

**IEEE EDISON MEDAL**  
**RECIPIENTS**

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| 2020 | FREDE BLAABJERG<br>Professor, Department of<br>Energy Technology, Aalborg<br>University, Aalborg, Denmark  | "For contributions to and leadership in power electronics, developing a sustainable society."   |
| 2019 | URSULA KELLER<br>Director of NCCR MUST (Swiss<br>National Centre of<br>Competence for Research in<br>Molecular Ultrafast Science<br>and Technology)—ETH Zurich,<br>Zurich, Switzerland | "For pioneering and fundamental contributions to and leadership in useable, compact ultrafast laser technology, enabling applications in metrology, sensing, and biophotonics." |
| 2018 | ELI YABLONOVITCH<br>Professor, Electrical<br>Engineering & Computer<br>Sciences Department,<br>University of California,<br>Berkeley, USA  | "For leadership, innovations, and entrepreneurial achievements in photonics, semi-conductor lasers, antennas, and solar-cells."   |
| 2017 | MAGNUS GEORGE CRAFORD<br>Solid State Lighting Fellow,<br>Philips Lumileds Lighting<br>Company, San Jose, CA, USA   | "For a lifetime of pioneering contributions to the development and commercialization of visible LED materials and devices."   |
| 2016 | ROBERT W. BRODERSON<br>Professor Emeritus, University<br>of California, Berkeley,<br>Berkeley, CA, USA   | "For contributions to integrated systems for wired and wireless communications, including wireless connectivity of personal devices."   |
| 2015 | JAMES JULIUS SPILKER, JR.<br>Executive Chairman, AOSense<br>Inc., Half Moon Bay,<br>California, USA  | "For contributions to the technology and implementation of civilian GPS navigation systems."  |
| 2014 | RALPH H. BAER<br>Owner, R.H. Baer<br>Consultants, Manchester, New<br>Hampshire, USA  | "For pioneering and fundamental contributions to the video-game and interactive multimedia-content industries."   |
| 2013 | IVAN PAUL KAMINOW<br>Adjunct Professor, Electrical<br>Engineering and Computer<br>Science Department,<br>University of California<br>Berkeley, Berkeley, CA, USA                       | "For pioneering, life-long contributions to and leadership in photonic devices and networks instrumental to global high-capacity optical networks."                             |
| 2012 | MICHAEL F. TOMPSETT  | "For pioneering contributions to imaging  |

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|      | President, TheraManager LLC., Murray Hill, NJ, USA   | devices, including CCD imagers, cameras, and thermal imagers."  |
| 2011 | ISAMU AKASAKI<br>Professor, Meijo University,<br>High Tech Research Center,<br>Nagoya, Japan   | "For seminal and pioneering contributions to the development of nitride-based semiconductor materials and optoelectronic devices, including visible wave length LEDs and lasers." |
| 2010 | RAY DOLBY<br>Member of the Board, Dolby Laboratories, Inc., San Francisco, CA, USA   | "For leadership and pioneering applications in audio recording and playback equipment for both professional and consumer electronics."  |
| 2009 | TINGYE LI<br>Retired, Division Manager, Communications Infrastructure Research Laboratory, AT&T Labs, Holmdel, NJ, USA   | "For leadership, vision, and pioneering contributions in the field of broadband optical fiber communications."  |
| 2008 | DOV FROHMAN-BENTCHKOWSKY<br>Retired, Vice President and General Manager, Intel Israel, Jerusalem, Israel   | "For pioneering the development of the MOS Erasable, Programmable Read Only Memory (EPROM), a key enabler of the information age revolution."                                     |
| 2007 | RUSSELL D. DUPUIS<br>Professor and Steve W. Chaddick Endowed Chair in Electro-Optics, Georgia Institute of Technology, Atlanta, GA, USA                        | "For pioneering contributions to metalorganic chemical vapor deposition technology and continuous-wave room-temperature quantum-well lasers."                                     |
| 2006 | FAWWAZ T. ULABY<br>Vice President for Research & Williams Professor of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, MI, USA | "For pioneering research in microwave and radar remote sensing technology and their environmental and industrial applications."   |
| 2005 | PETER LAWRENSEN<br>Private Consultant, Yorks, England  | "For outstanding contributions to the field of electrical machines, most notably the development and commercialization of switched reluctance drives."                            |
| 2004 | FEDERICO CAPASSO<br>VP of Physical Research  | "For a career of highly creative and influential contributions to heterostructure devices and   |

