

The Chip Insider[®]

2017 All Stars and Hall of Fame

- **2017 All Stars of the Semiconductor Industry**

- Omkaram (Om) Nalamasu, Applied Materials
- Peter Wennink, ASML
- Lee Wai Kwong, ASM Pacific Technology
- Luis Müller, Cohu
- Atsushi (Art) Horiba, Horiba
- Martin Anstice, LAM Research
- Deirdre Hanford, Synopsys
- Tim Moriarty, Teradyne
- Tony Kawai, Tokyo Electron Limited

- **2017 Inductees to the SEMICONDUCTOR INDUSTRY HALL OF FAME**

- Mark Durcan, Micron
- Jensen Huang, Nvidia
- Irwin Jacobs, Qualcomm
- Sanjay Jha, GLOBALFOUNDRIES
- Paul Otellini, Intel
- Robin Saxby, ARM
- Lisa Su, AMD

- **Semiconductor Industry Hall of Fame Members**

VLSIresearch's ALL STARS OF THE CHIP MAKING INDUSTRY

- These are the executives that made the most of this year
- For some, it has taken several years of methodical execution to an overarching strategy to bring this year together
- For others it was about being fleet of feet
- They will tell you they are parts of bigger teams who really made it possible
 - It's true, but these people took the point, making them the most visible for either adulation or the well-placed sniper's bullet
- They have led the industry and their companies forward, for which we can all be thankful

VLSIresearch's 2017 All Stars

Omkaram (Om) Nalamasu: Instrumental in building a new Applied Materials focused on materials engineering innovations

- Spearheaded Applied's relationships with external research institutions
 - Integrated their work into Applied's internal innovations
- As CTO Om has been essential in the development of disruptive products
- Key technology leadership role in Applied's management team
- In 2017, Dr. Nalamasu was elected to the U.S. National Academy of Engineering for
 - Technical innovation spanning materials' development
 - Atomically controlled thin-film fabrication
 - Commercialization in microelectronics and energy generation and storage



VLSIresearch's 2017 All Stars

Peter Wennink: Absolutely critical for ASML in managing investor expectations and the business aspects of the industry's most expensive R&D program

- The task of managing expectations of all stakeholders around the EUV program has been enormous
 - Peter has been able to pull it off against all odds
- Managing the funding and business model for something as complex as the EUV program, demonstrates a skill that very few individuals have
 - Keeping investors at bay for all the spending they had to do
 - Without these deft skills Moore's Law might have been stopped cold



ASML

VLSIresearch's 2017 All Stars

Lee Wai Kwong: Provided the change leadership needed to make ASM Pacific Technology the broadest Assembly and Packaging Equipment Supplier

- ASMPT has passed the \$2B milestone as a supplier of assembly and packaging equipment, packaging materials and SMT solutions
- It has the broadest equipment portfolio to serve the needs of LED, Power, CIS, and IC manufacturing
 - ASMPT has the most prolific new product development operations in the industry



ASM  Pacific Technology

VLSIresearch's 2017 All Stars

Luis Müller: Engineered a leading handler and test connectivity company through acquisitions and focused product development

- The strategy is to surround the tester with differentiated handling and connection technologies
 - As proof of the strategy, Cohu is on track to grow above the market in 2017
- Focus on key differentiating technologies such as thermal control, vision inspection, and integrated test solutions
- Strategic and successful acquisitions to add into products and TAM: Rasco, Ismeca, and Kita



VLSIresearch's 2017 All Stars

Atsushi (Art) Horiba: Created the most responsive Critical Sub-System supplier to the Semiconductor Equipment Supply Chain

- With record growth this year, Horiba's MFC's and related components shipments increased from a baseline of around 160k per year to 300k per year with additional capacity for 450k per year by the end of 2018
 - A scaling feat that no other Critical Sub-system supplier can claim in 2017
- Horiba-san has one of the longest-term investment horizon's in the industry
 - With the nerves to build a substantial product war-chest
 - Resulting in capabilities where it can serve its customers through the wildest cycles
- Extremely technology-oriented leader with eye on best possible customer benefit



