



2017 IEEE Technical Field Award Recipients and Citations

1. **IEEE BIOMEDICAL ENGINEERING AWARD**—recognizes outstanding contributions to the field of biomedical engineering—sponsored by the *IEEE Circuits and Systems Society* and *IEEE Engineering in Medicine and Biology Society*—to

Recipient

BIN HE (FIEEE)—Distinguished McKnight University Professor, University of Minnesota, Minneapolis, Minnesota, USA

Citation

“For contributions to neuroengineering and neuroimaging.”

2. **IEEE CLEDO BRUNETTI AWARD**—recognizes outstanding contributions to nanotechnology and technologies for microsystem miniaturization—sponsored by the *Brunetti Bequest*—to

Recipient

GUIDO GROESENEKEN (FIEEE)—Professor, KU Leuven, and Fellow, IMEC, Leuven, Belgium

Citation

“For contributions to the characterization and understanding of the reliability physics of advanced MOSFET nanodevices.”

3. **IEEE COMPONENTS, PACKAGING, AND MANUFACTURING TECHNOLOGY AWARD**—recognizes outstanding contributions to advancing components, electronic packaging, or manufacturing technologies—sponsored by the *IEEE Components, Packaging, and Manufacturing Technology Society*—to

Co-Recipients

PAUL S. HO (FIEEE)—Professor, The University of Texas at Austin, Austin, Texas, USA

AND

KING-NING TU (non-member)—Distinguished Professor, Department of Material Science & Engineering, University of California at Los Angeles, Los Angeles, California, USA

Citation

"For contributions to the materials science of packaging and its impact on reliability, specifically in the science of electromigration."

4. **IEEE CONTROL SYSTEMS AWARD**—recognizes outstanding contributions to control systems engineering, science, or technology—sponsored by the *IEEE Control Systems Society*—to

Recipient

RICHARD M. MURRAY (FIEEE)—Professor, Caltech, Pasadena, California, USA

Citation

"For contributions to the theory and applications of nonlinear and networked control systems."

5. **IEEE ELECTROMAGNETICS AWARD**—recognizes outstanding contributions to the theory and/or application of electromagnetics—sponsored by the *IEEE Antennas and Propagation Society, IEEE Electromagnetic Compatibility Society, IEEE Geoscience and Remote Sensing Society, and IEEE Microwave Theory and Techniques Society*—to

Recipient

WENG CHO CHEW (FIEEE)—Professor, University of Illinois, Urbana-Champaign (UIUC), Urbana, Illinois, USA

Citation

"For contributions to electromagnetic solutions of complex multiphysics problems and inverse scattering methods."

6. **IEEE JAMES L. FLANAGAN SPEECH AND AUDIO PROCESSING AWARD**—recognizes outstanding contribution to the advancement of speech and/or audio signal processing—sponsored by the *IEEE Signal Processing Society*—to

Recipient

MARK YOFFE LIBERMAN (non-member)—Professor, University of Pennsylvania, Philadelphia, Pennsylvania, USA

Citation

"For pioneering contributions to and continued leadership in robust, replicable, and data-driven speech and language science and engineering."

7. **IEEE FOURIER AWARD FOR SIGNAL PROCESSING**—recognizes an outstanding contribution to the advancement of signal processing, other than in the areas of speech and audio processing—sponsored by the *IEEE Circuits and Systems Society* and the *IEEE Signal Processing Society*—to

Recipient

RUSSELL MERSEREAU (FIEEE)—Regents' Professor Emeritus, School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, Georgia, USA

Citation

"For sustained technical contributions to multidimensional digital signal processing."

8. **IEEE ANDREW S. GROVE AWARD**—recognizes outstanding contributions to solid-state devices and technology—sponsored by the *IEEE Electron Devices Society*—to

Recipient

SORIN CRISTOLOVEANU (FIEEE)—Director of Research CNRS, IMEP-LAHC, Grenoble, France

Citation

"For contributions to silicon-on-insulator technology and thin body devices."

