

2012 IEEE MEDALS & AWARDS CITATIONS & SCOPES LIST

1. **IEEE MEDAL OF HONOR**, for an exceptional contribution or an extraordinary career in the IEEE fields of interest, sponsored by the *IEEE Foundation*, to **JOHN L. HENNESSY** (FIEEE) – President, Stanford University, Stanford, CA, USA

“For pioneering the RISC processor architecture and for leadership in computer engineering and higher education.”

2. **IEEE ALEXANDER GRAHAM BELL MEDAL**, for exceptional contributions to the advancement of communications sciences and engineering, sponsored by *Alcatel-Lucent Bell Labs*, to **LEONARD KLEINROCK** (LFIEEE) – 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.”

3. **IEEE EDISON MEDAL**, for a career of meritorious achievement in electrical science, electrical engineering or the electrical arts, sponsored by *Samsung Electronics Co., Ltd.*, to **MICHAEL F. TOMPSETT** (FIEEE) – President, TheraManager LLC., Murray Hill, NJ, USA

“For pioneering contributions to imaging devices, including CCD imagers, cameras, and thermal imagers.”

4. **IEEE JAMES H. MULLIGAN, JR. EDUCATION MEDAL**, for a career of outstanding contributions to education in the fields of interest of IEEE, sponsored by *Mathworks, Pearson Education, Inc., National Instruments Foundation* and the *IEEE Life Members Committee*, to **FAWWAZ T. ULABY** (LFIEEE) – Chen-To Tai Professor of EECS, University of Michigan, Ann Arbor, MI, USA

“For contributions to undergraduate and graduate engineering education through innovative textbooks, dedicated mentoring of students, and inspirational teaching.”

5. **IEEE FOUNDERS MEDAL**, for outstanding contributions in the leadership, planning, and administration of affairs of great value to the electrical and electronics engineering profession, sponsored by the *IEEE Foundation*, to **FAQIR CHAND KOHLI** (LFIEEE) – Former Director, Deputy Chairman, Tata Consultancy Services, Mumbai, India

“For early vision and pioneering contributions to the development of the IT industry in India.”

6. **IEEE RICHARD W. HAMMING MEDAL**, for exceptional contributions to information sciences, systems, and technology, sponsored by *QUALCOMM, Inc.*, to two co-recipients:

MICHAEL G. LUBY (FIEEE) – Chief Technical Officer, Digital Fountain, Inc., Fremont, CA, USA

AMIN SHOKROLLAHI (FIEEE) – Professor of Math and Computer Science, EPFL, and Chief Scientist, Digital Fountain, Inc., Lausanne, Switzerland

“For the conception, development, and analysis of practical rateless codes.”

7. **IEEE MEDAL FOR INNOVATIONS IN HEALTHCARE TECHNOLOGY**, for outstanding contributions and/or innovations in engineering within the fields of medicine, biology, and healthcare technology, sponsored by the *IEEE Engineering in Medicine and Biology Society*, to **SAVIO L-Y. WOO** (Non-Member) - Professor of Bioengineering and the Founder and Director of the Musculoskeletal Research Center (MSRC), Swanson School of Engineering at the University of Pittsburgh, Pittsburgh, PA, USA

“For pivotal contributions to biomechanics and its application to orthopedic surgery and sports medicine.”

8. **IEEE JACK S. KILBY SIGNAL PROCESSING MEDAL**, for outstanding achievements in signal processing, sponsored by *Texas Instruments, Inc.*, to **G. CLIFFORD CARTER** (FIEEE) – U.S. Navy’s Senior Technologist (ST) for Acoustic Signal Processing, Naval Undersea Warfare Center (NUWC) Division Newport, Newport, RI, USA

“For contributions to the fundamentals of coherence and time-delay estimation and to underwater acoustics signal processing.”

9. **IEEE JUN-ICHI NISHIZAWA MEDAL**, for outstanding contributions to material and device science and technology, including practical application, sponsored by *The Federation of Electric Power Companies, Japan*, to three co-recipients:

MARK T. BOHR (FIEEE) – Intel Senior Fellow and Director of Process Architecture and Integration, Intel Corp., Hillsboro, OR, USA

ROBERT S. CHAU (FIEEE) – Intel Senior Fellow and Director of Transistor Research and Nanotechnology, Intel Corp., Hillsboro, OR, USA

TAHIR GHANI (FIEEE) – Intel Fellow and Director of Transistor Research and Integration, Intel Corp., Hillsboro, OR, USA

“For sustained leadership in developing innovative transistor technologies for advanced logic products.”

10. **IEEE ROBERT N. NOYCE MEDAL**, for exceptional contributions to the microelectronics industry, sponsored by *Intel Foundation*, to **YOON-WOO LEE** (Non-member) – Chairman, Samsung Electronics Co., Seoul, Korea

“For pioneering the development of the memory chip and LCD industries in Korea.”

11. **IEEE DENNIS J. PICARD MEDAL FOR RADAR TECHNOLOGIES AND APPLICATIONS**, for outstanding accomplishments in advancing the fields of radar technologies and their applications, sponsored by *Raytheon Company*, to **KARL GERLACH** (FIEEE) – (retired) Head, Advanced Signal Processing Section, Radar Division, US Naval Research Laboratory, Chesapeake Beach, MD, USA

“For contributions to radar signal processing, clutter modeling, and electronic protection.”

