

**IEEE ALEXANDER GRAHAM BELL MEDAL**  
**RECIPIENTS**

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|------|--|---|
| 2019 | TERESA HUAI-YING MENG<br>Professor Emeritus, Reif<br>Weaver Dennis Professor in<br>Electrical Engineering and<br>Professor of Computer Science,<br>Stanford, California, USA | "For technical contributions to and<br>leadership in the development of wireless<br>semiconductor technology."  |
| 2018 | NAMBIRAJAN SESHADRI<br>Former Chief Technology<br>Officer, Broadcom Corporation,<br>Irvine, California, USA  | "For contributions to the theory and<br>practice of wireless communications."   |
| 2017 | H. VINCENT POOR<br>Michael Henry Strater<br>University Professor of Electrical<br>Engineering, Princeton<br>University, Princeton, NJ, USA                                   | "For fundamental contributions to signal<br>processing and its application to digital<br>communications."   |
| 2016 | ROBERTO PADOVANI<br>Executive Vice President and<br>Fellow, Qualcomm<br>Technologies, San Diego, CA,<br>USA  | "For innovations enabling efficient,<br>wideband, wireless access to the Internet,<br>that is central to all third-generation<br>cellular networks."  |
| 2015 | FRANK KELLY<br>Professor, University of<br>Cambridge, Cambridgeshire,<br>United Kingdom  | "For creating principled mathematical<br>foundations for the design and analysis of<br>congestion control, routing, and blocking in<br>modern communication networks."                                    |
| 2014 | DARIUSH DIVSALAR<br>Senior Research Scientist, Jet<br>Propulsion Laboratory,<br>Pasadena, CA, USA  | "For fundamental contributions to the<br>theory and practice of channel codes that<br>transformed deep space and other forms of<br>wireless communications."  |
| 2013 | ANDREW R. CHRAPLYVY<br>Optical Technologies Research<br>vice-president, Alcatel-Lucent,<br>Holmdel, NJ, USA  | "For contributions to the science and<br>technology of optical communications<br>enabling high-speed wavelength division<br>multiplexing through the mitigation of the<br>effects of fiber nonlinearity." |
| AND  | ROBERT WILLIAM TKACH<br>Director of the Advanced<br>Photonics Research Department<br>at Bell Labs, Alcatel-Lucent,<br>Holmdel, NJ, USA                                       |   |
| 2012 | LEONARD KLEINROCK<br>Professor, Computer Science   | "For pioneering contributions to modeling,<br>analysis, and design of packet-switching  |

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	Department, University of California, Los Angeles, Los Angeles, CA, USA	networks.”
2011	AROGYASWAMI J. PAULRAJ Professor (Emeritus), Stanford University, Stanford, CA, USA	“For pioneering contributions to the application of multiantenna technology to wireless communication systems.”
2010	JOHN M. CIOFFI Hitachi America Professor of Electrical Engineering, Stanford University, Stanford, CA, USA	“For pioneering discrete multitone modem technology as the foundation of the global DSL industry.”
2009	ROBERT J. MCELIECE Allan E. Puckett Professor and Professor of Electrical Engineering California Institute of Technology Pasadena, CA, USA	“For fundamental contributions to the theory and practice of error-correcting codes and to the design of deep space telecommunication systems.”
2008	GERARD J. FOSCHINI Bell Labs Fellow, Wireless Communications Research Department, Bell Laboratories, Alcatel-Lucent, Holmdel, NJ, USA	“For seminal contributions to the science and technology of multiple-antenna wireless communications.”
2007	NORMAN ABRAMSON Vice President and CTO of SkyWare, Inc. San Francisco, CA, USA	“For contributions to the development of modern data networks through fundamental work in random multiple access”
2006	JOHN M. WOZENCRAFT Professor Emeritus, Electrical Engineering and Computer Science, MIT., Cambridge, MA, USA	“For the development of sequential decoding and the signal space approach to digital communication.”
2005	JIM K. OMURA Technology Strategist, Gordon & Betty Moore Foundation, San Francisco, CA, USA	“For contributions to the theory of communication systems and the commercial applications of spread spectrum radios and public key cryptography.”
2004	NOT AWARDED	

