technology; Shrawan Matham, IBM Research; Vijayalakshmi Seshachalam, GlobalFoundries						Sponsored by <i>Nova</i> Session Co-Chairs: Cody Murray, IBM Research; Delphine Le Cunff, STMicroelectronics	
12:50pm	9.1	Influence of Salicic Acid Block Oxide and Key Process Parameters on P+ Polysilicon Resistor Performance A. Dineshan, C. Choi, I. Nam, K. Lau, X. Jin, C. Conne, GlobalFoundries		12:50pm	10.1	Epi Defect Quantification via Massive Metrology SEM Measurement-Based Inspection C. Smith, F. Levitov, Applied Materials; S. Matham, S. Emans, R. Sheraw, IBM Research	
	9.2	Enhanced Annealing and Material with Crystal Originated Particles for Localized Yield Improvement K. Cheng, J. Zhou, J. Huang, GlobalFoundries Singapore; W. Lew, NanYang Technological University			10.2	Novel Placement of Overlay Marks to Eliminate Measurement Errors for Thick Photoresist Layers A. Viswanathan, D. Oon, S. Lim, J. Zhou, J. Chew, GlobalFoundries	
	9.3	Effect of Deposition Conditions on Polysilicon PNP Emitter Grain and Electrical Performance M. Lakshminarayanan, A. Dineshan, H. Hiew, GlobalFoundries			10.3	Orthogonal Marker Structures for Precise Electron Probe Positioning and Displacement Measurement in Secondary Electron Imaging K. Matsuda, S. Leong, Human University	
1:55		COFFEE BREAK		1:55		COFFEE BREAK	
SESSION 11		EO: EQUIPMENT OPTIMIZATION		SESSION 12		NOVEL DEVICES AND ADVANCED PATTERNING	
		Sponsored by <i>Trelleborg</i> Session Co-Chairs: Olaf Storbek, Infineon Technologies; Thirumalesh Bannuru, WolfSpeed; Vijayalakshmi Seshachalam, GlobalFoundries		Session Co-Chairs: Eric Eisenbaum, SUNY Albany CISE; Shubhodeep Goswami, GE Aerospace Research; Susan Fan, IBM Research			
2:15	11.1	Copper Residue Removal from Electrostatic Chuck to Mitigate Helium Leak Faults Using Enhanced In-Situ Chamber Clean R. Thiruchelvan, B. Cheong, W. Wong, GlobalFoundries		2:15	12.1	A Perspective on Interconnect Scaling Challenges in the NanoStack Transistor Era N. Lenakis, S. Khan, J. Mazzeo, U. Bajpai, K. Motoyama, IBM Research	
	11.2	Predicting Seal Longevity: Advanced Simulations for Plasma and Rotary Applications in Semiconductor Processes M. Gulcur, J. Palford, T. Duran, A. Asbury, Trelleborg Sealing Solutions			12.2	Device Optimization to Enable Ultra Low Leakage Logic FinFETs E. Yamoghaddam, S. Saudari, W. Ma, M. Luque, V. Rossi, A. Orshani, J. Johnson, O. Kwon, E. Maciejewski, H. Wang, S. Parhar, GlobalFoundries	
	11.3	Enhancing Particle Performance in Plasma-Resist-Stripping Machines through Pressure Relief Valve Assembly Relocation R. Goczi, M. Ten, R. Thiruchelvan, C. Foo, GlobalFoundries			12.3	Toward ML-Enhanced Design and Fabrication of Resonant Nanoelectromechanical IR Sensor E. Altin, H. Yan, A. Vardetti, W. Gubinski, P. Simeoni, M. Rinaldi, B. Davaji, Northeastern University	
	11.4	CPEC Clean Enhancement via Backside Polishing to Reduce Precoat UPC Fault Z. Ooi, C. Tan, C. Lim, W. Pascoa, B. Tan, C. Koh, GlobalFoundries			12.4	WEE Residue Elimination for Cross-Link Prone Positive Tone DUV Photoresist S. Lim, A. Viswanathan, H. Liu, V. Xavier, GlobalFoundries	
3:40		COFFEE BREAK		3:40		COFFEE BREAK	

CONTINUED

Critical Dates for SEMI Standards Ballots 2026

2026	Ballot Submission Deadline	Voting Opens	Voting Closes
Cycle 1	December 19, 2025	December 29, 2025	January 28
Cycle 2	January 23	February 11	March 13
Cycle 3	March 5	March 18	April 17
Cycle 4	March 16	March 25	April 24
Cycle 5	May 8	May 27	June 26
...