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|      | Bell Labs/Lucent Tech.,<br>Murray Hill, NJ, USA  | materials."  |
| 2003 | NOT AWARDED  |  |
| 2002 | ED HAMMER<br>General Electric Company<br>Cleveland, OH, USA                                    | "For contributions to design methods for energy efficient fluorescent lighting systems and development of lighting products."  |
| 2001 | ROBERT H. DENNARD<br>IBM Thomas J. Watson<br>Research Ctr<br>Yorktown Heights, NY, USA         | "For the invention of the 1-transistor DRAM cell, and contributions to the development of MOSFET device scaling principles."   |
| 2000 | JUN-ICHI NISHIZAWA<br>Tohoku University, Sendai,<br>Japan                                      | "For contributions to materials science and technology, and the invention of the static induction transistor."   |
| 1999 | KEES A. SCHOUHAMER<br>IMMINK<br>University of Essen<br>Essen, Germany                          | "For a career of creative contributions to the technologies of digital video, audio, and data recording."  |
| 1998 | ROLF LANDAUER<br>IBM Corporation<br>T.J. Watson Research Center<br>Yorktown Heights, NY, USA   | "For pioneering contributions to the physics of computing and conduction"  |
| 1997 | ESTHER M. CONWELL<br>Research Fellow<br>Xerox Corporation, Webster,<br>NY, USA                 | "For fundamental contributions to transport theory in semiconductor and organic conductors, and their application to the semiconductor, electronic copying and printing industries." |
| 1996 | FLOYD DUNN<br>Professor Emeritus<br>Dept. of ECE<br>University of Illinois, Urbana,<br>IL, USA | "For creative contributions to the fundamental knowledge of ultrasonic propagation in and interactions with biological media."   |
| 1995 | ROBERT W. LUCKY<br>Bellcore, Red Bank, NJ, USA   | "For an extraordinary career in telecommunications providing visionary technical leadership, support of his profession, and compelling public advocacy of technology."               |
| 1994 | LESLIE A. GEDDES<br>Purdue University<br>West Lafayette, IN, USA                               | "For fundamental contributions to applied biomedical instrumentation and the understanding of the electrical properties of   |

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|      |  | the cardiovascular system."  |
| 1993 | JAMES H. POMERENE<br>IBM Corp.<br>Yorktown Heights, NY, USA        | "For outstanding contributions to the development of computer architecture, including pipelining, reliable main memory and memory hierarchies."                      |
| 1992 | G DAVID FORNEY, JR.<br>Codex Corp., Mansfield, MA,<br>USA          | "For original contributions to coding, modulation, data communication modems, and for industrial and research leadership in communications technology."              |
| 1991 | JOHN LOUIS MOLL<br>Hewlett Packard Labs.<br>Palo Alto, CA, USA     | "For pioneering contributions to diffused and oxide-masked silicon devices, transistor analysis, the p-n-p-n switch, and optoelectronics."                           |
| 1990 | ARCHIE W. STRAITON<br>Univ. of Texas, Austin, TX                   | "For an outstanding career in electrical engineering with significant contributions in the fields of radio propagation and astronomy, and in engineering education." |
| 1989 | NICK HOLONYAK, JR.<br>Univ. of Illinois, Urbana, IL                | "For an outstanding career in the field of electrical engineering with contributions to major advances in the field of semiconductor materials and devices."         |
| 1988 | JAMES ROSS MACDONALD<br>Univ. of North Carolina<br>Chapel Hill, NC | "For seminal contributions to solid state science and technology, and outstanding leadership as a research director."  |
| 1987 | ROBERT A. HENLE<br>IBM Corp., Yorktown Heights,<br>NY              | "For sustained leadership in, and individual contributions to, the science and technology of semiconductor circuits for computing systems."                          |
| 1986 | JAMES L. FLANAGAN<br>AT&T Bell Labs., Murray Hill,<br>NJ           | "For a career of innovation and leadership in speech communication science and technology."  |
| 1985 | JOHN D. KRAUS<br>Ohio State Univ., Columbus,<br>OH                 | "For a sustained career as an innovator, discoverer, and educator in the fields of antennas and radio astronomy."  |
| 1984 | EUGENE I. GORDON<br>Bell Labs., Murray Hill, NJ                    | "For a singular career of invention, development, and leadership in electron devices."   |
| 1983 | HERMAN PAUL SCHWAN   | "For a career of creative endeavor by which  |

