IEEE CLEDO BRUNETTI AWARD
RECIPIENTS

2025  DANIEL WORLEDGE
Distinguished Research Staff
Member, and Senior Manager, IBM
Research, San Jose, California, USA

AND

GUOHAN HU
Distinguished Research Staff
Member, and Senior
Manager, IBM Research, Yorktown
Heights, New York, USA

AND

GWAN-HYEOB KOH
Head of Advanced Technology
Development Team, Samsung
Electronics, Hwaseong-si,
Republic of Korea

“For contributions to the development and
commercialization of embedded Spin-Transer-Torque Magnetoresistive Random-
Access Memory (STT-MRAM) technology.”

2024  ADRIAN M. IONESCU
Professor, Ecole Polytechnique
Fédérale de Lausanne, Lausanne,
Switzerland

“For leadership and contributions to the
field of energy-efficient steep slope devices
and technologies.”

2023  JOHN ROBERTSON
Professor (Retired), Cambridge
University, Cambridge,
Cambridgeshire, United Kingdom

“For theoretical contributions to the
integration of high-k oxides on
semiconductors.”

2022  SIMON DELEONIBUS
Chief Scientist (Retired), CEA,
LETI, Grenoble, France

“For contributions to and leadership in
nanoscale CMOS device and process
technologies.”

2021  JESUS DEL ALAMO
Donner Professor and Professor of
Electrical Engineering,
Massachusetts Institute of
Technology, Cambridge,
Massachusetts, USA

“For leadership in and contributions to
InGaAs- and GaN-based field-effect
transistor technology.”

2020  JAMES H. STATHIS
Principal Research
Staff Member, IBM Research,
Yorktown Heights, New York, USA

“And

“For contributions to the understanding of
gate dielectric reliability and its application
to transistor scaling.”
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RECIPIENTS

ERNEST YUE WU
Senior Technical Staff Member,
IBM Research, Albany, New York,
USA

2019 DANIEL C. EDELSTEIN
IBM Fellow, IBM T.J. Watson
Research Center, Yorktown
Heights, New York, USA

“For contributions to manufacturable,
reliable, and scalable Cu interconnect and
low-k dielectric technology for CMOS.”

AND

ALFRED GRILL
IBM Fellow, IBM T.J. Watson
Research Center, Yorktown
Heights, New York, USA

AND

CHAO-KUN HU
Research Staff Member, IBM T.J.
Watson Research Center,
Yorktown Heights, New York, USA

2018 SIEGFRIED SELBERHERR
Professor, Vienna University of
Technology, Institute for
Microelectronics, Vienna, Austria

“For pioneering contributions to Technology
Computer Aided Design.”

2017 GUIDO GROESENEKEN
Professor, Catholic University of
Leuven, and Fellow, IMEC, Leuven,
Belgium

“For contributions to the characterization
and understanding of the reliability physics
of advanced MOSFET nanodevices.”

2016 AKIRA TORIUMI
Professor, The University of Tokyo,
Tokyo, Japan

“For contributions to CMOS device design
from materials engineering to device
physics.”

2015 HIROSHI IWAI
Professor, Tokyo Institute of
Technology, Yokohama, Kangawa,
Japan

“For contributions to the scaling of CMOS
devices.”

2014 MARTIN VAN DEN BRINK
Vice President, ASML,
Veldhoven, The Netherlands

“For designing new lithography tool
concepts and bringing these to the market,
enabling micrometer to nanometer
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RECIPIENTS

2013 GIORGIO BACCARANI
Full Professor, University of Bologna, Bologna, Italy
“For contributions to scaling theory and modeling of metal oxide semiconductor (MOS) devices.”

2012 YAN BORODOVSKY
Intel Senior Fellow, Director of Advanced Lithography, Intel Corporation, Hillsboro, OR, USA
AND
SAM SIVAKUMAR
Intel Fellow, Director of Lithography, Intel Corporation, Hillsboro, OR, USA
“For contributions to developing and implementing innovative lithographic and patterning equipment and processes to enable cost-effective scaling for logic technologies.”