9. **IEEE HERMAN HALPERIN ELECTRIC TRANSMISSION AND DISTRIBUTION AWARD**—recognizes outstanding contributions to electric transmission and distribution—sponsored by the *Robert and Ruth Halperin Foundation, in memory of Herman and Edna Halperin*, and the *IEEE Power & Energy Society*—to

Recipient

GEORGE D. ROCKEFELLER (LFIEEE)—Engineer (Retired), Consolidated Edison Company of New York, New York, USA

Citation

"For pioneering development and practical demonstration of protective relaying of electric power systems with real-time digital computer techniques."

10. **IEEE MASARU IBUKA CONSUMER ELECTRONICS AWARD**—recognizes outstanding contributions in the field of consumer electronics technology—sponsored by *Sony Corporation*—to

Co-recipients

JOHN O' SULLIVAN (SMIEEE)—Electrical Engineer (Retired), Taggle Systems, Everleigh, Australia

AND

DAVID SKELLERN (LFIEEE)—Chairman, CMCRC Ltd,, Sydney, Australia

AND

TERENCE PERCIVAL (non-member)—Director (Retired), Broadband and the Digital Economy, NICTA, Northbridge, Australia

Citation

“For pioneering contributions to high-speed wireless LAN technology.”

11. [**IEEE INTERNET AWARD**](#)—recognizes exceptional contributions to the advancement of Internet technology for network architecture, mobility, and/or end-use applications—sponsored by *Nokia Corporation*—to

Recipient

DEBORAH ESTRIN (FIEEE)—Professor, Department of Computer Science, Cornell Tech, New York, New York, USA

Citation

“For formative contributions and thought leadership in Internet routing and in mobile sensing techniques and applications, from environmental monitoring to personal and community health.”

12. [**IEEE RICHARD HAROLD KAUFMANN AWARD**](#)—recognizes outstanding contributions in industrial systems engineering—sponsored by the *IEEE Industry Applications Society*—to

Recipient

ERLING HESLA (LSMIEEE)—Owner, Hesla & Associates, Camano Island, Washington, USA

Citation

“For leadership in establishing the fundamentals for the protection and safe operation of industrial power systems.”

13. [**IEEE JOSEPH F. KEITHLEY AWARD IN INSTRUMENTATION AND MEASUREMENT**](#)—recognizes outstanding contributions in electrical measurements—sponsored by *Keithley Instruments, a Tektronix company* and the *IEEE Instrumentation and Measurement Society*—to

Recipient

JEROME BLAIR (FIEEE)—Chief Scientist, Keystone International, Inc., Albuquerque, New Mexico, USA

Citation

“For contributions to test procedures for analog-to-digital and digital-to-analog converters and to enhanced-accuracy gamma-ray spectrometry.”

14. [**IEEE GUSTAV ROBERT KIRCHHOFF AWARD**](#)—recognizes an outstanding contribution to the fundamentals of any aspect of electronic circuits and systems that has a long-term significance or impact—sponsored by the *IEEE Circuits and Systems Society*—to

Recipient

MARCEL J.M. PELGROM (MIEEE)—Consultant (Retired), Pelgrom Consult, Helmond, The Netherlands

Citation

“For seminal contributions to systematic analysis of random offsets in semiconductor devices and their impact on circuits.”

15. [**IEEE LEON K. KIRCHMAYER GRADUATE TEACHING AWARD**](#)—recognizes inspirational teaching of graduate students in the IEEE fields of interest—sponsored by the *Leon K. Kirchmayer Memorial Fund*—to

Recipient

C.-C. JAY KUO (FIEEE)—Professor, University of Southern California, Los Angeles, California, USA

Citation

“For inspirational guidance of graduate students and curriculum development in the area of multimedia signal processing.”

16. [**IEEE KOJI KOBAYASHI COMPUTERS AND COMMUNICATIONS AWARD**](#)—recognizes outstanding contributions to the integration of computers and communications—sponsored by *NEC Corporation*—to

Recipient

KANNAN RAMCHANDRAN (FIEEE)—Professor, University of California, Berkeley, Berkeley, California, USA

Citation

“For pioneering contributions to the theory and practice of distributed source and storage coding.”

