1997 MTT-S Awards

David N. McQuiddy, Jr., *Fellow, IEEE*

OUR President R. E. "Skip" Bryan presented the annual IEEE MTT-S Awards in the Plenary Session and at the Awards Banquet during the 1997 International Microwave Symposium in the mile-high city of Denver, Colorado. The Awards Committee, The Fellows Evaluation Sub-Committee, and the Microwave Prize Sub-Committee have carefully evaluated an extensive list of outstanding candidates from the nominations solicited from our members over the last year. The Awards Committee, which works anonymously, is to be commended for their objective selection of this year's awardees.

The nomination processes for the MTT-S Awards and the IEEE Fellows are publicized in the *MTT-S Newsletter*. Nominations can be made by any member to recognize deserving individuals for the various awards. The selection process for the MTT-S Awards started after the nomination deadline of 1 July 1996 and the results of the selection process were first announced in the Fall AdCom meeting which was held in September 1996. The nominations for the IEEE Fellows were due 15 March 1996 and the results of the Fellow Evaluation process were announced by IEEE Headquarters on 1 December 1996. A listing of the annual Microwave Awards including the new IEEE MTT-S Fellows was published in the official program of the 1997 International Microwave Symposium and in the *1997 International Microwave Symposium Digest*.

In addition to the MTT-S Awards and Fellows, the Awards Committee and the President, in consultation with AdCom Committees, recognize the achievements of those key individuals who have given extraordinary service to our microwave profession by presenting them with Certificates of Recognition. These awards were announced during Microwave Week and were presented in the Plenary Session of the symposium after the keynote addresses by Bernard B. Bossard and Robert C. Dixon.

Prior to presenting the 1997 MTT-S Fellows Awards during the Awards Banquet, our MTT-S Honorary Life Member, Theodore S. Saad, sorrowfully announced that Dr. John H. Bryant had died the previous day, 10 June 1997. John Bryant had received the Microwave Career Award last year in recognition of his many and diverse contributions to the Microwave Theory and Techniques Society and to the microwave profession in general. He had served as Chairman of the MTT-S AdCom in 1970 before the title was changed to President. After recounting some of John's salient contributions, including his well-known developments in the miniaturization of microwave circuits and interconnections, Ted Saad asked those in attendance at the Awards Banquet to join in a celebration of the life of John Bryant. *Resquiescat in pace.*

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Ted Saad then presented the ten MTT-S Fellows Awards to those who had elected to receive their certificates at the Awards Banquet. President "Skip" Bryan presented the MTT-S Awards to conclude the evening.

AWARDS SUMMARY

A. Technical Awards

Career Awards: Dr. Ralph Levy

"FOR A CAREER OF INNOVATION IN THE SYNTHESIS OF COMPLEX MICROWAVE PASSIVE COMPONENTS."
Plaque, Certificate, Honorarium for $2000

Pioneer Award: Dr. Ali E. Atia and Dr. Albert E. Williams

"FOR THE INVENTION OF THE DUAL-MODE GENERALIZED WAVEGUIDE CAVITY FILTER, A MAJOR ADVANCE IN THE DEVELOPMENT OF SATELLITE COMMUNICATIONS."
Plaque, shared Honorarium of $2000

Distinguished Educator Award: Dr. David B. Rutledge

"FOR LEADERSHIP IN TEACHING, RESEARCH AND IN THE MICROWAVE PROFESSION."
Plaque, Honorarium of $1000

Microwave Prize: Dr. Ruai Y. Yu, Dr. Madhukar Reddy, Mr. Joe Pusl, Dr. Scott T. Allen, Dr. Michael Case, and Dr. Mark J. W. Rodwell for their paper:

"Millimeter-Wave On-Wafer Waveform and Networks Measurements Using Active Probes" IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, vol. 43, no. 4, pp. 721–729, Apr. 1995.
Certificate, shared Honorarium of $2000.