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|      | Univ. of Pennsylvania<br>Philadelphia, PA                | engineering, physics, biology, and medicine have been amalgamated into a coherent field of electromagnetic bioengineering."   |
| 1982 | NATHAN COHN<br>Leeds & Northrup Co.<br>North Wales, PA   | "For a career of creative contributions and leadership in the instrument, control and process computer industry, in the control and economic dispatch of power in large interconnected electrical systems."                 |
| 1981 | C. CHAPIN CUTLER<br>Stanford University, Stanford,<br>CA | "For his creative contributions to microwave electronics, space communications, and technology of communication systems."   |
| 1980 | ROBERT ADLER<br>Extel Co., Northbrook, IL                | "For many inventions in the fields of electronic beam tubes and ultrasonic devices, and for leadership in innovative research and development."   |
| 1979 | ALBERT ROSE<br>RCA Labs., Princeton, NJ                  | "For basic inventions in television camera tubes and fundamental contributions to the understanding of photoconductivity, insulators, and human and electronic vision."   |
| 1978 | DANIEL E. NOBLE<br>Motorola, Inc., Phoenix, AZ           | "For leadership and innovation in meeting important public needs, especially in developing mobile communications and solid state electronics."  |
| 1977 | HENRI BUSIGNIES<br>ITT Corp., Nutley, NJ                 | "For technical contributions and leadership in the field of radar, radio communication and radio navigation."   |
| 1976 | MURRAY JOSLIN<br>Consolidated Edison<br>Oak Park, IL     | "For his leadership in overcoming technical and financial obstacles to nuclear power generation and for managerial guidance and foresight in the planning, building and operating the early Dresden Nuclear Power Station." |
| 1975 | SIDNEY DARLINGTON<br>Bell Labs., North Andover, MA       | "For basic contributions to network theory and for important inventions in radar systems and electronic circuits."  |
| 1974 | JAN A. RAJCHMAN<br>RCA Labs., Princeton, NJ              | "For a creative career in the development of electronic devices and for pioneering work in computer memory systems."  |
| 1973 | B. D. H. TELLEGEN  | "For a creative career of significant   |

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|      | Philips Research Labs.<br>Eindhoven, Netherlands                              | achievement in electrical circuit theory,<br>including the gyrator."  |
| 1972 | WILLIAM H. PICKERING<br>California Institute of<br>Technology<br>Pasadena, CA | "For contributions to telecommunications,<br>rocket guidance and spacecraft control, and for<br>inspiring leadership in unmanned exploration of<br>the solar system."   |
| 1971 | JOHN W. SIMPSON<br>Westinghouse Electric Corp.<br>Pittsburgh, PA              | "For sustained contributions to society through<br>the development and engineering design of<br>nuclear power systems."   |
| 1970 | HOWARD H. AIKEN<br>Aiken Enterprises<br>Ft. Lauderdale, FL                    | "For a meritorious career of pioneering<br>contributions to the development and<br>application of large-scale digital computers and<br>important contributions to education in the<br>digital computer field."  |
| 1969 | HENDRIK W. BODE<br>Harvard Univ.<br>Cambridge, MA                             | "For fundamental contributions to the arts of<br>communication, computation, and control; for<br>leadership in bringing mathematical science to<br>bear on engineering problems; and for<br>guidance and creative counsel in systems<br>engineering." |
| 1968 | CHARLES F. AVILA<br>Boston Edison Co.<br>Boston, MA                           | "For his early contribution to underground<br>transmission, for his continuing guidance in the<br>field of electrical research and for his positive<br>leadership in the development of the electrical<br>utility industry."                          |
| 1967 | GEORGE H. BRORCA Labs.<br>Princeton, NJ                                       | "For a meritorious career distinguished by<br>significant engineering contributions to antenna<br>development, electromagnetic propagation, the<br>broadcast industry, the art of radio frequency<br>heating, and color television."                  |
| 1966 | WILMER L. BARROW<br>Sperry Gyroscope Co.<br>Great Neck, NY                    | "For a career of meritorious achievement<br>innovating, teaching and developing means for<br>transmission of electromagnetic energy at<br>microwave frequencies."   |
| 1965 | WALKER LEE CISLER<br>Detroit Edison Co.<br>Detroit, MI                        | "For his achievements in the power industry,<br>including the development of nuclear power;<br>for his services to his country and to<br>international understanding, including the   |

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application of electric power to economic growth among all nations; and for his broad contributions to the profession of engineering."