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2003	JOACHIM HAGENAUER Munich University of Technology Munich, Germany	"For contributions to soft decoding and its application to iterative decoding algorithm"
2002	TSUNEO NAKAHARA Sumitomo Electric Industries Osaka, Japan	"For pioneering work on the design and development of manufacturing systems for optical fibers."
2001	NOT AWARDED	
2000	VLADIMIR A. KOTELNIKOV Russian Academy of Sciences Moscow, Russia	"For fundamental contributions to signal theory."
1999	DAVID G. MESSERSCHMITT University of California, Berkeley Berkeley, CA, USA	"For fundamental contributions to communications theory and practice, including VLSI for signal processing, and simulation and modeling software."
1998	RICHARD E. BLAHUT Dept. of Electrical & Computer Science University of Illinois, Urbana, IL, USA	"For contributions to error-control coding, particularly by combining algebraic coding theory and digital transform techniques"
1997	VINTON G. CERF Sr. Vice President MCI Telecommunications Corp. Reston, VA, USA	"For conceiving the Internet architecture and protocols, and for the vision and sustained leadership that led to the current Internet."
AND	ROBERT E. KAHN Founder and President Corp for National Research Initiative (CNRI), Reston, VA, USA	
1996	TADAHIRO SEKIMOTO NEC Corporation, Tokyo, Japan	"For pioneering contributions to digital satellite communications and industry leadership in developing digital communications."
1995	IRWIN M. JACOBS QUALCOMM, Inc., San Diego, CA, USA	"For outstanding contributions to telecommunications, including leadership, theory, practice and product development."
1994	HIROSHI INOSE	"For pioneering contributions to digital

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	NCSIS, Tokyo, Japan	switching and modulation, and for leadership in international telecommunications."
1993	DONALD C. COX Bellcore, Red Bank, NJ, USA	"For pioneering and leadership in personal portable communications."
1992	JAMES L. MASSEY Swiss Fed. Tech. University Zurich, Switzerland	"For contributions to the theory and practical implementation of forward-error-correcting codes, multi-user communications, and cryptographic systems; and for excellence in engineering education."
1991	C. CHAPIN CUTLER The Compromise, Waterford, ME, USA	"For the invention and development of predictive coding of pictures and picture sequences."
	AND JOHN O. LIMB Hewlett-Packard, Cupertino, CA, USA	
	AND ARUN N. NETRAVALI AT&T Bell Labs., Murray Hill, NJ, USA	
1990	PAUL BARAN Interfax Inc., Menlo Park, CA, USA	"For pioneering in Packet Switching."
1989	GERALD R. ASH	"For contributions to the conception and implementation of Dynamic Nonhierarchical Routing (DNHR) in telecommunications networks."
	AND BILLY B. OLIVER AT&T Bell Labs, Holmdel, NJ, USA	
1988	ROBERT M. METCALFE 3Com Corp., Santa Clara, CA, USA	"For contributions to the invention, standardization and commercialization of local area networks -- especially the Ethernet."
1987	JOEL S. ENGEL Satellite Business Systems McLean, VA, USA	"For fundamental contributions to the theory, design and deployment of cellular mobile communications systems."
	AND RICHARD H. FRENKIEL AT&T Information Systems Labs	

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- Holmdel, NJ, USA
- AND WILLIAM C. JAKES, JR.  
AT&T Bell Labs,  
Andover, MA, USA
- 1986 BERNARD WIDROW  
Stanford University,  
Palo Alto, CA, USA "For fundamental contributions to adaptive filtering, adaptive noise and echo cancellation, and adaptive antennas."
- 1985 CHARLES K. KAO  
ITT Corp., Shelton, CT, USA "For pioneering contributions to optical fiber communications."
- 1984 ANDREW J. VITERBI  
Linkabit Corp.,  
San Diego, CA, USA "For fundamental contributions to telecommunication theory and practice and for leadership in teaching."
- 1983 STEPHEN O. RICE  
Univ. of California,  
San Diego, CA, USA "For his contributions to the fundamental understanding of communications systems and to the underlying mathematics, and for inspiring younger scientists and engineers."
- 1982 HAROLD A. ROSEN  
Hughes Aircraft Company  
El Segundo, CA, USA "For pioneering contributions to, and leadership in, geostationary communication satellites."
- 1981 DAVID SLEPIAN  
Bell Labs,  
Murray Hill, NJ, USA "For fundamental contributions to communication theory."
- 1980 RICHARD R. HOUGH  
AT&T,  
Basking Ridge, NJ, USA "For his contributions to the nationwide and international telephone network and, particularly, the introduction of electronic switching therein."
- 1979 A. CHRISTIAN JACOBÆUS  
Telefonaktiebolaget  
Stockholm, Sweden "For pioneering work in the theory of switching systems and technical leadership in the development of telecommunication systems."
- 1978 M. ROBERT AARON  
Bell Labs, Holmdel, NJ, USA "For personal contributions to, and leadership in, the practical realization of high-speed digital communications."
- AND JOHN S. MAYO  
Bell Labs, Murray Hill, NJ, USA
- AND ERIC E. SUMNER

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Bell Labs, Whippany, NJ, USA

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|------|---|--|
| 1977 | EBERHARDT RECHTIN<br>Hewlett-Packard Co.,<br>Palo Alto, CA, USA   | "For pioneering and lasting contributions to deep-space-vehicle communications technology and for leadership in defense telecommunications." |
| 1976 | AMOS E. JOEL, JR.<br><br>AND WILLIAM KEISTER<br><br>AND RAYMOND W. KETCHLEDGE<br>Bell Telephone Labs, Inc.,<br>Holmdel, NJ, USA | "For conception and development of Electronic Switching Systems and their effective introduction into a nation-wide telephone system."       |