B. Fellow Awards

Dr. H. Clark Bell
Dr. Kazuhiko Honjo
Dr. Asher Madjar,
Dr. Toshio Nishikawa
Dr. Anthony M. Pavio
Prof. Roger D. Pollard
Dr. S. Michael Saad
Prof. Alwyn J. Seeds,
Dr. Richard V. Snyder
Dr. Cheng Paul Wen.

C. Service Awards

Distinguished Service Award: Mr. Vladimir G. Gelnovatch

"FOR 36 YEARS OF DILIGENT, EXCEPTIONALLY EFFECTIVE AND DISTINGUISHED SERVICE TO THE MICROWAVE THEORY AND TECHNIQUES SOCIETY AND THE MICROWAVE PROFESSION."
Plaque, Certificate

N. Walter Cox Award: Dr. Reynold S. Kagiwada

"FOR EXEMPLARY SERVICE, GIVEN IN A SPIRIT OF SELFLESS DEDICATION AND COOPERATION."
Plaque

Past President: Mr. John W. Wassel

"IN RECOGNITION OF DISTINGUISHED SERVICE AS 1996 PRESIDENT"
Plaque

D. Certificates of Recognition

Dr. Randall E. Lehmann, Secretary of AdCom 1996.
Dr. J. Michael Golio, Member of AdCom 1994–1996.
Dr. Denis C. Webb, Member of AdCom 1994–1996.
Dr. E. James Crescenzi, Jr., *Chairman*, 1996 International Microwave Symposium.
Dr. Joseph S. Barrerra, *Vice-Chairman*, 1996 International Microwave Symposium.
Dr. S. Jerry Fiedziuszko, *Co-Chairman Technical Program*, 1996 International Microwave Symposium.
Dr. Derry P. Hornbuckle, *Co-Chairman Technical Program*, 1996 International Microwave Symposium.
Dr. George D. Vendelin, *Chairman Local Arrangements*, 1996 International Microwave Symposium.
Dr. Mahesh Kumar, *General Chairman*, 1996 Microwave and Millimeter-Wave Monolithic Circuits Symposium.
Mr. Ken Wong, *Chairman*, 47th Automatic RF Techniques Group Conference.

MICROWAVE CAREER AWARD
Dr. Ralph Levy

The Microwave Career Award is the highest honor bestowed by MTT-S. It recognizes an individual for a lifetime career of meritorious service and technical excellence in the field. Our honored recipient is Dr. Ralph Levy, an internationally recognized independent consultant for microwave passive components and an IEEE Fellow.

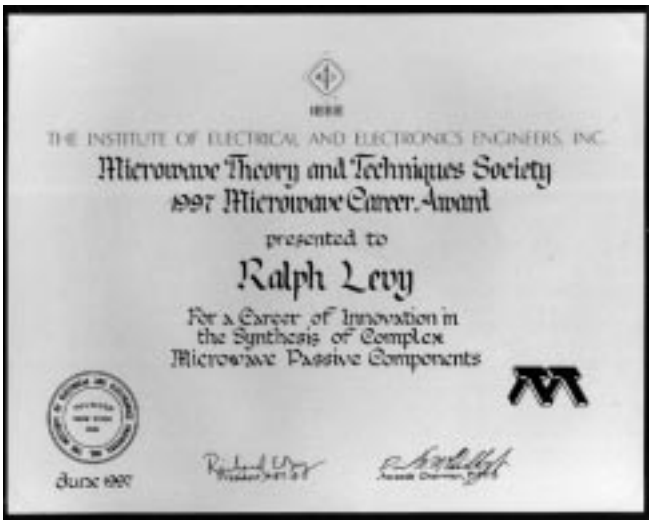
The award consists of a plaque, a certificate, and an honorarium of $2000. The Career Award Citation reads:

"FOR A CAREER OF INNOVATION IN THE SYNTHESIS OF COMPLEX MICROWAVE PASSIVE COMPONENTS."

Ralph Levy (SM'64–F'73) received the B.A. and M.A. degrees in physics from Cambridge University, Cambridge, U.K., in 1953 and 1957, respectively, and the Ph.D. degree in applied sciences from London University, London, U.K., in 1966.

