

**IEEE RICHARD W. HAMMING MEDAL
RECIPIENTS**

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|------|--|---|
| 2022 | MADHU SUDAN (FIEEE)—
Professor, Harvard University,
Cambridge, Massachusetts,
USA | “For fundamental contributions to probabilistically checkable proofs and list decoding of Reed-Solomon codes.” |
| 2021 | RAYMOND W. YEUNG (FIEEE)—
Choh-Ming Li Professor of
Information Engineering, The
Chinese University of Hong
Kong, Hong Kong, China | “For fundamental contributions to information theory and pioneering network coding and its applications.” |
| 2020 | CYNTHIA DWORK
Gordon McKay Professor of
Computer Science, Harvard
University, Cambridge,
Massachusetts, USA | “For foundational work in privacy, cryptography, and distributed computing, and for leadership in developing differential privacy.” |
| 2019 | DAVID TSE
Professor, Stanford University,
Stanford, California, USA | “For seminal contributions to wireless network information theory and wireless network systems.” |
| 2018 | ERDAL ARIKAN
Professor, Department of
Electrical Engineering, Bilkent
University, Ankara, Turkey | “For contributions to information and communications theory, especially the discovery of polar codes and polarization techniques.” |
| 2017 | SHLOMO SHAMAI
Professor, Technion-Israel
Institute of Technology, Haifa,
Israel | “For fundamental contributions to information theory and wireless communications.” |
| 2016 | ABBAS EL GAMAL
Professor and Department
Chair, Department of Electrical
Engineering, Stanford
University, Stanford, California,
USA | “For contributions to network multi-user information theory and for wide ranging impact on programmable circuit architectures.” |
| 2015 | IMRE CSISZAR
Research Professor, A. Rényi
Institute of Mathematics,
Hungarian Academy of
Sciences, Budapest, Hungary | “For contributions to information theory, information-theoretic security, and statistics.” |
| 2014 | THOMAS RICHARDSON
Vice President, Engineering,
Qualcomm, Bridgewater,
New Jersey, USA | “For fundamental contributions to coding theory, iterative information processing, and applications.” |
| AND | RÜDIGER URBANKE | |

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Professor, Ecole Polytechnique
Federale de Lausanne,
Lausanne, Switzerland

- 2013 ROBERT CALDERBANK
Professor, Electrical and
Computer Engineering, Duke
University, Durham, NC, USA
"For fundamental contributions to coding theory that
impacted voice-band modems and wireless
communication."
- 2012 MICHAEL G. LUBY
Vice President of Technology,
QUALCOMM, Inc., Berkeley, CA,
USA
"For the conception, development, and analysis of
practical rateless codes."
- AND AMIN SHOKROLLAHI
Professor of Math and
Computer Science, EPFL, and
Chief Scientist, Digital Fountain,
Inc., Lausanne, Switzerland
- 2011 TOBY BERGER
Irwin and Joan Jacobs Professor
Engineering, Emeritus, Cornell
University, and Professor of
Electrical and Computer
Engineering, University of
Virginia, Charlottesville, VA,
USA
"For contributions to Information Theory, including
source coding and its applications."
- 2010 WHITFIELD DIFFIE
Vice President, Fellow and Chief
Security Officer, Sun
Microsystems, Menlo Park, CA,
USA
"For the invention of public key cryptography and its
application to secure communications."
- AND MARTIN HELLMAN
Professor Emeritus of Electrical
Engineering, Stanford
University, Stanford, CA, USA
- AND RALPH MERKLE
Senior Research Fellow,
Institute for Molecular
Manufacturing, Cupertino, CA,
USA
- 2009 PETER FRANASZEK
IBM Research, Research,
Yorktown Heights, NY, USA
"For pioneering contributions to the theory and
practice of constrained channel coding."