HORIBA
Explore the future

VLSIresearch's 2017 All Stars

Martin Anstice: Pulled off hyper-growth in a high-growth year

- Ability to do this without being slowed by industry-wide component shortages showed extreme vision, foresight, and guts
- Follows positioning Lam Research as a key Etch and Deposition technology supplier for memory manufacturers
- Lam is on track to beat overall WFE growth by 18 points in 2017, resulting in major share gains
- Lam Research has the operational excellence to manage this growth throughout its supply chain



VLSIresearch's 2017 All Stars

Deirdre Hanford: Critical to smoothing the path of Synopsys' partnerships as they jumped to ever-finer nodes together

- Efforts led to early tape-outs of 10nm products at a leading foundry
- Helped align ecosystem partners to customers' common needs
- Three-decade rise from applications engineering
- Role-model for young-women entering technology careers



SYNOPSYS®

VLSIresearch's 2017 All Stars

Tim Moriarty: Successfully grew Teradyne's memory test business to a significant position at all major customers

- During Tim's tenure, Teradyne's memory division has garnered close to a third of the memory test market since the Nextest acquisition
 - Long-term strategy of providing low cost, high capability testers brought differentiable advantage resulting in major share gains
- Record year on the back of strong demand from 3DNAND
 - Positioned to capture business from the NAND expansion cycle



TERADYNE

VLSIresearch's 2017 All Stars

Tony Kawai: Turned Tokyo Electron around to maintain its position as the third powerhouse of non-lithography process equipment suppliers

- TEL's business performance has risen to be among the leading equipment suppliers and is benefitting from the current up-cycle
- Re-vitalizing Tokyo Electron after losing the wind in its sails from a failed merger attempt and implementing all key learnings for the experience
- Bringing in a ruthless focus on new technologies and its business model to elevate TEL's capabilities as a world-class equipment supplier that can serve all stakeholders from customers to investors



VLSIresearch's

SEMICONDUCTORY INDUSTRY HALL OF FAME

- For executives who have made systematic contributions to the semiconductor industry
 - Whose contributions advanced
 - Customers
 - Technology
 - Moore's Law
 - Business Fundamentals
 - Without them, our industry would be much smaller
 - And would have had a much smaller impact on everyone's lives around the globe
- Mark Durcan
 - Micron
 - Jensen Huang
 - Nvidia
 - Irwin Jacobs
 - Qualcomm
 - Sanjay Jha
 - GLOBALFOUNDRIES
 - Paul Otellini
 - Intel
 - Robin Saxby
 - ARM
 - Lisa Su
 - AMD

2017 Inductee to the SEMICONDUCTOR INDUSTRY HALL OF FAME

Mark Durcan (2017): Critical to keeping America competitive in advanced memory manufacturing

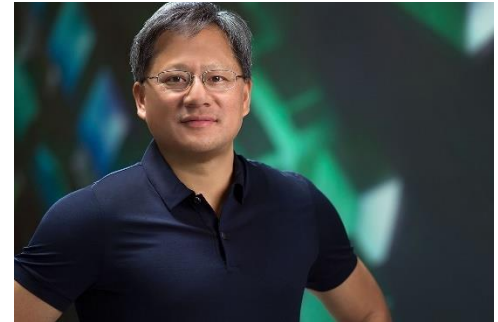
- Mark was the operational counterpart to Steve Appleton's hard-edged business acumen that made Micron Technology so successful in the 90s and 2000s
- Stepped back in out of retirement to stabilize Micron after the untimely death of Appleton
 - He then led them to acquire Elpida which had been formed out of Japan's leading memory companies



2017 Inductee to the SEMICONDUCTOR INDUSTRY HALL OF FAME

Jensen Huang (2017): Brought high-end GPUs to the consumer through his partnership with TSMC that would be critical to the success of both Nvidia and TSMC

- When the fabless/foundry business was still fragile, Jensen needed an independent supplier of leading edge silicon
- Nvidia's 1st graphics chip was the 1st consumer-grade GPU with 3D rendering, and integrated GUI and video acceleration priced
 - They revolutionized the graphics industry
 - He used Nvidia's processor architecture to develop new markets in super-computing and Artificial Intelligence



2017 Inductee to the SEMICONDUCTOR INDUSTRY HALL OF FAME

Irwin Jacobs (2017): Founder of Qualcomm, most notably Irwin conceived the smartphone and sold the concept by taping together a PDA and cellphone