2011 MASSIMO V. FISCHETTI
Professor, University of Massachusetts, Amherst, MA, USA
AND
DAVID J. FRANK
Research Staff Member, IBM T. J. Watson Research Center, Yorktown Heights, NY, USA
AND
STEVEN E. LAUX
Research Staff Member, IBM T. J. Watson Research Center, Yorktown Heights, NY, USA
“For contributions to the fundamental understanding of the physics, design and scaling of nanosized electronic devices.”

2010 GHAVAM SHAHIDI
IBM Fellow, Director of Silicon Tech IBM TJ Watson Research Ctr
Yorktown Heights, NY, USA
“For contributions to and leadership in the development of silicon-on-insulator CMOS technology.”

2009 BURN JENG LIN
Senior Director of Micropatterning Division, TSMC, Ltd. Hsin-Chu, Taiwan
“For contributions to immersion lithography for the manufacture of integrated circuit devices.”

2008 MICHEL BRUEL
Deputy Director of CEA-LETI, Director of Research, CEA, Cedex, France
“For inventing Smart Cut™ layer transfer technology that enabled widespread adoption of SOI for CMOS circuits.”

2007 SANDIP TIWARI
Professor, Electrical and Computer Engineering, Cornell University Ithaca, NY
“For pioneering contributions to nanocrystal memories and to quantum effect devices.”
<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Institution</th>
<th>Citation</th>
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<tbody>
<tr>
<td>2006</td>
<td>SUSUMU NAMBA</td>
<td>Professor, Nagasaki Institute of Applied Science, Nagasaki, Japan</td>
<td>“For contributions to ion-beam and optical technologies for application to semiconductor devices.”</td>
</tr>
<tr>
<td>2005</td>
<td>WILLIAM G. OLDHAM</td>
<td>Professor Emeritus, University of California, Berkeley, CA</td>
<td>“For pioneering contributions to lithographic engineering and to high-density isolation technology.”</td>
</tr>
<tr>
<td>2004</td>
<td>STEPHEN Y. CHOU</td>
<td>Professor, Department of Electrical Engineering, Princeton University, Princeton, NJ</td>
<td>“For the invention and development of tools for nanoscale patterning, especially nanoimprint lithography, and for the scaling of devices into new physical regimes.”</td>
</tr>
<tr>
<td>2003</td>
<td>ANDREW R. NEUREUTHER</td>
<td>Professor, EECS, University of California, Berkeley, CA</td>
<td>&quot;For pioneering contributions to modeling and simulation of the lithographic materials, processes, and tools used in microelectronics manufacturing.&quot;</td>
</tr>
<tr>
<td>2002</td>
<td>MARK LUNDSTROM, SUPRIYO DATTA</td>
<td>Purdue University, West Lafayette, IN</td>
<td>“For significant contributions to the understanding and innovative simulation of nano-scale electronic devices.”</td>
</tr>
<tr>
<td>2001</td>
<td>R. FABIAN W. PEASE</td>
<td>Stanford University, Stanford, CA</td>
<td>“For advancing high resolution patterning technologies, high performance thermal management, and scanning electron microscopy for microelectronics.”</td>
</tr>
<tr>
<td>2000</td>
<td>ROBERT E. FONTANA</td>
<td>IBM Almaden Research Center, San Jose, CA</td>
<td>&quot;For contributions to micro fabrication techniques for the manufacture of thin film and giant magnetoresistive heads used in hard disk drives.&quot;</td>
</tr>
<tr>
<td>1999</td>
<td>DAVID K. FERRY</td>
<td>Arizona State Univ., Tempe, AZ</td>
<td>“For fundamental contributions to the theory and development of nanostructured devices.”</td>
</tr>
<tr>
<td>1998</td>
<td>ROGER T. HOWE, RICHARD S. MULLER</td>
<td>University of California, Berkeley, CA</td>
<td>&quot;For leadership and pioneering contributions to the field of microelectromechanical systems.&quot;</td>
</tr>
<tr>
<td>1997</td>
<td>DIETER P. KERN, GEORGE A. SAI-HALASZ</td>
<td></td>
<td>&quot;For the development of sub-0.1 micron MOSFET devices and circuits.&quot;</td>
</tr>
</tbody>
</table>
MATTHEW R. WORDEMAN  
IBM Research, Yorktown Heights, NY

1996 MITSUMASA KOYANAGI  
Tohoku Univ Intell Sys Lab  
Sendai, Japan  
"For pioneering research and development of the three dimensional stacked capacitor DRAM cell."

