

**IEEE DONALD G. FINK PRIZE PAPER AWARD**  
**RECIPIENTS**

The award is discontinued after 2016, as approved by the IEEE Board of Directors in February 2016.

2016 – TIMOTHY YORK

AND

SAMUEL B. POWELL

AND

SHENKUI GAO

AND

LINDSEY KAHAN

AND

TAUSEEF CHARANYA

AND

DEBAJIT SAHA

AND

NICHOLAS W. ROBERTS

AND

THOMAS W. CRONIN

AND

JUSTIN MARSHALL

AND

SAMUEL ACHILEFU

AND

SPENCER P. LAKE

AND

BARANIDHARAN RAMAN

AND

VIKTOR GRUEV

“Bioinspired Polarization Imaging Sensors: From Circuits and Optics to Signal Processing Algorithms and Biomedical Applications,” *Proceedings of the IEEE*, Vol. 102, No. 10, pp. 1450–1469, October 2014.

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- 2015 - THEODORE S. RAPPAPORT                      “Millimeter Wave Mobile Communications for 5G  
Cellular: It Will Work,” *IEEE Access* Vol. 1, pp. 335–  
349, May 2013.
- AND
- SHU SUN
- AND
- RIMMA MAYZUS
- AND
- HANG ZHAO
- AND
- YANIV AZAR
- AND
- KEVIN WANG
- AND
- GEORGE N. WONG
- AND
- JOCELYN K. SCHULZ
- AND
- MATHEW SAMIMI
- AND
- FELIX GUTIERREZ
- 2014 - DIPANKAR RAYCHAUDHURI                      “Frontiers of Wireless and Mobile Communications,”  
WINLAB, Tech Centre of NJ, North                      Proceedings of the IEEE, Vol. 100, Issue 10, April 2012,  
Brunswick, New Jersey, USA                      pp. 824–840.
- AND
- NARAYAN B. MANDAYAM  
WINLAB, Tech Centre of NJ, North

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Brunswick, New  
Jersey, USA

2013 – STEFANO GALLI

“For the Grid and Through the Grid: The Role of Power Line Communications in the Smart Grid,” *Proceedings of the IEEE*, Vol. 99, No. 6, June 2011, pp. 998–1027.

AND

ANNA SCAGLIONE

AND

ZHIFANG WANG

2012 – KANNAN KRISHNAN

“Biomedical Nanomagnetism: A Spin Through Possibilities in Imaging, Diagnostics and Therapy,” *IEEE Transactions on Magnetics*, Vol. 46, No. 7, July 2010, pp. 2523–2558.

2011 - ANDREAS F. MOLISCH  
Department of Electrical  
Engineering, University of Southern  
California, CA, USA

For their paper entitled “Propagation Issues for Cognitive Radio,” *Proceedings of the IEEE*, Vol. 97, No. 5, May 2009.

AND

LARRY J. GREENSTEIN  
Rutgers University-WINLAB, North  
Brunswick, NJ, USA

AND

MANSOOR SHAFI  
Telecom New Zealand, Wellington,  
New Zealand

2010 – JOHN W. ARTHUR  
School of Engineering and  
Electronics, King’s Buildings,  
Edinburgh, Scotland

For his paper entitled “The Fundamentals of Electromagnetic Theory Revisited,” *IEEE Antennas and Propagation Magazine*, Volume 50, Issue 1, Feb. 2008, pp. 19–45.

2009 – DANIEL J. COSTELLO

For their paper entitled: “Channel Coding: The Road to Channel Capacity,” *Proceedings of the IEEE*, Vol. 95, No. 6, June 2007, pp. 1150–1117.

