

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

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| 2019 | URSULA KELLER<br>Director of NCCR MUST (Swiss National Centre of Competence for Research in Molecular Ultrafast Science and Technology)—ETH Zurich, 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 Engineering & Computer Sciences Department, University of California, 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, Philips Lumileds Lighting 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 of California, Berkeley, 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 Inc., Half Moon Bay, California, USA   | "For contributions to the technology and implementation of civilian GPS navigation systems."  |
| 2014 | RALPH H. BAER<br>Owner, R.H. Baer Consultants, Manchester, New Hampshire, USA   | "For pioneering and fundamental contributions to the video-game and interactive multimedia-content industries."   |
| 2013 | IVAN PAUL KAMINOW<br>Adjunct Professor, Electrical Engineering and Computer Science Department, University of California 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<br>President, TheraManager LLC., Murray Hill, NJ, USA   | "For pioneering contributions to imaging devices, including CCD imagers, cameras, and thermal imagers."   |
| 2011 | ISAMU AKASAKI<br>Professor, Meijo University,   | "For seminal and pioneering contributions to the development of nitride-based   |

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	High Tech Research Center, Nagoya, Japan	semiconductor materials and optoelectronic devices, including visible wave length LEDs and lasers."
2010	RAY DOLBY 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 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 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 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 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 LAWRENSON 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 VP of Physical Research Bell Labs/Lucent Tech., Murray Hill, NJ, USA	"For a career of highly creative and influential contributions to heterostructure devices and materials."
2003	NOT AWARDED	

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2002	ED HAMMER General Electric Company Cleveland, OH, USA	"For contributions to design methods for energy efficient fluorescent lighting systems and development of lighting products."
2001	ROBERT H. DENNARD IBM Thomas J. Watson Research Ctr 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 Tohoku University, Sendai, Japan	"For contributions to materials science and technology, and the invention of the static induction transistor."
1999	KEES A. SCHOUHAMER IMMINK University of Essen Essen, Germany	"For a career of creative contributions to the technologies of digital video, audio, and data recording."
1998	ROLF LANDAUER IBM Corporation T.J. Watson Research Center Yorktown Heights, NY, USA	"For pioneering contributions to the physics of computing and conduction"
1997	ESTHER M. CONWELL Research Fellow Xerox Corporation, Webster, 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 Professor Emeritus Dept. of ECE University of Illinois, Urbana, IL, USA	"For creative contributions to the fundamental knowledge of ultrasonic propagation in and interactions with biological media."
1995	ROBERT W. LUCKY 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 Purdue University West Lafayette, IN, USA	"For fundamental contributions to applied biomedical instrumentation and the understanding of the electrical properties of the cardiovascular system."
1993	JAMES H. POMERENE IBM Corp. Yorktown Heights, NY, USA	"For outstanding contributions to the development of computer architecture, including pipelining, reliable main memory and

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		memory hierarchies."
1992	G DAVID FORNEY, JR. Codex Corp., Mansfield, MA, USA	"For original contributions to coding, modulation, data communication modems, and for industrial and research leadership in communications technology."
1991	JOHN LOUIS MOLL Hewlett Packard Labs. 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 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. 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 Univ. of North Carolina Chapel Hill, NC	"For seminal contributions to solid state science and technology, and outstanding leadership as a research director."
1987	ROBERT A. HENLE IBM Corp., Yorktown Heights, NY	"For sustained leadership in, and individual contributions to, the science and technology of semiconductor circuits for computing systems."
1986	JAMES L. FLANAGAN AT&T Bell Labs., Murray Hill, NJ	"For a career of innovation and leadership in speech communication science and technology."
1985	JOHN D. KRAUS Ohio State Univ., Columbus, OH	"For a sustained career as an innovator, discoverer, and educator in the fields of antennas and radio astronomy."
1984	EUGENE I. GORDON Bell Labs., Murray Hill, NJ	"For a singular career of invention, development, and leadership in electron devices."
1983	HERMAN PAUL SCHWAN Univ. of Pennsylvania Philadelphia, PA	"For a career of creative endeavor by which engineering, physics, biology, and medicine have been amalgamated into a coherent field of electromagnetic bioengineering."
1982	NATHAN COHN	"For a career of creative contributions and

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	Leeds & Northrup Co. North Wales, PA	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 Stanford University, Stanford, CA	"For his creative contributions to microwave electronics, space communications, and technology of communication systems."
1980	ROBERT ADLER 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 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 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 ITT Corp., Nutley, NJ	"For technical contributions and leadership in the field of radar, radio communication and radio navigation."
1976	MURRAY JOSLIN Consolidated Edison 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 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 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 Philips Research Labs. Eindhoven, Netherlands	"For a creative career of significant achievement in electrical circuit theory, including the gyrator."
1972	WILLIAM H. PICKERING California Institute of	"For contributions to telecommunications, rocket guidance and spacecraft control, and for

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	Technology Pasadena, CA	inspiring leadership in unmanned exploration of the solar system."
1971	JOHN W. SIMPSON Westinghouse Electric Corp. Pittsburgh, PA	"For sustained contributions to society through the development and engineering design of nuclear power systems."
1970	HOWARD H. AIKEN Aiken Enterprises Ft. Lauderdale, FL	"For a meritorious career of pioneering contributions to the development and application of large-scale digital computers and important contributions to education in the digital computer field."
1969	HENDRIK W. BODE Harvard Univ. Cambridge, MA	"For fundamental contributions to the arts of communication, computation, and control; for leadership in bringing mathematical science to bear on engineering problems; and for guidance and creative counsel in systems engineering."
1968	CHARLES F. AVILA Boston Edison Co. Boston, MA	"For his early contribution to underground transmission, for his continuing guidance in the field of electrical research and for his positive leadership in the development of the electrical utility industry."
1967	GEORGE H. BRORCA Princeton, NJ	"For a meritorious career distinguished by significant engineering contributions to antenna development, electromagnetic propagation, the broadcast industry, the art of radio frequency heating, and color television."
1966	WILMER L. BARROW Sperry Gyroscope Co. Great Neck, NY	"For a career of meritorious achievement innovating, teaching and developing means for transmission of electromagnetic energy at microwave frequencies."
1965	WALKER LEE CISLER Detroit Edison Co. Detroit, MI	"For his achievements in the power industry, including the development of nuclear power; for his services to his country and to international understanding, including the application of electric power to economic growth among all nations; and for his broad contributions to the profession of engineering."
1964	NO AWARD	

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| 1963 | JOHN R. PIERCE<br>Bell Telephone Labs.<br>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<br>Westinghouse Electric Corp.<br>Pittsburgh, PA   | "For meritorious achievement in engineering, education, management, and development of young engineers."   |
| 1961 | WILLIAM B. KOUWENHOVEN<br>John Hopkins Univ.<br>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<br>McGraw Hill Encyclopedia<br>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<br>Consolidated Edison Co. of<br>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<br>General Motors Corp.<br>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<br>Westinghouse Elec. Corp.<br>Pittsburgh, PA           | "For his significant contributions to the electrical industry through creative design and development of transformer apparatus which marked new advances in protection, 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." |

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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 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."



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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 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."

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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."
1927	WILLIAM D. COOLIDGE	"For his contributions to the incandescent electric lighting and the X-ray arts."
1926	NO AWARD	

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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 and apparatus."
1911	GEORGE WESTINGHOUSE	"For meritorious achievement in connection with the development of the alternating current system for light and power."

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| 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." |