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

- 82% of visitors influence buying decisions
- 35% of visitors represent engineering or technology roles
- 20% of visitors are international

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.

### 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**

<table>
<thead>
<tr>
<th>Job Function</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D</td>
<td>13%</td>
</tr>
<tr>
<td>Equipment Engineering</td>
<td>5%</td>
</tr>
<tr>
<td>Design</td>
<td>4%</td>
</tr>
<tr>
<td>Fabrication/Process Engineering</td>
<td>4%</td>
</tr>
<tr>
<td>Chemicals/Materials</td>
<td>2%</td>
</tr>
<tr>
<td>Test</td>
<td>2%</td>
</tr>
<tr>
<td>QA/Failure Analysis/Reliability</td>
<td>1%</td>
</tr>
<tr>
<td>Packaging/Assembly</td>
<td>1%</td>
</tr>
<tr>
<td>Software Engineering</td>
<td>1%</td>
</tr>
<tr>
<td>Industrial Engineering</td>
<td>1%</td>
</tr>
<tr>
<td>Facilities/Engineering Support</td>
<td>1%</td>
</tr>
<tr>
<td>Marketing/Sales/Business Development</td>
<td>27%</td>
</tr>
<tr>
<td>Executive Management/Board Member</td>
<td>11%</td>
</tr>
<tr>
<td>Product Management</td>
<td>6%</td>
</tr>
<tr>
<td>Manufacturing/Operations Management/Production</td>
<td>5%</td>
</tr>
<tr>
<td>Purchasing/Procurement/Office Management</td>
<td>4%</td>
</tr>
<tr>
<td>Financial/Industry Analyst/Investor Relations</td>
<td>3%</td>
</tr>
<tr>
<td>Logistics/Supply Chain Management</td>
<td>2%</td>
</tr>
<tr>
<td>Government/Public Policy</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Training/Education</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Environment, Health, and Safety</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Human Resources</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Integration/IT Support</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
</tr>
</tbody>
</table>

82% of visitors influence buying decisions and 35% of visitors represent engineering or technology roles.

www.seminconwest.org
### 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.

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

#### AREAS OF INTEREST

MANUFACTURING INTERESTS

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

APPLICATION INTERESTS

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

DESIGN/MANUFACTURING SERVICES

<table>
<thead>
<tr>
<th>Service/Technology</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D/Technology Transfer</td>
<td>24%</td>
</tr>
<tr>
<td>Foundries</td>
<td>22%</td>
</tr>
<tr>
<td>Manufacturing Services and Consulting</td>
<td>20%</td>
</tr>
<tr>
<td>Engineering Services</td>
<td>18%</td>
</tr>
<tr>
<td>Packaging and Test Services (OSAT)</td>
<td>17%</td>
</tr>
<tr>
<td>Design/EDA</td>
<td>16%</td>
</tr>
<tr>
<td>Electronic Manufacturing Services (EMS)/System Integration</td>
<td>16%</td>
</tr>
<tr>
<td>Factory Control/Process Software</td>
<td>12%</td>
</tr>
<tr>
<td>Fabless</td>
<td>10%</td>
</tr>
<tr>
<td>Other Design/Manufacturing Services</td>
<td>13%</td>
</tr>
</tbody>
</table>

MANUFACTURING EQUIPMENT

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

MATERIALS

<table>
<thead>
<tr>
<th>Material</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wafers/Substrates</td>
<td>31%</td>
</tr>
<tr>
<td>Process materials: Gases/Liquids/Solids/Chemicals</td>
<td>24%</td>
</tr>
<tr>
<td>Packaging/Assembly</td>
<td>18%</td>
</tr>
<tr>
<td>Cleaning</td>
<td>16%</td>
</tr>
<tr>
<td>Consumables</td>
<td>14%</td>
</tr>
<tr>
<td>Inks/Pastes/Printing Materials</td>
<td>8%</td>
</tr>
<tr>
<td>Other Materials</td>
<td>12%</td>
</tr>
</tbody>
</table>

OTHER

<table>
<thead>
<tr>
<th>Other/Service</th>
<th>Other/Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support Products/Cleanroom</td>
<td>17%</td>
</tr>
<tr>
<td>General Business Services/Consulting</td>
<td>12%</td>
</tr>
<tr>
<td>Standards</td>
<td>10%</td>
</tr>
<tr>
<td>Representative Sales and Service</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
</tr>
</tbody>
</table>
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, fabless, 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
- Malem Sensors
- Marvell
- Merck Ltd.
- Microchip Technology
- Microsoft
- NeoPhotonics Corp.
- Northrop Grumman
- nVidia
- O2 Technologies, Inc.
- Omvion.
- Omron
- Pacific Biosciences
- Proteus Digital
- Qualcomm
- Raytheon
- Roche
- Rockwell Collins, Inc.
- Seagate Technology
- Siemens
- Skyworks Solutions, Inc.
- Tesla
- Thermo Fisher Scientific
- Western Digital
- Xilinx
- 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
- 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
- Malem Sensors
- Marvell
- Merck Ltd.
- Microchip Technology
- Microsoft
- NeoPhotonics Corp.
- Northrop Grumman
- nVidia
- O2 Technologies, Inc.
- Omvion.
- Omron
- Pacific Biosciences
- Proteus Digital
- Qualcomm
- Raytheon
- Roche
- Rockwell Collins, Inc.
- Seagate Technology
- Siemens
- Skyworks Solutions, Inc.
- Tesla
- Thermo Fisher Scientific
- Western Digital
- Xilinx
- Health, Inc.
- Qualcomm
- Raytheon
- Roche
- Rockwell Collins, Inc.
- Seagate Technology
- Siemens
- Skyworks Solutions, Inc.
- Tesla
- Thermo Fisher Scientific
- Western Digital
- Xilinx

*Continued*
Key Visiting Companies and Organizations  Continued

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, fabless, OSATs, and OEMs. (Partial listings below)

**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.
- Axcels 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.
- SioTec
- 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

www.semiconwest.org
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
- AVEM
- 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
- McClennahan Bruer
- McGraw-Hill/Amica Research
- Media & Entertainment Tech
- MEMS Direct
- MEPTEC
- Mergermarket
- MIT Technology Review
- NASA Tech Briefs
- Nikkei BP
- NP Communications
- Photonics Spectra
- Physics Today
- Power Electronics World
- Semiconductor Engineering
- Semiconductor Packaging News
- SemiWiki
- Shinyusya 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 Tohmatu 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
- Jeffries & 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