



SEMICON® WEST

BEYOND SMART

JULY 10-12, 2018 | MOSCONE CENTER | SAN FRANCISCO, CA

REGISTRATION

Total Attendance (Visitors and Exhibitors)*	19,623
Total Verified Visitors*	12,542

*SEMICON West and Intersolar North America

EXHIBITOR INFORMATION

Total SEMICON Exhibiting Companies	530
Total Net Exhibit Area (sq. ft.)	112,700

INTERNATIONAL ATTENDANCE

Total International Verified SEMICON Visitors (19% of Verified Unique SEMICON Visitors)	1,138
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Major Countries Represented (Percent of International Visitors)

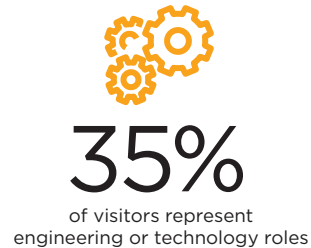
Japan	27%
South Korea	25%
Taiwan	8%
Mainland China	7%
Germany	6%
Singapore	4%
Netherlands	4%
France	3%
United Kingdom	3%
Canada	3%
Israel	2%



Keynotes and Executive Panels

- **Melissa Schilling, NYU, Breakthrough Innovators Who Changed the World** told the story of the foibles and genius of some of today's most remarkable innovators.
- **Gary Dickerson, AI Design Forum (sponsored by Applied Materials), Navigating the Perfect Storm—Enabling the AI Era** looked into the key innovations behind today's AI revolution.
- **Dr. John E. Kelly III, IBM Research, The Era of Artificial Intelligence** explored new developments in AI by the executive behind many of IBM's "Watson" initiatives.
- **Amir Husain, SparkCognition, Industrial AI Applications and Edge Intelligence** described how AI is solving challenging perception and autonomy problems in numerous applications.
- **Mark Papermaster, AMD, Machine Learning: The Potential to Transform the Semiconductor Industry** told of the system design approaches across hardware and software ecosystems that are enabling the right solutions in intelligent systems.

Visitor Highlights



Program Highlights

- **Smart Manufacturing Pavilion** let attendees experience the data-sharing breakthroughs enabling smarter manufacturing processes, increased yields and profits, and greater innovation across the industry.
- **TechXPOT Theaters** provided insights into the latest developments in Advanced Manufacturing, Smart MedTech, Big Data, and MEMS & Sensors, and hosted the annual Best of the West awards ceremony.
- **Meet the Expert Theaters** gave attendees insider info and tips from industry leaders in an informal, up-close setting in the Smart Manufacturing, Smart Transportation, and Smart Workforce Pavilions.
- **Smart Workforce Pavilion** gave college students and entry- to mid-level professionals interested in microelectronics multiple resources to help them find open positions and internships, including the opportunity to network with HR recruiters and hiring managers, and to connect with professional mentors.

Visitor Profile

SEMICON West attracts a highly influential audience from every segment and sector of the global microelectronics industries, including semiconductors, solar/PV, LEDs, MEMS, Display, Fabless/Design, System OEMs, printed/flexible electronics, and other adjacent markets.

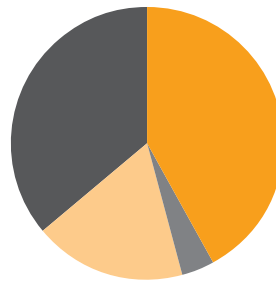



82%
 of visitors influence buying decisions


35%
 of visitors represent engineering or technology roles



INFLUENTIAL BUYERS



PURCHASING AUTHORITY

- 36% Final Decision Maker
- 42% Recommend/Evaluate/Consult
- 4% Specify
- 18% No Role/Other



JOB LEVELS

- 20% Executive Management
- 25% Senior Management
- 27% Other Management
- 23% Non-management
- 4% Other (incoming students)

PRIMARY JOB FUNCTIONS

R&D	13%
Equipment Engineering	5%
Design	4%
Fabrication/Process Engineering	4%
Chemicals/Materials	2%
Test	2%
QA/Failure Analysis/Reliability	1%
Packaging/Assembly	1%
Software Engineering	1%
Industrial Engineering	1%
Facilities/Engineering Support	1%

Marketing/Sales/Business Development	27%
Executive Management/Board Member	11%
Product Management	6%
Manufacturing/Operations Management/Production	5%
Purchasing/Procurement/Office Management	4%
Financial/Industry Analyst/Investor Relations	3%
Logistics/Supply Chain Management	2%
Government/Public Policy	<1%
Training/Education	<1%
Environment, Health, and Safety	<1%
Human Resources	<1%
Integration/IT Support	<1%
Other	6%

Areas of Interest

SEMICON West visitors represent a broad range of industries, technologies, products and services from across the extended supply chain, from design to final manufacturing.