<https://www.semi.org/en/collaborate/standards/ballots>

SEMI Standards Publications

- Total SEMI Standards in portfolio: 1,107
 - Includes 373 Inactive Standards

Cycle	New	Revised	Reapproved	Withdrawn
May 2025	0	5	4	0
June 2025	1	0	0	0
July 2025	1	4	0	0
August 2025	0	1	0	0
September 2025	4	1	3	0

SEMI Standards Publications

- New Standards

Cycle	Designation	Title	Committee	Region
June 2025	SEMI M94	Specification for Silicon Carbide Engineered Substrates	Compound Semiconductor Materials	EU
July 2025	SEMI E194	Guide to Using a Liquid Particle Counter to Assess Particulate Surface Contamination on Critical Chamber Components and Coupons	Metrics	NA
September 2025	SEMI E195	Test Method Using Adhesive Replacement Substrates to Assess Particulate Surface Contamination on Critical Chamber Components	Metrics	NA
September 2025	SEMI E196	Guide for Equipment Edge Data Governance	Information & Control	TW

SEMI Standards Publications

- New Standards

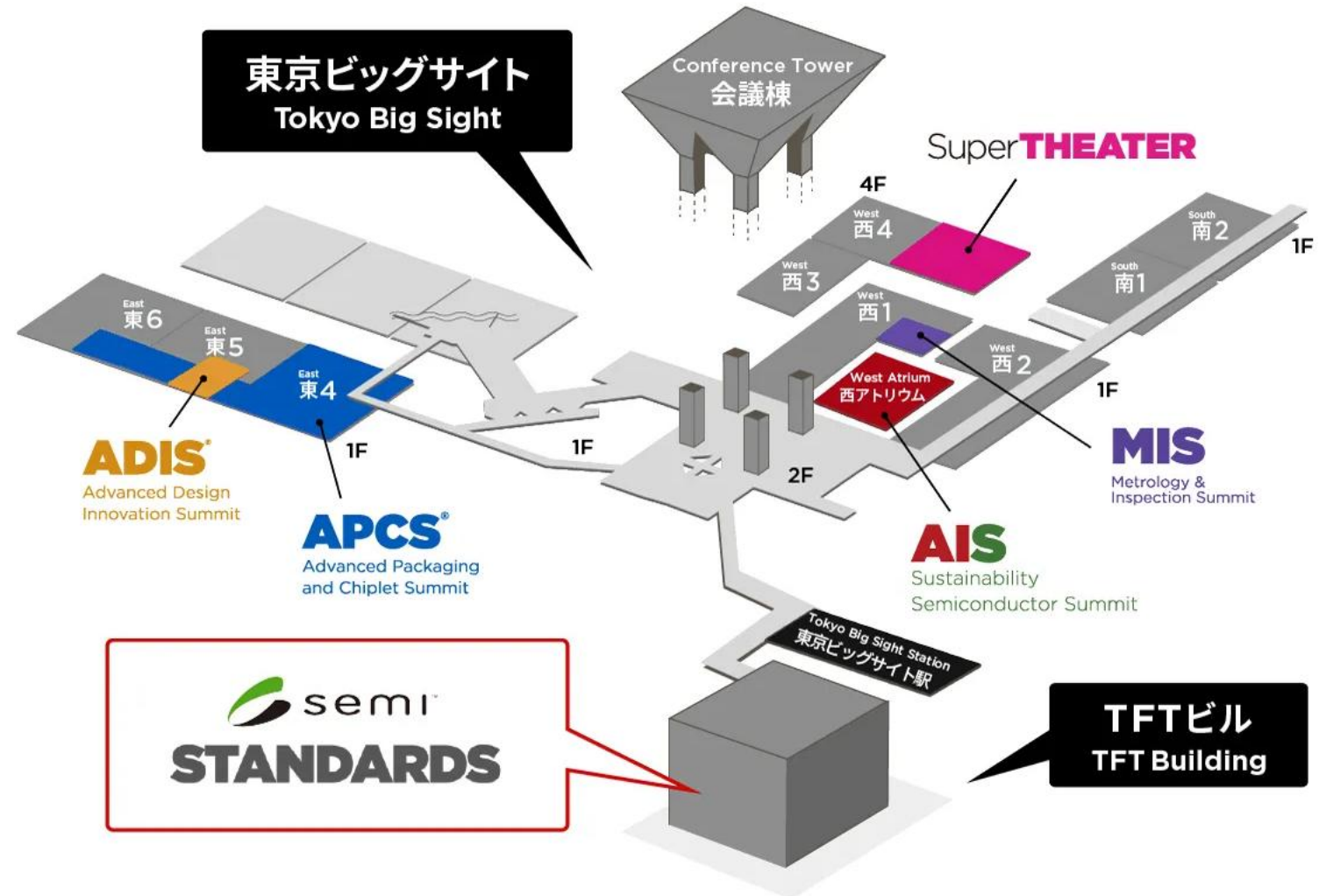
Cycle	Designation	Title	Committee	Region
September 2025	SEMI M95	Test Method for Net Carrier Density and Resistivity of Silicon Epitaxial Layer by Capacitance-Voltage Measurements with an Evaporated Metal Schottky Diode	Silicon Wafer	JP
September 2025	SEMI T26	Specification for Electronic Supply Chain Traceability Using Distributed Ledger Technology	Traceability	NA