From 1953 to 1959, he was with GEC, Stanmore, U.K., where he worked on a variety of systems and waveguide components. In 1959, he joined Mullard Research Laboratories, Redhill, U.K., and continued research and development on microwave components and systems. From 1964 to 1967, he was a Faculty Member at Leeds University. In 1967, he emigrated to the United States and was with Microwave Development Laboratories, Natick, MA, as Vice President of Research until 1984 when he moved to California to join KW Microwave, San Diego, CA, as the Vice President of Engineering. After a short period with Remec Inc., he became an independent Consultant in July 1989, and currently works with several companies on a wide variety of projects, mainly in the field of passive components. His most important technical contributions, evaluated mainly on the basis of being widely referenced, are as follows: 1961: Invention of the digital IFM system; 1963: Exact synthesis of asymmetric coupled-transmission-line directional couplers; 1964: Explicit formulas for broad-band matching networks; 1965: Synthesis of distributed low-pass filters; 1965: Generalized Kuroda transformations; 1967: Theory of direct-coupled cavity filters; 1968: Synthesis of branch-guide directional couplers (with L. F. Lind); 1968: Synthesis of multiaperture directional couplers (improved in 1980 with field averaging over the coupling apertures); 1970: Introduction of Zolotarev functions with microwave circuit applications; 1970: Design of mixed lump and distributed networks; 1973: Generalized design of distributed ladder networks; 1973: Tapered corrugated waveguide low-pass filters; 1976: Filters having single extra cross couplings; 1979: Generalized multiplexer theory (with J. D. Rhodes); 1984–1988: Synthesis of inhomogeneous distributed networks; 1994: Synthesis of singly terminated cross coupled filters; 1995: Direct synthesis of cascaded-quadruplet filters; 1995: Simple theory of dual-mode cavity coupling. He has authored over 60 papers and two books, and holds 12 patents.

Dr. Levy has been involved in many IEEE MTT-S activities, including editor of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES from 1986 to 1988. He has been chairman of the Central New England and San Diego MTT Chapters, Technical Program Committee chairman for the 1983 IMS and vice-chairman of the Steering Committee for the 1994 IMS.



PIONEER AWARD
Dr. Ali E. Atia and Dr. Albert E. Williams

The Pioneer Award recognizes contributions that have had a major impact on the microwave engineering field and have stood the test of time. The basis of nomination is an archival paper in the field of interest of MTT-S, published at least 20 years prior to the year of the award.

Dr. Ali E. Atia and Dr. Albert E. Williams are the recipients this year of the Pioneer Award. They developed the dual-mode cavity filter at COMSAT Laboratories, which has been widely used for multiplexers and filters requiring high selectivity in a limited volume.

Each award consists of a plaque and an honorarium of $1000. The citations read:

> "FOR THE INVENTION OF THE DUAL-MODE CAVITY FILTER, A MAJOR ADVANCE IN THE DEVELOPMENT OF SATELLITE COMMUNICATIONS."

In the late 1960's, it was recognized that the most efficient way to design a satellite payload with a large communications capacity was to divide the allocated 500-MHz frequency band into a large number of narrow-band transponders, each with its own nonlinear power amplifier. In 1968, this could only be achieved with bulky waveguide Chebyshev filters. For example, the INTELLSAT IV payload contained 12 10-pole filters of 36-MHz bandwidth, each weighing approximately 2200 grams. A significant filter weight reduction was needed in order to increase the number of channels in the satellite communications systems without adding extra payload.

Dr. Atia and Dr. Williams solved this problem by developing the dual-mode cavity filter in which a single cavity could support two electrical resonant modes and, in addition, could generate responses with sharp selectivity and/or flat group delay. An eight-pole elliptic filter constructed in four physical cavities and weighing only 450 g proved to be electrically equivalent to the INTELLSAT IV ten-pole Chebyshev filter and was first flown in space on the INTELLSAT IV-A communications satellite.

During the next 25 years, this original work lead directly to the development of many types of multiple coupled-cavity filters and multiplexers providing significant reduction in mass and volume for high-capacity satellite payloads. In 1991, collaboration with Lincoln Laboratory led to the development of high-temperature superconducting thin films. Both cavity and superconducting filters are now finding extensive application in the wireless industry.