17. [**IEEE WILLIAM E. NEWELL POWER ELECTRONICS AWARD**](#)—recognizes outstanding contributions to power electronics—sponsored by the *IEEE Power Electronics Society*—to

Recipient

SEUNG-KI SUL (FIEEE)—Professor, Department of Electrical and Computer Engineering, Seoul National University, Seoul, Korea

Citation

“For contributions to the sensorless control of rotating field electrical machines.”

18. [**IEEE DANIEL E. NOBLE AWARD FOR EMERGING TECHNOLOGIES**](#)—recognizes outstanding contributions to emerging technologies recognized within recent years—sponsored by *Motorola Solutions Foundation*—to

Recipient

MIGUEL A. L. NICOLELIS (MIEEE)—Professor, Department of Neurobiology, Duke University, Durham, North Carolina, USA

Citation

“For seminal contributions to brain-machine interfaces.”

19. [**IEEE DONALD O. PEDERSON AWARD IN SOLID-STATE CIRCUITS**](#)—recognizes outstanding contributions to solid-state circuits—sponsored by the *IEEE Solid-State Circuits Society*—to

Co-Recipients

TAKAO NISHITANI (FIEEE)—Principal, LAISIP, Kanagawa, Japan

AND

JOHN S. THOMPSON (LMIEEE)—Consultant and President (Retired), Technology Pathways, Tucson, Arizona, USA

Citation

“For pioneering real-time programmable digital signal processor architectures.”

20. [**IEEE FREDERIK PHILIPS AWARD**](#)—recognizes outstanding accomplishments in the management of research and development resulting in effective innovation in the electrical and electronics industry—sponsored by *Philips Electronics N.V.*—to

Recipient

GARY L. PATTON (FIEEE)—CTO & Senior VP of Worldwide R&D, GLOBALFOUNDRIES, Malta, New York, USA

Citation

“For industry influence and leadership in the development of leading-edge microelectronics technology and collaborative research.”

21. [**IEEE PHOTONICS AWARD**](#)—recognizes outstanding achievements in photonics—sponsored by the *IEEE Photonics Society*—to

Recipient

JOHN E. BOWERS (FIEEE)—Director, Institute of Energy Efficiency, University of Santa Barbara, California, USA

Citation

“For pioneering research in silicon photonics, including hybrid silicon lasers, photonic integrated circuits, and ultra-low-loss waveguides.”

22. **IEEE ROBOTICS AND AUTOMATION AWARD**—recognizes outstanding contributions in the field of robotics and automation—sponsored by the *IEEE Robotics and Automation Society*—to

Recipient

OUSSAMA KHATIB (FIEEE)—Professor, Department of Computer Science, Stanford University, California, USA

Citation

“For contributions to the development of robot control and human-centered and humanoid robotics, and leadership in the robotics community.”

23. **IEEE FRANK ROSENBLATT AWARD**—recognizes outstanding contributions to biologically and linguistically motivated computational paradigms and systems—sponsored by the *IEEE Computational Intelligence Society*—to

Recipient

STEPHEN GROSSBERG (FIEEE)—Wang Professor of Cognitive and Neural Systems, Boston University, Boston, Massachusetts, USA

Citation

“For contributions to understanding brain cognition and behavior and their emulation by technology.”

24. **IEEE MARIE SKLODOWSKA-CURIE AWARD**—recognizes outstanding contributions to the field of nuclear and plasma sciences and engineering—sponsored by the *IEEE Nuclear and Plasma Sciences Society*—to

Recipient

CHANDRASHEKHAR JOSHI (FIEEE)— Professor, University of California, Los Angeles, Los Angeles, California, USA

Citation

“For groundbreaking contributions to and leadership in the field of plasma particle accelerators.”

