IEEE DANIEL E. NOBLE AWARD FOR EMERGING TECHNOLOGIES
RECIPIENTS
Formerly the IEEE Morris N. Liebmann Memorial Award

2023 – NO AWARD

2022 – NO AWARD

2021 – NO AWARD

2020 – MIRO MICOVIC
Engineering Fellow, Raytheon,
Tucson, Arizona, USA
“For leadership in millimeter-wave Gallium Nitride (GaN) transistor and technology development.”

2019 – THOMAS KENNY
Professor, Department of
Mechanical Engineering,
Stanford University, Stanford,
California, USA
“For the development and widespread commercialization of MEMS resonators for timing applications.”

2018 – RAJIV V. JOSHI
Research Staff Member, IBM T. J. Watson Research Center, Yorktown Heights, New York, USA
“For contributions to predictive failure analytics, VLSI memory design, and technology.”

2017 – MIGUEL A. L. NICOLELIS
Professor, Duke University School of Medicine, Durham, North Carolina, USA
"For seminal contributions to brain-machine interfaces."

2016 – MARK G. ALLEN
Alfred Fitler Moore Professor, Department of Electrical and Systems Engineering, Singh Center for Nanotechnology, University of Pennsylvania, Philadelphia, Philadelphia, USA
“For contributions to research and development, clinical translation, and commercialization of biomedical microsystems.”

2015 - KHALIL NAJAFI
Schlumberger Professor and Chair, Electrical Engineering and Computer Science, The University of Michigan, Ann Arbor, Michigan, USA
“For leadership in micro-electro-mechanical systems (MEMS), technologies, and devices and for seminal contributions to inertial devices and hermetic wafer-level packaging.”

2014 – GABRIEL M. REBEIZ
Professor, University of California, San Diego, La Jolla, CA, USA
“For pioneering contributions enabling commercialization of RF MEMS technology and tunable micro- and millimeter-wave systems.”

2013 - JAN P. ALLEBACH
Hewlett-Packard Distinguished Professor of Electrical and Computer
“For the development of the Tone-Dependent Error Diffusion algorithm used widely in inkjet and laser printers.”
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Engineering, Purdue University,
West Lafayette, IN, USA

2012 - SUBRAMANIAN S. IYER
Distinguished Engineer & Chief Technologist, Semiconductor Research & Development Center,
IBM Systems & Technology Group
Hopewell Junction, NY, USA

“For the development and implementation of embedded DRAM technologies.”

2011 - MARK L. BURGENGER
Vice President of Advanced Research, Peregrine Semiconductor,
San Diego, CA, USA

AND RONALD E. REEDY
CTO and Chief of Staff, Peregrine Semiconductor,
San Diego, CA, USA

“For basic research and development of silicon on sapphire technology culminating in high-yield, commercially viable integrated circuits.”

2010 – SHINICHI ABE
Gen Mgr., Hybrid Vehicle Mgmt System Development Division,
Toyota Corp.
Aichi, Japan

AND SHOICHI SASAKI
Professor, Keio University
Yokohama, Japan

AND TAKEHISA YAEGASHI
President (Consultant)
Cordia Corporation
Shizuoka, Japan

“For pioneering contributions to the development and market penetration of hybrid electric vehicles (HEVs) through the establishment of innovative architectures and control technologies.”

2009 – LARRY F. WEBER
President, Society for Information Display (SID),
San Jose, CA, USA

“For pioneering contributions to Plasma Display Technology and its commercialization.”

2008 – JAMES M. DAUGHTON
Founder, President/CEO/CTO, NVE Corporation,
Eden Prairie, MN, USA

AND STUART PARKIN
IBM Fellow, IBM Almaden Research Center; Director, IBM-Stanford

“For fundamental contributions to the development of magneto-resistive devices for non-volatile, high density, random access memory.”
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Spintronic Science and Applications
Center (SpinAps),
San Jose, CA, USA

AND

SAIED TEHRANI
MRAM Technology Director,
Freescale Semiconductor,
Chandler, AZ, USA

2007 – STEPHEN R. FORREST
Dept of Electrical Engineering,
Princeton University,
Princeton, NJ, USA

AND

RICHARD H. FRIEND
Department of Physics, Cambridge
University,
Cambridge, UK

AND

CHING TANG
University of Rochester,
Rochester, NY, USA

2007 – STEPHEN R. FORREST
Dept of Electrical Engineering,
Princeton University,
Princeton, NJ, USA

“For pioneering contributions to the development of organic light emitting diodes (OLEDs)”

AND

RICHARD H. FRIEND
Department of Physics, Cambridge
University,
Cambridge, UK

AND

CHING TANG
University of Rochester,
Rochester, NY, USA

2006 - CARLOS A. PAZ DE ARAUJO
Full Professor of Electrical and Computer Engineering, University of Colorado,
Colorado Springs, CO, USA

“For fundamental contributions and commercialization in the field of Ferroelectric Random Access Memory (FeRAM).”

2005 – DAVID LOUIS HARAME
Director of Enablement for Semiconductor Research and Development Center, IBM Fellow,
IBM
Essex Junction, VT, USA

“For the development of manufacturable Silicon Germanium, HBT Bipolar and BiCMOS technologies.”

2004 – LARRY J. HORNBECK
Texas Instruments Fellow
Texas Instruments,
Plano, TX, USA

“For his pioneering work and sustained development of the Digital Micromirror Device, used in projection displays.”

2003 - KENICHI IGA
Executive Director, Japan Society for the Promotion of Science,
Tokyo, Japan

"For pioneering developments of surface emitting semiconductor lasers and arrays."
### IEEE DANIEL E. NOBLE AWARD FOR EMERGING TECHNOLOGIES
#### RECIPIENTS
Formerly the **IEEE Morris N. Liebmann Memorial Award**

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Institution</th>
<th>Country</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>MASATAKA NAKAZAWA</td>
<td>Tohoku University, Miyagi-Ken, Japan</td>
<td>Japan</td>
<td>&quot;For pioneering development of 1.48 µm InGaAsP laser-diode pumping of erbium-doped fiber amplifiers (EDFA).&quot;</td>
</tr>
<tr>
<td>2001</td>
<td>KATSUTOSHI IZUMI</td>
<td>Osaka Prefecture University, Osaka, Japan</td>
<td>Japan</td>
<td>&quot;For pioneering development of Separation by Implanted Oxygen (SIMOX) technology.&quot;</td>
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