IEEE DAVID SARNOFF AWARD
RECIPIENTS

2017 – NOT AWARDED

2016 – HIROYUKI MATSUNAMI
Professor Emeritus, Kyoto University, Yawata, Kyoto, Japan
“For contributions to the development of silicon carbide (SiC) crystals and devices for advanced power electronics.”

2015 - PALLAB BHATTACHARYA
Charles M. Vest Distinguished University Professor and James R. Mellor Professor of Engineering, University of Michigan, Ann Arbor, Michigan, USA
“For contributions to near-infrared and visible quantum dot lasers.”

2014 - LARRY A. COLDREN
Fred Kavli Professor of Optoelectronics and Sensors, University of California at Santa Barbara, Santa Barbara, California, USA
“For contributions to semiconductor lasers and photonic integrated circuits.”

2013 - SAJEEV JOHN
University Professor, Department of Physics, University of Toronto, Toronto, Ontario, Canada
“For the conception and development of light-trapping crystals and for leadership in elucidating their properties and applications in photonics.”

2012 - HIDEO OHNO
Professor at Laboratory for Nanoelectronics and Spintronics, Research Institute of Electrical Communication and Director of Center for Spintronics Integrated Systems, Tohoku University, Sendai, Japan
“For seminal contributions and leadership in bridging semiconductor electronics with magnetism and spintronics.”

2011 – CONSTANCE J. CHANG-HASNAIN
John R. Whinnery Chair Professor of Electrical Eng. and Computer Science, University of California Berkeley, CA, USA
“For her pioneering contributions to vertical cavity surface emitting laser (VCSEL) arrays and tunable VCSELs.”

2010 – MARK RODWELL
Professor, Dept of Elec and Comp Engrg, Univ of California, Santa Barbara
Santa Barbara, CA, USA
“For development of millimeter-wave and sub-millimeter-wave InP bipolar transistors and integrated circuits.”

2009 – YASUHIKO ARAKAWA
Professor, Research Center for
“For seminal contributions to improved dynamics of quantum well semiconductor
Advanced Science and Technology, Tokyo, Japan

AND

KAM-YIN LAU
Professor, EECS, Univ of California, Berkeley, CA, USA

AND

KERRY J. VAHALA
Jenkins Professor, Applied Physics, California Institute of Technology, Pasadena, CA, USA

2008 - JAMES COLEMAN
University of Illinois at Urbana-Champaign, Intel Alumni Endowed Chair in Electrical and Computer Engineering, Urbana, IL, USA

“For leadership in the development of highly reliable strained-layer lasers”

2007 – UMESH K. MISHRA
ECE Department, University of California, Santa Barbara, CA, USA

“For development of gallium nitride electronics.”

2006 - MAU-CHUNG FRANK CHANG
Professor, Electrical Engineering Department, UCLA, Los Angeles, CA, USA

“For development of HBT power amplifiers leading to their commercialization in wireless communications.”

2005 – PIERRE TOURNOIS
Co-Founder & Scientific Director Fastlite Company, Palaiseau, France

“For pioneering contributions to pulse compression devices and the invention of the Acousto-Optic Programmable Dispersive Filter.”

2004 – FREDERICK A. KISH
Engineering Vice President Lepton Networks, Cupertino, CA, USA

“For his key role in the development of high efficiency transparent substrate light emitting diodes and their commercial realization.”

2003 - PETER ASBECK
Professor, Electrical and Computer Engineering Dept, University of California, San Diego, CA, USA

"For development and applications of GaAs-based heterojunction bipolar transistors."
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RECIPIENTS

2002 – YOUNG-KAI CHEN
Lucent Technologies
Murray Hill, NJ, USA
“For contributions to ultrahigh speed heterostructure transistors and seminal work on colliding pulse mode-locked semiconductor lasers.”

2001 - PAUL D. DAPKUS
University of Southern California
Los Angeles, CA, USA
“For contributions both to the establishment of MOCVD as a dominant technology for epitaxial materials growth and to the first MOCVD quantum well laser.”

2000 - ALASTAIR MALCOLM GLASS
Bell Laboratories/Lucent Technologies
Murray Hill, NJ, USA
"For pioneering research on electro-optical materials and photorefractive phenomena, and for leadership in development of Wavelength Division Multiplexing (WDM) components."

1999 - GERARD A. MOUROU
University of Michigan
Ann Arbor, MI, USA
"For pioneering contributions to high-speed, high-intensity optoelectronic measurement techniques, including electro-optic sampling and femtosecond high-voltage switching."