- The semiconductor industry would be far smaller had the smartphone not replaced the dumb cell phone and PDA
 - The union of these two devices created the foundation for growth in the 2000s
- It was a hard sell
 - Few believed there was a market
- The world would be far different had this not happened



QUALCOMM

2017 Inductee to the SEMICONDUCTOR INDUSTRY HALL OF FAME

Sanjay Jha (2017): For shepherding New York's semiconductor research brain trust from IBM to GLOBALFOUNDRIES

- Had vision for the value IBM's IP and people could bring to strengthening GFs product platforms
- Made the integration process for bringing company fruitful
- Turned it into a track record of crisp execution
- Resulted in America holding on to one of its last two centers of advanced logic research and manufacturing based on opposite coasts



GLOBALFOUNDRIES®

2017 Inductee to the SEMICONDUCTOR INDUSTRY HALL OF FAME

Paul Otellini (2017): His vision and strategy based on “*The Four Vectors of Mobility: Performance, Battery Life, Form Factor, and Connectivity*” proved a catalyst to build out the WiFi infrastructure

- This brought wireless connectivity to computing
 - Versus smartphones, which brought compute to an existing cellular infrastructure
- Pivoted Intel out of the Mega-Hertz era, creating a new mobile computing era
 - Brought back the ‘Tick-Tock’ model to address the rise of the consumer and the annual holiday business cycle
- Brought a sunny side to the “Paranoid Company”
 - Ending many legal issues from the 90s



2017 Inductee to the SEMICONDUCTOR INDUSTRY HALL OF FAME

Robin Saxby (2017): Introduced microprocessor IP licensing model which would be largely responsible for the success of the smartphone

- Making them easy to plug into new designs ARM core became keystones to most SoC designs
 - Known for their high code density with relatively small embedded memory needs, ARM IP was inherently low cost and low power
 - Proving MPU performance at MCU cost and power needs
 - Without ARM, it is doubtful that the fabless industry would have ever been competitive against IDM proprietary IP



arm

2017 Inductee to the SEMICONDUCTOR INDUSTRY HALL OF FAME

Lisa Su (2017): Her vision led AMD to be a leader with consumer-grade high-performance heterogeneous ICs

- Used deep knowledge of the stack to bring innovative products to market that aligned blended chip technologies to consumer market segment needs
- In doing so, she turned around AMD, which had been languishing for years
- Lisa has a long track record of innovative firsts and is one of the few who it can be said:
 - silicon runs in her veins



SEMICONDUCTOR INDUSTRY HALL OF FAME

Alex d'Arbeloff (1993)
James Bagley (1994)
Richard Blickman (2011)
Robert Boehlke (2005)
Mark Bohr (2006)
Mike Bradley (2013)
Martin van den Brink (2006)
Andy Bryant (2016)
Mike Cadigan (2008)
Gordon A. Campbell (2016)
Morris Chang (2016)
Sunlin Chou (2006)
Gary Dickerson (2006)
Roger Emerick (1993)
Paolo Gargini (2009)
Aart de Geus (2012)
Robert Graham (1993)
Andrew Grove (2016)
Pat E. Haggerty (2016)
Gary Heerssen (2012)

Terry Higashi (2005)
Bill Holt (2015)
Robert Holzel (1993)
Bob Huston (2006)
Winfried Kaiser (2008)
Tokuo Kubo (1993)
C. Scott Kulicke (1994)
Patrick Lam (2006)
Jean LeMoin (1994)
Ken Levy (1995)
Walt Mathews (1995)
Toshio Maruyama (2009)
Haruo Matsuno (2014)
Dan Maydan (1996)
Eric Meurice (2008)
James Morgan (1993)
Gordon Moore (2016)
Steve Newberry (2011)
Karl Nicklaus (1994)

Robert Noyce (2016)
Gary Patton (2016)
Mike Polcari (2009)
Arthur del Prado (1993)
Egon Putzi (2006)
Barry Rapozo (2006)
Ken Schroeder (1996)
Mike Splinter (2007)
Charlie Sporck (2016)
Larry Sumney (2009)
Jon Tompkins (1996)
Randhir Thakur (2012)
Ray Thompson (2006)
Papken Der Torossian (1994)
Tetsuo (Tom) Tsuneishi (2015)
Kouichi Uehara (2007)
Kazuo Ushida (2007)
Shoichiro Yoshida (1993)
Arthur Zafiropoulo (1994)



Thank You

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