SEMICON® JAPAN 2025 Overview

Period: December 17-19, 2025
Venue: Tokyo Big Sight, Tokyo, Japan
Organizer: SEMI

Theme:
AI x サステナビリティ x 半導体
STRONGER TOGETHER

Expected Event Scale:
Exhibitors: 1,200 (1,107)
Visitors: 120,000 (103,165)





2025 SEMI Standards Meetings & Events



- SEMI Standards will host the below Technical Committees + many Task Forces engaged in various standardization activities and topics, including:
 - Compound Semiconductor Materials
 - Information & Control
 - Metrics
 - Physical Interfaces & Carriers
 - Silicon Wafer
 - Traceability
- Check full schedule on SEMICON Japan Website at: [SEMI International Standards | SEMICON Japan](#)
- Technology Sessions Related to Standardization
 - Cybersecurity Forum**
Wednesday, December 17 | 9:30 - 11:00
605-606, Conference Tower, Tokyo Big Sight
 - SATAS Program Summit**
Transformation of The Semiconductor Back-End Process!
The World of Fully Automated Back-End Processing that SATAS Aims For
Wednesday, December 17 | 13:30 - 15:00
605-606, Conference Tower, Tokyo Big Sight
 - Smart Manufacturing: The Next Frontier**
Smarter Factory for Solving Semiconductor Fab Operation Challenges
Friday, December 19 | 09:30 - 11:00
102, Conference Tower, Tokyo Big Sight

Join us! **SEMI Standards Friendship Party & Awards Ceremony**

Thursday, December 18
5:00 PM – 7:00 PM
Room 9-A, East Wing 9F,
TFT Building, Tokyo, Japan

SEMICON Japan 2025 SEMI Standards Friendship Party & Award Ceremony

*Thursday, December 18, 2025, 17:00 – 19:00
Room 9-A, East Wing 9F, TFT Building, Tokyo, Japan*

Agenda

17:00	Door Open	
17:15	Opening Remarks	Jim Hamajima President, SEMI Japan
17:25	Award Ceremony	Presenter Greg Barrett Chief Financial & Business Operations Officer, SEMI
	• International Collaboration Award	2 recipients
	• Honor Award	1 recipient
	• Special Award	1 recipient
	• Official Photo Session	All recipients, Greg Barrett, Paul Trio
17:45	Networking	
19:00	Close	

Please note that the agenda is subject to change.

Regulations & Procedure Manual

Available at www.semi.org/standards (under Tools for Developing Standards) or direct link below

- Regulations (Feb 20, 2024)
 - <https://www.semi.org/sites/semi.org/files/2024-02/Standards%20Regulations%20February%2020%202024.pdf>
- Procedure Manual (July 7, 2025)
 - <https://www.semi.org/sites/semi.org/files/2025-07/Procedure%20Manual%20July%2007%2C%202025%20v1.pdf>
 - Noticeable updates:
 - Major revision to multiple Standards
 - New SNARF Form (July 2025)
 - Ballot checklist requirement for Revision to Primary Standard

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THANK YOU

STANDARDS