1964 NO AWARD

1963 JOHN R. PIERCE  
Bell Telephone Labs.  
Murray Hill, NJ

"For his pioneer work and leadership in satellite communications and for his stimulus and contributions to electron optics, travelling wave tube theory and the control of noise in electron streams."

1962 ALEXANDER C. MONTEITH  
Westinghouse Electric Corp.  
Pittsburgh, PA

"For meritorious achievement in engineering, education, management, and development of young engineers."

1961 WILLIAM B. KOUWENHOVEN  
John Hopkins Univ.  
Baltimore, MD

"For his inspiring leadership in education, for his contributions in the fields of electrical insulation, electrical measurements, and electrical science applied to medicine, and especially for his investigations of the effects of electricity on the human body with the successful development of countershock for the cure of fibrillation of the heart."

1960 HAROLD S. OSBORNE  
McGraw Hill Encyclopedia  
Upper Montclair, NJ

"For his contributions to the art of telecommunication and his leadership and vision in extending its application; for his achievements in the coordination of international communication and in national and international standardization; and for his advancement of the engineering profession."

1959 JAMES F. FAIRMAN  
Consolidated Edison Co. of  
New York, New York, NY

"For outstanding performance in improving the design of large electric power systems; for far-sighted leadership in atomic power development; and for unremitting efforts to improve the engineering profession."

1958 CHARLES F. KETTERING  
General Motors Corp.  
Dayton, OH

"For invention, research and development in the broad fields of industry, engineering, transportation, medicine, education, energy and power resulting in service to all mankind."

1957 JOHN K. HODNETTE  
Westinghouse Elec. Corp.  
Pittsburgh, PA

"For his significant contributions to the electrical industry through creative design and development of transformer apparatus which marked new advances in protection,

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performance and service. For his vision, judgment and management skill which fostered and achieved the practical application of his ideas with resulting advancements in the electrical industry."

1956 COMFORT A. ADAMS

"For pioneering achievements in the development of alternating current electric machinery and in electric welding; for vision and initiative in the formation of an engineering standards organization and for eminence as an educator and consulting engineer."

1955 LEONID A. UMANSKY

"For his outstanding contribution to the electrification of industry through the application of electrical machines, devices and systems to automatic process machinery; and for his inspiration, leadership, and teaching of men in this work."

1954 OLIVER E. BUCKLEY

"For his personal contributions to the science and art which have made possible a transatlantic telephone cable; for wise leadership of a great industrial laboratory; for outstanding services to the government of his country."

1953 JOHN F. PETERS

"For his contributions to the fundamentals of transformer design, his invention of the Klydonograph, his contributions to Military Computers and for his sympathetic understanding in the training of young engineers."

1952 VLADIMIR K. ZWORYKIN

"For outstanding contributions to concept and design of electronic components and systems."

1951 CHARLES F. WAGNER

"For his distinguished contributions in the field of power system engineering."

1950 OTTO B. BLACKWELL

"For his pioneer contributions to the art of telephone transmission."

1949 KARL B. McEACHRON

"For his contributions to the advancement of electrical science in the field of lightning and other high voltage phenomena and for the application of this knowledge to the design and



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|      |                        | protection of electric apparatus systems."   |
| 1948 | MORRIS E. LEEDS        | "For his contributions to industry through development and production of electrical precision measuring devices and controls."   |
| 1947 | JOSEPH SLEPIAN         | "For his theoretical and practical contributions to power systems through circuit analysis, arc control, and current interruption."  |
| 1946 | LEE DE FOREST          | "For pioneering achievements in radio and for the invention of the grid-controlled vacuum tube with its profound technical and social consequences."   |
| 1945 | PHILIP SPORN           | "For his contributions to the art of economical and dependable power generation and transmission."   |
| 1944 | E. F. W. ALEXANDERSON  | "For his outstanding inventions and developments in the radio, transportation, marine and power fields."   |
| 1943 | VANNEVAR BUSH          | "For his contribution to the advancement of electrical engineering, particularly through the development of new applications of mathematics to engineering problems, and for his eminent service to the nation in guiding the war research program." |
| 1942 | EDWIN H. ARMSTRONG     | "For distinguished contributions to the art of electric communication, notably the regenerative circuit, the superheterodyne, and frequency modulation."   |
| 1941 | JOHN B. WHITEHEAD      | "For his contributions to the field of electrical engineering, his pioneering and development in the field of dielectric research, and his achievements in the advancement of engineering education."  |
| 1940 | GEORGE ASHLEY CAMPBELL | "In recognition of his distinction as scientist and inventor and for his outstanding original contributions to the theory and application of electric circuits and apparatus."   |
| 1939 | PHILIP TORCHIO         | "For distinguished contributions to the art of central station engineering and for achievement in the production distribution, and   |