INDUSTRIES SERVED

SEMICON West attracts a diverse range of visitors from across the microelectronics industry.

Semiconductors	71%	Flexible Hybrid Electronics/Printed Electronics	8%
Sensors	19%	PCB Assembly	8%
MEMS	15%	EMS/Contract Manufacturing/Precision Engineering	8%
Photonics	12%	PCB Manufacturing	6%
LED/Solid State Lighting	12%	Professional Services/Consulting	6%
Automotive/Transportation	12%	Software/Applications	6%
Aerospace	11%	Academia/University/R&D	6%
Photovoltaic/Solar	11%	Government	4%
Display/FPD	11%	Association/Non-profit	1%
Medical	10%	Media/Publication	1%
Imaging	10%	Other	4%
Consumer Electronics	9%		

AREAS OF INTEREST

MANUFACTURING INTERESTS

Front-end Manufacturing (IDM, foundry)	36%
Material Engineering/Materials Science	28%
Packaging/Assembly	25%
System Integration/Product-level Manufacturing	24%
System-level Manufacturing	21%
Test	21%
Design/EDA/IP	18%
Board-level Manufacturing	10%
Roll-to-Roll/Printing	7%
Other Manufacturing	4%

APPLICATION INTERESTS

Smart Manufacturing	42%
Internet of Things (IoT)	33%
Artificial Intelligence Systems (AI)	26%
Automotive Electronics/Smart Transportation	24%
Consumer Electronics	21%
Medical Electronics/MedTech	18%
Wearables	17%
Mobile Technologies/Wireless/5G	17%
OLED	15%
Virtual Reality/Augmented Reality (VR/AR)	15%
Green Manufacturing/EHS	12%
Cloud Computing/High-performance Computing	11%
Imaging	11%
Other Applications	12%

DESIGN/MANUFACTURING SERVICES

R&D/Technology Transfer	24%
Foundries	22%
Manufacturing Services and Consulting	20%
Engineering Services	18%
Packaging and Test Services (OSAT)	17%
Design/EDA	16%

Electronic Manufacturing Services (EMS)/System Integration	16%
Factory Control/Process Software	12%
Fabless	10%
Other Design/Manufacturing Services	13%

MANUFACTURING EQUIPMENT

Front-end Processing	34%
Inspection and Measurement/Metrology	20%
Assembly/Packaging	19%
Test	19%
Factory Automation/Robotics	17%
Components/Sub-systems/Instrumentation	13%
Parts	13%
Large-area/Thin Film	13%
Secondary Equipment and Services	12%
Printing/Coating/Roll-to-Roll	9%
Abatement/Environmental Systems	6%
Other Manufacturing Equipment	11%

MATERIALS

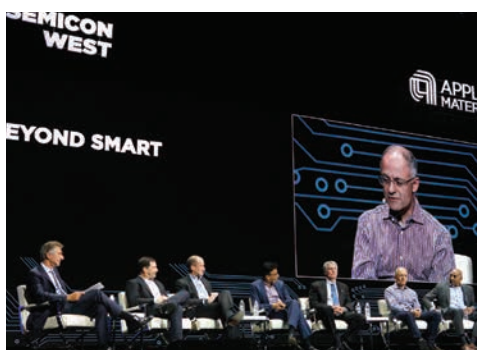
Wafers/Substrates	31%
Process materials: Gases/Liquids/Solids/Chemicals	24%
Packaging/Assembly	18%
Cleaning	16%
Consumables	14%
Inks/Pastes/Printing Materials	8%
Other Materials	12%

OTHER

Support Products/Cleanroom	17%
General Business Services/Consulting	12%
Standards	10%
Representative Sales and Service	10%
Other	1%

Key Visiting Companies and Organizations

SEMICON West attracts visitors from around the world and from every major microelectronics company, including buying teams from the world's top capital spending IDMs, foundries, fables, OSATs, and OEMs. *(Partial listings below)*



IDMS/FOUNDRIES

- Cypress
- Fujitsu
- GLOBAL-FOUNDRIES
- IBM
- IDT
- Infineon
- Intel
- Lumileds
- Maxim
- Micralyne, Inc.
- Micrel
- Micron
- Microsemi Corp.
- NXP Semiconductor
- ON Semiconductor
- Panasonic
- Peregrine Semiconductor
- Qorvo, Inc.
- Renesas
- Samsung
- Silex Microsystems
- SK Hynix
- STMicroelectronics
- Taiwan Semiconductor Manufacturing Company
- Teledyne DALSA Semiconductor
- Texas Instruments
- Toshiba
- TowerJazz
- TSI Semiconductors
- TSMC