AND

G. DAVID FORNEY, JR.

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- 2008 - (Co-recipients) YANN FRAUEL  
THOMAS J. NAUGHTON  
OSAMU MATOBA  
ENRIQUE TAJAHUERCE  
BAHRAM JAVIDI
- For their paper entitled, "Three-Dimensional Imaging and Processing Using Computational Holographic Imaging," *Proceedings of the IEEE*, Volume 94, No.3, March 2006.
- 2007 – MICHAEL SHUR  
Dr. Sc., Patricia W. and C. Sheldon  
Roberts Professor, Rensselaer  
Polytechnic Institute, Troy, NY, USA
- For their paper entitled, "Solid-State Lighting: Towards Superior Illumination," *Proceedings of the IEEE*, Volume 93, No. 10, October 2005, pp. 1691–1703.
- AND
- ARTURAS ZUKAUSKAS  
Vilnius University, Vilnius, Lithuania
- 2006 – SUHAS N. DIGGAVI  
Professor, School of Computer and  
Communication Sciences, LICOS,  
Swiss Federal Institute of  
Technology, Lausanne, Switzerland
- "Great Expectations: The Value of Spatial Diversity in Wireless Networks," *Proceedings of the IEEE*, Volume 92, No. 2, February, 2004.
- AND
- NAOFAL AL-DHAHIR  
Associate Professor, University of  
Texas, Dallas, TX, USA
- AND
- A. STAMOULIS  
QUALCOMM, Inc.,  
San Diego, CA, USA
- AND
- A.R. CALDERBANK  
Professor, Electrical Engineering and  
Mathematics, Princeton University,  
Princeton, NJ, USA
- 2005 - OLIVER BRAND  
Associate Professor, School of
- "Microfabrication Techniques for Chemical/Biosensors," *Proceedings of the IEEE*, Volume 91, No. 6, June 2003."

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Electrical and Computer  
Engineering, Georgia Institute of  
Technology, Atlanta, GA, USA

AND

CHRISTOPH HAGLEITNER  
Researcher, IBM, Ruschlikon,  
Switzerland

AND

ANDREAS HIERLEMANN  
Technical Staff member, ETH  
Zurich, Zurich, Switzerland

AND

HENRY BALTES  
Professor of Physical Electronics,  
ETH Zurich, Zurich, Switzerland

2004 – ALAN WILLSKY  
Dept of Electrical Engineering &  
Computer Science Laboratory for  
Information & Decision Systems  
Massachusetts Institute of  
Technology  
Cambridge, MA, USA

“Multiresolution Markov Models for Signal and Image  
Processing,” *Proceedings of the IEEE*, Volume 90, No.  
8, August 2002, pp. 1396–1458.

2003 – SUNIL R. DAS,  
C.V. RAMAMOORTHY,  
MANSOUR H. ASSAF,  
EMIL M. PETRIU,  
WEN-BEN JONE

“Fault Tolerance in Systems Design in VLSI Using Data  
Compression Under Constraints of Failure Probabilities,”  
*IEEE Transactions on Instrumentation and  
Measurement*, Volume 50, Number 6, December 2001,  
pp. 1725–1747.

2002 - TED PAINTER  
Intel Corporation  
Hudson, MA, USA

“Perceptual Coding of Digital Audio,” *Proceedings of the  
IEEE*, Vol. 88, No. 4, April 2000, pp. 451–513.

AND

ANDREAS S. SPANIAS  
Arizona State University  
Tempe, AZ, USA

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2001 - XIN YAO  
University of Birmingham  
Birmingham, United Kingdom

"Evolving Artificial Neural Networks," *Proceedings of the IEEE*, Vol. 87, No. 9 September 1999, pp. 1423–1447.

2000 - EZIO BIGLIERI  
Politecnico di Torino  
Torino, Italy

"Fading Channels: Information-Theoretic and Communications Aspects," *IEEE Transactions on Information Theory*, Vol. 44, No. 6, October 1998, pp. 2619–2692.

AND

JOHN PROAKIS  
Northeastern University  
Boston, MA, USA

AND

SHLOMO SHAMAI  
Rechnion-Israel Institute of  
Technology,  
Haifa, Israel

1999 - RICHARD P. WILDES  
Sarnoff Corporation  
Princeton, NJ, USA

"Iris Recognition: An Emerging Biometric Technology," *Proceedings of the IEEE*, Vol. 85, No. 9, September 1997, pp. 1348–1363.

1998 - FRANCIS T. S. YU  
The Pennsylvania State University  
University Park, PA, USA

"Optical Pattern Recognition: Architectures and Techniques," *Proceedings of the IEEE*, Vol. 84, No. 5, May 1996, pp. 733–752.

AND

DON A. GREGORY  
University of Alabama  
Huntsville, AL, uSA

1997 - ASAD A. ABIDI  
University of California  
Los Angeles, CA, USA

"Low-Power Radio-Frequency IC's for Portable Communications," *Proceedings of the IEEE*, Vol. 83, No 4, April 1995, pp. 544–569.

1996 - ALI H. SAYED  
University of California  
Santa Barbara, CA, USA

"A State-Space Approach to Adaptive RLS Filtering," *IEEE Signal Processing Magazine*, Vol. 11, No. 3, July 1994, pp. 18–60.