1995 HENRY I. SMITH  
MIT, Cambridge, MA  
"For contributions to microfabrication science and technology, notably microlithography."

1994 EIJI TAKEDA  
Hitachi Ltd.  
Tokyo, Japan  
"For pioneering contributions to the characterization and understanding of hot-carrier effects in MOS devices."

1993 TAKAFUMI NAMBU  
MITSURU IDA  
KAMON YOSHIYUKI  
SONY Corporation, Tokyo, Japan  
"For the development of the WALKMAN, the realization of a totally new concept of miniaturization of consumer electronics."

1992 DAVID A. THOMPSON  
IBM Corp.  
San Jose, CA  
"For pioneering work in miniature magnetic devices for data storage, including the invention, design and development of thin-film and magnetoresistive recording heads."

1991 HIDEO SUNAMI  
Hitachi, Ltd., Tokyo, Japan  
"For contributions in the invention and development of the trench capacitor DRAM cell."

1990 ELSE KOOI  
Philips Research Labs.  
Sunnyvale, CA  
"For invention and development of the process for localized oxidation of silicon using a silicon nitride mask, which enabled greatly reduced dimensions in VLSI circuits."

1989 SHUN-ICHI IWASAKI  
Tohoku University, Sendai, Japan  
"For contributions to the miniaturization of magnetic recording systems."

1988 IRVING AMES  IBM Corp., NY  
FRANCOIS M. d'HEURLE  
RICHARD E. HORSTMANN  
"For the invention of electromigration-resistant copper-doped aluminum metallurgy."

1987 MICHAEL HATZAKIS  
IBM Corp., Yorktown Heights, NY  
"For fundamental contributions to the patterning techniques of submicron electron devices."
1986  RICHARD M. WHITE  
Univ of California, Berkeley, CA  
"For invention of surface acoustic wave electronic devices for signal processing applications."

1985  ALEC N. BROERS  
IBM Corporation  
Hopewell Junction, NY  
"For leadership and pioneering contributions to the technology and applications of electron beams to fine line lithography."

1984  HARRY W. RUBINSTEIN  
Sprague Electric Co.  
Grafton, Wisconsin  
"For early key contributions to the development of printed components and conductors on a common insulating substrate."

1983  ABE OFFNER  
Perkin-Elmer Corp.  
Wilton, CT  
"For the invention and design of the optics which made possible the projection lithography systems that were key to advancing integrated circuit manufacture."

1982  ROBERT H. DENNARD  
IBM Corp.  
Yorktown Heights, NY  
"For the invention of the one-transistor dynamic random access memory cell and for contributions to scaling of MOS devices."

1981  DONALD R. HERRIOTT  
Bell Labs.  
Murray Hill, NJ  
"For key contributions to the development of a practical electron beam system for fabrication of integrated circuit masks and to other aspects of microlithography."

1980  MARCIAN E. HOFF, JR.  
INTEL Corp.  
Santa Clara, CA  
"For the conception and development of the microprocessor."

1979  GEOFFREY W. A. DUMMER  
Worcestershire, England  
AND  
PHILIP J. FRANKLIN  
GSA, Federal Supply Service  
Washington, DC  
"For contributions to materials development and fabrication techniques for miniature passive electronic components and assemblies."

1978  JACK S. KILBY  
Texas Instrument, Dallas, TX  
ROBERT N. NOYCE  
Intel Corporation, Santa Clara, CA  
"For contributions to miniaturization through inventions and the development of integrated circuits."