1998 - TATSUO IZAWA
Nippon Telegraph and Telephone Corp.
Kanagawa, Japan
"For contributions to vapor phase axial deposition for optical fiber fabrication."

1997 - MILTON FENG
University of Illinois
Urbana, IL, USA
"For contributions to the theoretical and experimental understanding of the fundamental speed limitations of MESFETs and HEMTs."

1996 - HIROYUKI SAKAKI
University of Tokyo
Tokyo, Japan
"For pioneering studies of quantum effects in semiconductor microstructures."

1995 - KARL HESS
Beckman Inst. - Univ. of Illinois
Urbana, IL, USA
"For contributions to high field transport and real space transfer effects in semiconductor heterolayer structures."

1994 - WON-TIEN TSANG
AT&T Bell Laboratories
Murray Hill, NJ, USA
"For innovative contributions to the design of novel quantum well semiconductor lasers and to epitaxial growth processes."

1993 - RAO R. TUMMALA
IBM Corp.
Hopewell Junction, NY, USA
"For development of high density, high performance multichip packages for computer applications."
1992 - J. JIM HSIEH  
Lasertron Inc.  
Burlington, MA, USA  

"For the invention and commercialization of the GaInAsP semiconductor laser for fiber-optic communications."

1991 - FEDERICO CAPASSO  
AT&T Bell Laboratories  
Murray Hill, NJ, USA  

"For pioneering contributions to heterostructure devices through the use of bandgap engineering techniques."

1990 - LEROY L. CHANG  
IBM Corp.  
Yorktown Heights, NY, USA  

"For pioneering contributions to the realization and development of quantum wells and superlattices."

1989 - HERWIG KOGELNIK AND  
CHARLES V. SHANK  
AT&T Bell Laboratories,  
Holmdel, NJ, USA  

"For invention of the distributed feedback laser, and contributions to integrated optics and fiber communications."

1988 - IZUO HAYASHI  
Optoelectronics Joint Res. Lab.  
Kawasaki, Japan  

"For contributions to III-V semiconductors and device technology."

1987 - FRANK F. FANG AND  
ALAN B. FOWLER  
IBM Corp.,  
Yorktown Heights, NY, USA  

"For contributions to MOSFET device physics and two-dimensional electron systems."

1986 - YASUHARU SUEMATSU  
Tokyo Inst. of Tech.  
Tokyo, Japan  

"For contributions to semiconductor lasers and integrated optics for optical fiber communications."

1985 - HENRY KRESSEL  
E.M. Warburg, Pincus & Co.  
New York, NY, USA  

"For outstanding contributions to electro-optic semiconductor devices."

1984 - JAMESON D. RIGDEN AND  
ALAN D. WHITE  
Delta Development Ltd.  
Norfolk, England  
White Associates  
Berkely Heights, NJ, USA  

"For invention of the visible light helium-neon laser."