AND

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THOMAS KAILATH  
Stanford University  
Stanford, CA, USA

1995 - NIKIL JAYANT

"Signal Compression Based on Models of Human Perception," *Proceedings of the IEEE*, Vol. 81, No. 10, October 1993, pp. 1383–1422.

AND

JAMES D. JOHNSTON

AND

ROBERT J. SAFRANEK  
AT&T Bell Labs.  
Murray Hill, NJ, USA

1994 - ANDREW P. SAGE  
George Mason University  
Fairfax, VA, USA

"Systems Engineering and Information Technology: Catalysts for Total Quality in Industry and Education," *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 22, No. 5, September/October 1992, pp. 833–864.

1993 - PRAVAS R. MAHAPATRA  
Indian Institute of Science  
Bangalore, India

"Sensors and Systems to Enhance Aviation Safety Against Weather Hazards," *Proceedings of the IEEE*, Vol. 79, No. 9, September 1991, pp. 1234–1267.

AND

DUSAN S. ZRNI  
National Severe Storm Laboratory  
Norman, OK, USA

1992 - ANTHONY EPHREMIDES  
University of Maryland  
College Park, MD, USA

"Control and Optimization Methods in Communication Network Problems," *IEEE Transactions on Automatic Control*, Vol. 34, No. 9 September 1989, pp. 93–942.

AND

SERGIO VERDU  
Princeton University  
Princeton, NJ, USA

1991 - TADAO MURATA  
University of Illinois  
Chicago, IL, USA

"Petri Nets: Properties, Analysis and Applications," *Proceedings of the IEEE*, April 1989.

1990 - G. DAVID FORNEY, JR.

"Coset Codes - Part I: Introduction and Geometrical



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- |   |   |
|---|---|
| Codex Corporation<br>Mansfield, MA, USA   | Classification," and CosetCodes - Part II: Binary Lattices and Related Codes," <i>IEEE Transactions on Information Theory</i> , September 1988. |
| 1989 - KARL JOHAN ASTROM<br>Lund University<br>Lund, Sweden                           | "Adaptive Feedback Control," <i>Proceedings of the IEEE</i> , February 1987.  |
| 1988 - RAYMOND L. MURRAY<br>North Carolina State University<br>Raleigh, NC, USA       | "Radioactive Waste Storage and Disposal," <i>Proceedings of the IEEE</i> , April 1986.  |
| 1987 - SHAHID U.H. QURESHI<br>Codex Corporation<br>Mansfield, MA, USA                 | "Adaptive Equalization," <i>Proceedings of the IEEE</i> , September 1985.   |
| 1986 - THOMAS H. JOHNSON<br>U.S. Military Academy<br>West Point, NY, USA              | "Inertial Confinement Fusion: Review and Perspective," <i>Proceedings of the IEEE</i> , May 1984.   |
| 1985 - ARNOLD REISMAN<br>North Carolina State University<br>Raleigh, NC, USA          | "Device, Circuit, and Technology Scaling to Micron and Submicron Dimensions," <i>Proceedings of the IEEE</i> , May 1983.                        |
| 1984 - ROBERT A. SCHOLTZ<br>University of Southern California<br>Los Angeles, CA, USA | "The Origins of Spread-Spectrum Communications," <i>IEEE Transactions on Communications</i> , May 1982.   |
| 1984 - ENDERS A. ROBINSON<br>Cornell University<br>Ithaca, NY, USA                    | "A Historical Perspective of Spectrum Estimation," <i>Proceedings of the IEEE</i> , September 1982.   |
| 1983 - ANIL K. JAIN<br>University of California<br>Davis, CA, USA                     | "Image Data Compression: A Review," <i>Proceedings of the IEEE</i> , March 1981.  |
| 1982 - ARUN N. NETRAVALI<br>Bell Laboratories<br>Holmdel, NJ, USA                     | "Picture Coding: A Review," <i>Proceedings of the IEEE</i> , March 1980.  |

AND

JOHN O. LIMB  
Bell Laboratories  
Murray Hill, NJ, USA

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1981 - WHITFIELD DIFFIE

"Privacy and Authentication: An Introduction to  
Cryptography," *Proceedings of the IEEE*, March 1979.

AND

MARTIN E. HELLMAN  
Stanford University  
Stanford, CA, USA