FABLESS/SYSTEM OEMS

- ALTA Devices, Inc.
- Amazon
- AMD
- Analog Devices
- Apple
- ARM, Inc.
- Broadcom
- Cisco
- Cree
- Dell EMC
- Finisar Corporation
- FLIR Systems
- FormFactor, Inc.
- GE Global Research
- General Dynamics
- Google
- Hewlett-Packard
- HGST
- Huawei
- Infinera Corporation
- Invensense
- ISE Labs, Inc.
- Jabil
- Juniper Networks, Inc.
- Kateeva, Inc.
- Keysight Technologies, Inc.
- LG Electronics
- Lockheed Martin
- Magic Leap
- Malema Sensors
- Marvell
- Merck Ltd.
- Microchip Technology
- Microsoft
- NeoPhotonics Corp.
- Northrop Grumman
- nVidia
- O2 Technologies, Inc.
- Omnivision.
- Omron
- Pacific Biosciences
- Proteus Digital
- Health, Inc.
- Qualcomm
- Raytheon
- Roche
- Rockwell Collins, Inc.
- Seagate Technology
- Siemens
- Skyworks Solutions, Inc.
- Tesla
- Thermo Fisher Scientific
- Western Digital
- Xilinx

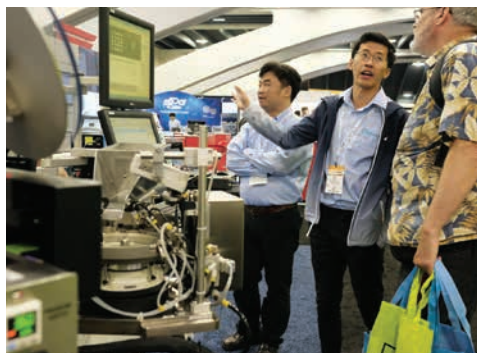
OSATS

- Amkor Technology
- ASE Group
- Lingsen Precision Industries
- Promex Industries

Continued

Key Visiting Companies and Organizations *Continued*

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EQUIPMENT/MATERIALS/SERVICES

- 3M
- Advantest Corporation
- Air Liquide
- Air Products and Chemicals
- Aixtron, Inc.
- AMEC, Inc.
- Applied Materials, Inc.
- Asahi Glass Co., Ltd.
- ASM International N.V.
- ASML
- ATREG, Inc.
- Axcelis Technologies, Inc.
- BASF Corporation
- Brewer Science, Inc.
- Brooks Automation
- Bruker Corp.
- Cabot Microelectronics Corp.
- Cadence Design Systems, Inc.
- Canon
- Carl Zeiss
- COMET GROUP
- Corning, Inc.
- Cymer LLC
- Dai Nippon Printing Co., Ltd.
- Dow Chemical Company
- Dow Electronic Materials
- DuPont
- EAG, Inc.
- Ebara Corporation
- Edwards Vacuum
- Entegris, Inc.
- EV Group
- Ferrotec Corporation
- Fujifilm Electronic Materials Co., Ltd.
- Fujikin Incorporated
- Genmark Automation, Inc.
- Greene Tweed & Co.
- Hakuto Co., Ltd.
- Hamamatsu Corporation
- Heraeus
- Hermes Microvision, Inc.
- Hitachi
- Honeywell
- Intevac, Inc.
- Invensas Corporation
- JSR Corporation
- JX Nippon Mining & Metals
- Kanematsu PWS, Ltd.
- Kawasaki Robotics, Inc.
- Kinetics Systems, Inc.
- KLA-Tencor Corporation
- Kyocera
- Lam Research Corporation
- M+W Group
- Marubeni Corporation
- Materion Corporation
- Matheson Tri-Gas
- Mattson Technology, Inc.
- Mentor Graphics
- Mitsubishi Materials
- Mitsui & Co., Ltd.
- MKS Instruments, Inc.
- Multibeam Corporation
- Murata Machinery, Ltd.
- Nanometrics, Inc.
- Nanosys
- Nikon
- Nordson Corporation
- Parker Hannifin Corporation
- PDF Solutions, Inc.
- Perkin Elmer Medical Imaging
- Pivotal Systems Corporation
- Praxair, Inc.
- RAVE LLC
- Revasum
- Rudolph Technologies, Inc.
- SACHEM, Inc.
- SCHOTT AG
- SCREEN Semiconductor Solutions Co. Ltd.
- Shin-Etsu Handotai Co., Ltd.
- Soitec
- SPTS Technologies
- Sumitomo
- Synopsys, Inc.
- TE Connectivity
- TEL
- Teradyne Inc.
- Toppan Photomask, Inc.
- Ultratech, Inc.
- Veeco Instruments
- Versum Materials, Inc.
- Wonik Holdings Co., Ltd.
- Xcerra Corporation