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|      |                    | utilization of electrical energy."  |
| 1938 | DUGALD C. JACKSON  | "For outstanding and inspiring leadership in engineering education and in the field of generation and distribution of electric power."  |
| 1937 | GANO DUNN          | "For distinguished contributions in extending the science and art of electrical engineering, in the administration of great engineering works, and for inspiring leadership in the profession."   |
| 1936 | ALEX DOW           | "For outstanding leadership in the development of the central station industry and its service to the public."  |
| 1935 | LEWIS B. STILLWELL | "For his distinguished engineering achievements and his pioneer work in the generation, distribution, and utilization of electric energy."  |
| 1934 | WILLIS R. WHITNEY  | "For his contributions to electrical science, his pioneer inventions and his inspiring leadership in research."   |
| 1933 | ARTHUR E. KENNELLY | "For meritorious achievements in electrical science, electrical engineering and the electrical arts as exemplified by his contributions to the theory of electrical transmission and to the development of international electrical standards." |
| 1932 | BANCROFT GHERARDI  | "For his contributions to the art of telephone engineering and the development of electrical communication."  |
| 1931 | E. W. RICE, JR.    | "For his contributions to the development of electrical systems and apparatus and his encouragement of scientific research in industry."  |
| 1930 | FRANK CONRAD       | "For his contributions to radio broadcasting and short wave radio transmission."  |
| 1929 | CHARLES F. SCOTT   | "For his contributions to the science and art of polyphase transmission of electrical energy."  |
| 1928 | FRANK B. JEWETT    | "For his contributions to the art of electric communication."   |

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| 1927 | WILLIAM D. COOLIDGE   | "For his contributions to the incandescent electric lighting and the X-ray arts."                             |
| 1926 | NO AWARD              |   |
| 1925 | HARRIS J. RYAN        | "For his contributions to the science and the art of high-tension transmission of power."                     |
| 1924 | JOHN W. HOWELL        | "For his contributions toward the development of the incandescent lamp."                                      |
| 1923 | JOHN W. LIEB          | "For the development and operation of electric central stations for illumination and power."                  |
| 1922 | ROBERT A. MILLIKAN    | "For his experimental work in electrical science."  |
| 1921 | CUMMINGS C. CHESNEY   | "For early developments in alternating current transmission."   |
| 1920 | MICHAEL I. PUPIN      | "For his work in mathematical physics and its application to the electric transmission of intelligence."      |
| 1919 | W. L. R. EMMET        | "For inventions and developments of electrical apparatus and primo movers."                                   |
| 1918 | BENJAMIN G. LAMME     | "For invention and development of electrical machinery."  |
| 1917 | JOHN J. CARTY         | "For his work in the science and art of telephone engineering."   |
| 1916 | NIKOLA TESLA          | "For meritorious achievement in his early original work in polyphase and high-frequency electrical currents." |
| 1915 | NO AWARD              |   |
| 1914 | ALEXANDER GRAHAM BELL | "For meritorious achievement in the invention of the telephone."  |
| 1913 | CHARLES F. BRUSH      | "For meritorious achievement in the invention and development of the series arc lighting systems."            |
| 1912 | WILLIAM STANLEY       | "For meritorious achievement in invention and development of alternating current systems"                     |

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| 1911 | GEORGE WESTINGHOUSE | "For meritorious achievement in connection with the development of the alternating current system for light and power."                             |
| 1910 | FRANK J. SPRAGUE    | "For meritorious achievement in electrical science, engineering and arts as exemplified in his contributions thereto."                              |
| 1909 | ELIHU THOMSON       | "For meritorious achievement in electrical science, engineering and arts as exemplified in his contributions thereto during the past thirty years." |