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| 2008 | SERGIO VERDU
Prof. of Electrical Engineering,
Princeton Univ., Princeton, NJ,
USA | "For fundamental contributions to information theory and the development of multiuser detection." |
| 2007 | ABRAHAM LEMPEL
Director of the HP Labs
Advanced Studies Program and
Director of HP Labs Israel,
Hewlett-Packard Labs, Haifa,
Israel | "For pioneering work in data compression especially the Lempel-Ziv algorithm." |
| 2006 | VLADIMIR I. LEVENSHTein
Leading Scientific Researcher,
Keldysh Institute for Applied
Mathematics, Moscow, Russia | "For contributions to the theory of error-correcting codes and information theory, including the Levenshtein distance." |
| 2005 | NEIL J.A. SLOANE
Technology Leader, AT&T Labs,
Florham Park, NJ, USA | "For contributions to coding theory and its applications to communications, computer science, mathematics and statistics." |
| 2004 | JACK K. WOLF
Stephen O. Rice Prof, Dept of
E&CE and Endowed Chair,
Center for Magnetic Recording
Research
Univ. of California, San Diego,
La Jolla, CA, USA | "For fundamental contributions to the theory and practice of information transmission and storage." |
| 2003 | CLAUDE BERROU
ALAIN GLAVIEUX
Professors, Ecole Nationale
Superieure des
Telecommunications de
Bretagne, Brest, France | "For the invention of turbo codes, which have revolutionized digital communications." |
| 2002 | PETER ELIAS
MIT, Cambridge, MA, USA | "For fundamental and pioneering contributions to information theory and its applications." |
| 2001 | A.G. (SANDY) FRASER
Chief Scientist, AT&T Research
Labs, Florham Park, NJ, USA | "For pioneering contributions to the architecture of communication networks through the development of virtual circuit switching technology." |
| 2000 | SOLOMON W. GOLOMB
University of Southern
California, Los Angeles, CA,
USA | "For fundamental contributions to the theory of shift register sequences and their applications in digital communications." |
| 1999 | DAVID A. HUFFMAN
University of California | "For design procedures of minimum redundancy (Huffman) codes and asynchronous sequential circuits," |

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|------|---|--|
| | Santa Cruz, CA, USA | and contributions to analysis of visual imagery." |
| 1998 | DAVID D. CLARK
MIT, Cambridge, MA, USA | "For leadership and major contributions to the architecture of the Internet as a universal information medium" |
| 1997 | THOMAS M. COVER
Stanford University
Stanford, CA, USA | "For fundamental contributions to information and communication theory, statistics and pattern recognition." |
| 1996 | MARK S. PINSKER
Institute for Information
Transmission Problems (IITP)
Russian Academy of Sciences
Moscow, Russia | "For outstanding contributions to information theory, statistical estimation and coding theory." |
| 1995 | JACOB ZIV
Technion-Israel Inst. of Tech.
Haifa, Israel | "For contributions to information theory, and the theory and practice of data compression." |
| 1994 | GOTTFRIED UNGERBOECK
IBM Zürich Research Laboratory
Ruschlikon, Switzerland | "For the development and application of trellis modulation to digital communications." |
| 1993 | JORMA J. RISSANEN
IBM Corporation
San Jose, CA, USA | "For fundamental contributions to information theory, statistical inference, control theory, and the theory of complexity." |
| 1992 | LOTFI A. ZADEH
University of California
Berkeley, CA, USA | "For seminal contributions to information science and systems, including the conceptualization of fuzzy sets." |
| 1991 | ELWYN R. BERLEKAMP
AXCOM, Inc.
Berkeley, CA, USA | "For profound contributions to the theory and application of error-correcting codes." |
| 1990 | DENNIS M. RITCHIE
AT& T Bell Laboratories
Murray Hill, NJ, USA | "For the origination of the UNIX operating system and the C programming language." |
| AND | KENNETH L. THOMPSON
AT& T Bell Laboratories,
Murray Hill, NJ, USA | |
| 1989 | IRVING S. REED
University of Southern
California
Los Angeles, CA, USA | "For contributions to multiple error-correcting codes, digital computer design, and automatic detection and processing of signals in noise." |
| 1988 | RICHARD W. HAMMING
U.S. Naval Postgrad. School | "For exceptional and pioneering contributions to information sciences and systems, and for inspiring |

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Monterey, CA, USA

generations of researchers in these fields."