12. **IEEE MEDAL IN POWER ENGINEERING**, for outstanding contributions to the technology associated with the generation, transmission, distribution, application, and utilization of electric power for the betterment of society, sponsored by the *IEEE Industry Applications, Industrial Electronics, Power Electronics and Power & Energy Societies*, to **EDMUND O. SCHWEITZER, III** (FIEEE) – President and CEO, Schweitzer Engineering Laboratories, Inc., Pullman, WA, USA

"For leadership in revolutionizing the performance of electrical power systems with computer-based protection and control equipment."

13. **IEEE SIMON RAMO MEDAL**, for exceptional achievement in systems engineering and systems science, sponsored by *Northrop Grumman Corporation*, to **WILLIAM “RED” WHITTAKER** (MIEEE) – Fredkin University Professor, Carnegie Mellon University, Pittsburgh, PA, USA

“For pioneering contributions to mobile autonomous robotics, field applications of robotics, and systems engineering.”

14. **IEEE JOHN VON NEUMANN MEDAL**, for outstanding achievements in computer-related science and technology, sponsored by *IBM Corporation*, to **EDWARD McCLUSKEY** (LFIEEE) – Professor Emeritus, Departments of Electrical Engineering and Computer Science, Stanford University, Stanford, CA, USA

“For fundamental contributions that shaped the design and testing of digital systems.”

15. **IEEE/RSE WOLFSON JAMES CLERK MAXWELL AWARD**, for groundbreaking contributions that have had an exceptional impact on the development of electronics and electrical engineering or related fields, funded by *Wolfson Microelectronics plc.*, to **GERHARD SESSLER** (LFIEEE) – Professor, Darmstadt University of Technology, Darmstadt, Germany

“For pioneering contributions to electroacoustic transducers, the development of silicon microphone technology, and seminal work on electroactive materials.”

16. **IEEE MEDAL FOR ENVIRONMENTAL AND SAFETY TECHNOLOGIES**, for outstanding accomplishments in the application of technology in the fields of interest to IEEE that improve the environment and/or public safety, sponsored by *Toyota Motor Corporation*, to three co-recipients:

JOHN BANNISTER GOODENOUGH (Non-member) – Virginia H. Cockrell Centennial Professor of Engineering, The University of Texas at Austin, Austin, TX, USA

RACHID YAZAMI (Non-member) – Professor of Materials Science and Engineering, Nanyang Technological University (NTU), Singapore

AKIRA YOSHINO (Non-member) – Fellow, Asahi Kasei Corporation, Fuji-shi, Shizuoka, Japan

“For developing the lithium-ion battery, which enables significant fuel conservation and reduced emissions as power storage for electric vehicles and for smartgrids incorporating renewables.”

17. **IEEE HONORARY MEMBERSHIP**, elected by the Board of Directors from among those individuals, not members of IEEE, who have rendered meritorious service to humanity in IEEE’s designated fields of interest, sponsored by *IEEE*, to **YOSHIO UTSUMI** – President, Japan Telecommunications Engineering and Consulting Service (JTEC) and Advisor, Toyota InfoTechnology Center Co., Ltd., Tokyo, Japan

“For leadership in policy and initiatives leading to the growth of information and communication technologies.”

18. **IEEE RICHARD M. EMBERSON AWARD**, for distinguished service to the development, viability, advancement, and pursuit of the technical objectives of the IEEE, sponsored by the *IEEE Technical Activities Board*, to **BRUCE EISENSTEIN** (FIEEE) - Drexel University, Interim Dean of Engineering Arthur J. Rowland Professor of Electrical and Computer Engineering, Drexel University, Philadelphia, PA, USA

"For leadership in effectively improving the operation, structure, and finances of the Technical Activities Board and for contributions to IEEE."

19. **IEEE HARADEN PRATT AWARD**, for outstanding service to IEEE, sponsored by the *IEEE Foundation*, to **HUGH RUDNICK** (FIEEE) – Professor, Electrical Engineer, Pontificia Universidad Catolica de Chile, Santiago, Chile

"For leadership in making IEEE a truly global organization."

20. **IEEE CORPORATE INNOVATION RECOGNITION**, for outstanding and exemplary contributions by an industrial entity, governmental or academic organization, or other corporate body, which have resulted in major advancement electrotechnology, sponsored by *IEEE*, to **SANYO Electric Co., Ltd.**, Moriguchi-City, Osaka, Japan

"For developing and commercializing high-performance heterojunction solar cell technology (HIT)."

21. **IEEE ERNST WEBER ENGINEERING LEADERSHIP RECOGNITION**, for exceptional managerial leadership in the fields of interest of the IEEE, sponsored by *IEEE*, to **TETSUYA IIZUKA** (SMIEEE) - Founder & CEO, THine Electronics, Inc., Tokyo, Japan

"For pioneering *de facto* standard video chips for moving images and nurturing entrepreneurship in Japan."

22. **Prize Paper Recognitions**

2012 IEEE Donald G. Fink Prize Paper Award:

Kannan Krishnan

For the paper entitled "Biomedical Nanomagnetism: A Spin Through Possibilities in Imaging, Diagnostics and Therapy", *IEEE Transactions on Magnetics*, Vol. 46, No. 7, July 2010, pp. 2523-2558.

2012 IEEE W. R. G. Baker Prize Award (Co-recipients):

Gerhard Krieger, Alberto Moreira, Hauke Fiedler, Irena Hajnsek, Marian Werner, Marwan Younis, and Manfred Zink

For their paper entitled "TanDEM-X: A Satellite Formation for High-Resolution SAR Interferometry", *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 45, Issue 11, Part 1, November 2007, pp. 3317–3341.