

**IEEE ALEXANDER GRAHAM BELL MEDAL
RECIPIENTS**

2022	P. R. KUMAR (LFIEEE)— Professor, Electrical & Computer Engineering and Industrial & Systems Engineering, Texas A&M University, College Station, Texas, USA	“For seminal contributions to the modeling, analysis, and design of wireless networks.”
2021	NICHOLAS M. MCKEOWN (FIEEE)—Professor of Electrical Engineering and Computer Science, Stanford University, Stanford, California, USA	“For contributions to internet router architecture and software-defined networking.”
2020	RAJIV LAROIA Founder & CTO, Light Company, Far Hills, New Jersey, USA	“For contributions to cellular wireless data systems.”
2019	TERESA HUAI-YING MENG Professor Emeritus, Reif Weaver Dennis Professor in Electrical Engineering and Professor of Computer Science, Stanford, California, USA	“For technical contributions to and leadership in the development of wireless semiconductor technology.”
2018	NAMBIRAJAN SESHADRI Former Chief Technology Officer, Broadcom Corporation, Irvine, California, USA	“For contributions to the theory and practice of wireless communications.”
2017	H. VINCENT POOR Michael Henry Strater University Professor of Electrical Engineering, Princeton University, Princeton, NJ, USA	“For fundamental contributions to signal processing and its application to digital communications.”
2016	ROBERTO PADOVANI Executive Vice President and Fellow, Qualcomm Technologies, San Diego, CA, USA	“For innovations enabling efficient, wideband, wireless access to the Internet, that is central to all third-generation cellular networks.”
2015	FRANK KELLY Professor, University of Cambridge, Cambridgeshire, United Kingdom	“For creating principled mathematical foundations for the design and analysis of congestion control, routing, and blocking in modern communication networks.”

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| 2014 | DARIUSH DIVSALAR
Senior Research Scientist, Jet
Propulsion Laboratory,
Pasadena, CA, USA | "For fundamental contributions to the theory and practice of channel codes that transformed deep space and other forms of wireless communications." |
| 2013 | ANDREW R. CHRAPLYVY
Optical Technologies Research
vice-president, Alcatel-Lucent,
Holmdel, NJ, USA | "For contributions to the science and technology of optical communications enabling high-speed wavelength division multiplexing through the mitigation of the effects of fiber nonlinearity." |
| AND | ROBERT WILLIAM TKACH
Director of the Advanced
Photonics Research Department
at Bell Labs, Alcatel-Lucent,
Holmdel, NJ, USA | |
| 2012 | LEONARD KLEINROCK
Professor, Computer Science
Department, University of
California, Los Angeles, Los
Angeles, CA, USA | "For pioneering contributions to modeling, analysis, and design of packet-switching 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 | "For contributions to the development of modern data networks through |

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	SkyWare, Inc. San Francisco, CA, USA	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	
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."

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- AND ROBERT E. KAHN
Founder and President
Corp for National Research
Initiative (CNRI),
Reston, VA, USA
- 1996 TADAHIRO SEKIMOTO "For pioneering contributions to digital
NEC Corporation, Tokyo, Japan satellite communications and industry
leadership in developing digital
communications."
- 1995 IRWIN M. JACOBS "For outstanding contributions to
QUALCOMM, Inc., telecommunications, including leadership,
San Diego, CA, USA theory, practice and product
development."
- 1994 HIROSHI INOSE "For pioneering contributions to digital
NCSIS, Tokyo, Japan switching and modulation, and for
leadership in international
telecommunications."
- 1993 DONALD C. COX "For pioneering and leadership in personal
Bellcore, Red Bank, NJ, USA portable communications."
- 1992 JAMES L. MASSEY "For contributions to the theory and
Swiss Fed. Tech. University practical implementation of forward-error-
Zurich, Switzerland correcting codes, multi-user
communications, and cryptographic
systems; and for excellence in engineering
education."
- 1991 C. CHAPIN CUTLER "For the invention and development of
The Compromise, predictive coding of pictures and picture
Waterford, ME, USA 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 "For pioneering in Packet Switching."
Interfax Inc.,
Menlo Park, CA, USA
- 1989 GERALD R. ASH "For contributions to the conception and
implementation of Dynamic

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| AND | BILLY B. OLIVER
AT&T Bell Labs,
Holmdel, NJ, USA | Nonhierarchical Routing (DNHR) in telecommunications networks." |
| 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
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 |

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- 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
Bell Labs, Whippany, NJ, USA
- 1977 EBERHARDT RECHTIN
Hewlett-Packard Co.,
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.
AND WILLIAM KEISTER
AND RAYMOND W. KETCHLEDGE
Bell Telephone Labs, Inc.,
Holmdel, NJ, USA "For conception and development of
Electronic Switching Systems and their
effective introduction into a nation-wide
telephone system."