25. **[IEEE INNOVATION IN SOCIETAL INFRASTRUCTURE AWARD](#)**—recognizes significant technological achievements and contributions to the establishment, development, and proliferation of innovative societal infrastructure systems through the application of information technology with an emphasis on distributed computing systems—sponsored by *Hitachi, Ltd.* and the *IEEE Computer Society*—to

Recipient

ANTONELLO MONTI (SMIEEE)—Professor, Institute Director, E. ON ERC RWTH Aachen University, Aachen, Germany

Citation

“For accelerating innovation of energy, information, and communication technologies for the urban environment.”

26. **[IEEE CHARLES PROTEUS STEINMETZ AWARD](#)**—recognizes exceptional contributions to the development and/or advancement of standards in electrical and electronics engineering—sponsored by the *IEEE Standards Association*—to

Recipient*

DAVID JOHN LAW (SMIEEE)—Distinguished Technologist, Hewlett Packard Enterprise, Oban, Argyll, Scotland

Citation

“For leadership of and contributions to the development of IEEE Standards with global impact, particularly 802.3 Ethernet Standards.”

27. **[IEEE ERIC E. SUMNER AWARD](#)**—recognizes outstanding contributions to communications technology—sponsored by *Nokia Bell Labs*—to

Recipient

WILLIAM C. LINDSEY (LFIEEE)—Professor, University of Southern California, Los Angeles, California, USA

Citation

“For contributions to synchronization and digital communication technologies.”

28. **[IEEE NIKOLA TESLA AWARD](#)**—recognizes outstanding contributions to the generation and utilization of electric power—sponsored by *Wolong Electric Group Co., Ltd.*, the *IEEE Industry Applications Society*, and the *IEEE Power & Energy Society*—to

Recipient

ADEL RAZEK (LFIEEE)—Senior Research Director (Emeritus) and Professor (Honorary), The National Center for Scientific Research and Centralesupelec, Gif Sur Yvette, France

Citation

“For contributions to coupled multiphysics modeling and design of electromagnetic systems.”

29. **IEEE KIYO TOMIYASU AWARD**—recognizes outstanding early to mid-career contributions to technologies holding the promise of innovative applications—sponsored by *Dr. Kiyo Tomiyasu, the IEEE Geoscience and Remote Sensing Society, and the IEEE Microwave Theory and Techniques Society*—to

Recipient

EMILIO FRAZZOLI (SMIEEE)—Professor, Massachusetts Institute of Technology, Cambridge Massachusetts, USA

Citation

“For contributions to planning, control, and fleet operation algorithms for autonomous vehicles.”

30. **IEEE TRANSPORTATION TECHNOLOGIES AWARD**—recognizes advances in technologies within the fields of interest to the IEEE as applied in transportation systems—sponsored by the *IEEE Industry Applications Society, IEEE Industrial Electronics Society, IEEE Intelligent Transportation Systems Society, IEEE Microwave Theory and Techniques Society, IEEE Power Electronics Society, IEEE Power & Energy Society, and IEEE Vehicular Technology Society*—to

Recipient

CLAIRE J. TOMLIN (FIEEE)— Charles A. Desoer Professor of EECS, University of California, Berkeley, Berkeley, California, USA

Citation

“For contributions to air transportation systems, focusing on collision avoidance protocol design and avionics safety verification.”

31. **IEEE UNDERGRADUATE TEACHING AWARD**—recognizes inspirational teaching of undergraduate students in the fields of interest of the IEEE—sponsored by the *IEEE Education Society*—to

Recipient

BONNIE H. FERRI (SIEEE)—Professor, Georgia Institute of Technology, Atlanta, Georgia, USA

Citation

“For pioneering mobile hands-on learning and flipped classroom techniques for undergraduate engineering education.”

32. **2016 IEEE ERIC HERZ OUTSTANDING STAFF MEMBER AWARD**—recognizes a present or past full-time staff member of the IEEE with at least ten years of service—sponsored by *IEEE*—to

Recipient

KAREN A. GALUCHIE (non-member)—Executive Director, IEEE Foundation, Piscataway, New Jersey, USA

Citation

“For exceptional staff leadership and for support and service to IEEE volunteers in achieving the philanthropic objectives of the IEEE and the IEEE Foundation.”