RESEARCH/ACADEMIA

- Binghampton University
- Carnegie Mellon University
- Delft University of Technology
- Harvard University
- IMEC
- Intermolecular
- Lawrence Berkeley National Lab
- NASA
- National Institute of Standards (NIST)
- San Jose State University
- Sandia National Lab
- Santa Clara University
- Stanford University
- University of Arizona
- University of CA, Berkeley
- University of CA, Davis
- University of CA, Merced
- University of Central Florida
- University of Washington
- University of Wisconsin-Madison

Media Partners and Attendees

More than 50 international trade and business publications and more than 100 journalists and industry analysts partnered with SEMI to bring extensive global coverage of news and information about and from SEMICON West and our participating companies. *(Partial listings below)*



2018 MEDIA PARTNERS

- 3D InCites
- Adhesives & Sealants Industries
- Advanced Packaging
- Angel Business Communications
- AspenCore
- Austrian Trade Commission
- AVERM
- AZoNano
- Bitnavi
- Bloomberg
- Bodo's Power
- C&EN (American Chemical Society)
- Cadence
- Ceramic Industry
- Chip Design
- Chip Scale Review
- Circuitnet
- Compound Semiconductor
- Displays
- Dow Jones & Co.
- EDA Cafe
- eda2asic Consulting
- ElectroIQ
- Evaluation Engineering
- Extension Media
- Gartner
- Germany Trade & Invest
- Global LEDs/OLEDs
- Global SMT & Packaging International
- IDG
- IEEE Spectrum
- IHS
- JIJI PRESS
- Korea Times
- La Plume
- LED Manufacturing
- McClenahan Bruer
- McGraw-Hill/Amica Research
- Media & Entertainment Tech
- MEMS Direct
- MEPEEC
- Mergermarket
- MIT Technology Review
- NASA Tech Briefs
- Nikkei BP
- NP Communications
- Photonics Spectra
- Physics Today
- Power Electronics World
- Semiconductor Engineering
- Semiconductor Packaging News
- SemiWiki
- Shinyusha Publishing
- Silicon Run Productions
- Silicon Semiconductor
- Society of Vacuum Coaters
- Solid State Technology
- Sperling Media Group
- Techfocus Media
- TekReports
- The Korea Times
- U.S. Tech
- UBM
- UltraPureWater.com
- US Tech
- Vietnam Television
- Wafer News
- WTWH Media

INVESTORS/ANALYSTS

- Allianz Global Investors
- ArcInsight Partners
- AzTrong
- B.Riley FBR
- BlackRock
- Bloomberg
- BMO Capital Markets
- Capital Factory
- Citi
- Constitution Research and Management
- Coughlin Associates
- Cowen and Company
- Craig-Hallum Capital Group
- CSDN
- Deloitte Tohmatsu Consulting
- Deutsche Bank
- D-Side Advisors
- Evercore ISI
- Exane BNP Paribas
- FIL Investments (Japan) Limited
- Firsthand Capital
- Freeman Technology and Market Advisors
- G2 Investment Partners
- Gartner, Inc.
- Global Equities Research
- Goldman Sachs & Co.
- HolospaceX
- Hosei University
- IDC
- IHS Markit Technology
- Isaiah Research
- Jay Goldman
- Cowen & Co.
- JPMorgan
- KeyBanc Capital Markets
- Litchfield Hills Research, LLC
- Macquarie Capital
- Matthews Asia
- Mitsubishi UFJ Morgan Stanley Securities
- Mizuho Securities USA
- MKM Partners
- MooreElite
- Mutual of America Capital Management
- MWV
- New Street Research
- Nezu Asia
- NIBC Bank
- Phase 4
- RBC Capital Markets
- ROTH Capital
- Seaport Global
- Semico Research, Corp.
- Sequoia Capital Global Equities
- SMBC Nikko Securities
- Stifel Nicolaus
- TCW
- TECHCET
- TechInsights
- Technology Partners Inc.
- TIRIAS Research
- VLSI Research
- W2AGZ Technologies
- WebFeet Research Inc.
- Wells Fargo Securities