1983 - HERMANN K. GUMMEL  
AT&T Bell Laboratories  
Murray Hill, NJ, USA  

"For contributions and leadership in device analysis and development of computer-aided design tools for semiconductor devices and circuits."
<table>
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<tr>
<th>Year</th>
<th>Recipient(s)</th>
<th>Affiliation/Location</th>
<th>Citation</th>
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<tbody>
<tr>
<td>1982</td>
<td>NOBUTOSHI KIHARA</td>
<td>SONY Corp., Tokyo, Japan</td>
<td>&quot;For major contributions to magnetic video tape recording.&quot;</td>
</tr>
<tr>
<td>1980</td>
<td>MARSHALL I. NATHAN</td>
<td>IBM Corp., Yorktown Heights, NY, USA</td>
<td>&quot;For his role in the discovery of the injection laser, and other contributions to the physics of semiconductor devices.&quot;</td>
</tr>
<tr>
<td>1979</td>
<td>A. GARDNER FOX AND TINGYE LI</td>
<td>Bell Labs., Holmdel, NJ, USA</td>
<td>&quot;For the discovery of modes in open structures and their applications to laser resonators.&quot;</td>
</tr>
<tr>
<td>1978</td>
<td>STEPHEN E. HARRIS</td>
<td>Stanford University, Stanford, CA, USA</td>
<td>&quot;For scientific discoveries and device inventions in the fields of lasers, quantum electronics and non-linear optics.&quot;</td>
</tr>
<tr>
<td>1977</td>
<td>JACK M. MANLEY AND HARRISON E. ROWE</td>
<td>University of Wisconsin, Madison, WI, USA AND Bell Laboratories, Holmdel, NJ, USA</td>
<td>&quot;For their work on the properties of nonlinear devices resulting in the well-known Manley Rowe Relations.&quot;</td>
</tr>
<tr>
<td>1975</td>
<td>BERNARD C. DELOACH, JR.</td>
<td>Bell Telephone Laboratories, New Providence, NJ, USA</td>
<td>&quot;For contributions to and leadership in the development of the impact avalanche and transit time (IMPATT) device.&quot;</td>
</tr>
<tr>
<td>1974</td>
<td>FREDERIK L. J. SANGSTER</td>
<td>Phillips Research Laboratories, Eindhoven, the Netherlands</td>
<td>&quot;For the invention of the integrated bucket-brigade delay line and ingenuity in finding new realizations and applications of this principle.&quot;</td>
</tr>
<tr>
<td>1973</td>
<td>MAX VERNON MATHEWS</td>
<td>Bell Telephone Laboratories, Murray Hill, NJ, USA</td>
<td>&quot;For leadership in applying electronics to art and for his contribution to the production of musical sounds by computer.&quot;</td>
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IEEE DAVID SARNOFF AWARD
RECIPIENTS

1972 - EDWARD G. RAMBERG
RCA Laboratories
Princeton, NJ, USA
"For outstanding contributions to electron physics, electron optics and television."

1971 - ALAN L. MCWHORTER
Massachusetts Institute of Technology,
Cambridge, MA, USA
"For outstanding contributions leading to a better understanding of semiconductor devices."

1970 - JOHN BERTRAND JOHNSON
McGraw-Edison Company
West Orange, NJ, USA
"For fundamental contributions of major importance to electronics and communications."

1969 - ROBERT H. REDIKER
Massachusetts Institute of Technology,
Cambridge, MA, USA
"For contributions to semiconductor device research and injection lasers."

1968 - WALTER P. DYKE
Field Emission Corporation
McMinnville, OR, USA
"For pioneering contributions to the development of field emission in X-ray technology."

1967 - JAMES HILLIER
RCA Laboratories
Princeton, NJ, USA
"For his pioneering research on the electron microscope, including both electron optics and biological microscopy, and for his accomplishments as a research director and his inspiration to scientists - young and old."

1966 - JACK S. KILBY
Texas Instruments Inc.
Dallas, TX, USA
"For his outstanding creative contribution in the field of monolithic integrated circuits, for his key inventions and for his team leadership in the application of integrated circuits to large scale systems."

1965 - JACK A. MORTON
Bell Telephone Laboratories
Murray Hill, NJ, USA
"For his outstanding leadership and contributions to the development and understanding of solid-state electron devices."

1964 - HENRI BUSIGNIES
International Telephone & Telegraph
New York, NY, USA
"For outstanding contributions to electronic systems especially in the fields of direction finding and air navigation."

1963 - ROBERT N. HALL
General Electric Company
Schenectady, NY, USA
"For his outstanding contributions to the scientific understanding of semiconductors and for their applications to electronics."

1962 - HARRY B. SMITH
"For his contributions to the field of
<table>
<thead>
<tr>
<th>Year</th>
<th>Recipient</th>
<th>Institution</th>
<th>Award Description</th>
</tr>
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<tbody>
<tr>
<td>1961</td>
<td>CHARLES H. TOWNES</td>
<td>Westinghouse Electric Corporation, Baltimore, MD, USA</td>
<td>&quot;For research in resonance physics leading to major advances in communication technology.&quot;</td>
</tr>
<tr>
<td>1960</td>
<td>RUDOLF KOMPNER</td>
<td>Bell Telephone Laboratories, Holmdel, NJ, USA</td>
<td>&quot;For creative achievements in research and development in the field of electronics and for his leadership in this field.&quot;</td>
</tr>
<tr>
<td>1959</td>
<td>DAVID SARNOFF</td>
<td>Radio Corporation of America, New York, NY, USA</td>
<td>&quot;This special inaugural award of the David Sarnoff Medal is made to David Sarnoff on October 7, 1959, on the 75th Anniversary of the first technical meeting of AIEE, in recognition of his inspiring and courageous leadership in the advancement of the art and science of electronics.&quot;</td>
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