Ali E. Atia (S'67–M'69–SM'78–F'87) received the B.S. degree from Ain Shams University, Cairo, Egypt, in 1962, and the M.S. and Ph.D. degrees in electrical engineering from the University of California at Berkeley, in 1966 and 1969, respectively.

In 1969, he joined COMSAT Laboratories. where he participated in research and development of a broad range of advanced microwave technologies for communication satellite transponders and antennas. He designed, developed and implemented microwave flight hardware (mixers, filters, multiplexers, amplifiers, switches, antennas, etc.) for several satellite programs covering the L- through the Ka-frequency bands. He participated in and directed system development and software activities for several satellite programs and ground stations projects for customers including INTELSAT, INMARSAT, ARABSAT, and others. He has held several technical and management positions at COMSAT, the most recent of which was Vice President and Chief Engineer for COMSAT Technology Services and COMSAT Systems Division. In 1994, he joined CTA International, Rockville, MD, where he is currently President. CTA International implements turn-key satellite telecommunications and direct broadcast systems, and currently is managing the implementation of the INDOSTAR Program, a direct broadcast satellite system for the Republic of Indonesia. He has authored or co-authored over 100 refereed technical articles and presentations in the IEEE TRANSACTIONS and various national and international conferences and symposia, and holds five patents in the areas of microwave filters and receivers.

Dr. Atia is an Associate Fellow of the AIAA, and a member of the Sigma Xi.

Albert E. Williams (S'66–M'66–SM'78–F'87) was born in Albany, Western Australia, on March 27, 1940. He received the B.E. degree from the University of Western Australia, Perth, Australia, in 1962, the Ph.D. degree from University College, London University, London, U.K., in 1966 and the MBA degree from George Washington University, Washington, DC, in 1990.

From 1966 to 1968, he was a Lecturer in the Department of Electrical Engineering, University of Western Australia. In 1969, he joined COMSAT Laboratories, Clarksburg, MD, as a Member of the Technical Staff in the Transponders Department, Microwave Technical Division. He is currently Vice President of the Satellite and Systems Technologies Division. During his tenure at COMSAT, he has made major contributions to satellite and ground system design for both the INTELSAT and INMARSAT Systems. In recent years, he has led the COMSAT Laboratories team studying the application of low earth orbit, intermediate circular orbit, and geostationary orbits for personal hand-held communications. He has authored or co-authored over 50 papers and holds seven patents.

Dr. Williams is a member of Sigma Xi and the Scientific Research Society. He is past chairman of the MTT-8 subcommittee. He was joint recipient of the Institution of Electrical Engineers (IEE) (U.K.) Sylvanus P. Thompson Premium Award, in 1966, and was a joint recipient of the COMSAT Research Award in 1984.

DISTINGUISHED EDUCATOR AWARD
Dr. David B. Rutledge

This Award was inspired by the untimely death of Professor F. J. Rosenbaum (1937–1992), an outstanding teacher of microwave science and a dedicated MTT-S AdCom member/contributor. The award is given to a distinguished educator in the field of microwave engineering and science who exemplifies the special human qualities of the late Fred J. Rosenbaum. Fred considered teaching a high calling and demonstrated his dedication to MTT-S through tireless service.

The award consists of a plaque and an honorarium of $1,000. The awardee must be a distinguished educator, recognized, in general, by an academic career coupled to many years of service to the microwave profession. The effectiveness of the educator should be supported by a list of graduates in the field of microwave science who have become recognized in the field. The candidate shall also have an outstanding record of research contributions documented in archival publications. The candidate shall also have a record of many years of service to MTT-S.

The honored recipient of this year's award is Dr. David B. Rutledge, Professor of electrical engineering at the California Institute of Technology. The citation reads:

"FOR LEADERSHIP IN TEACHING, RESEARCH AND IN THE MICROWAVE PROFESSION."

David B. Rutledge (M'75–S'77–M'77–S'78–M'80–SM'89–F'93) grew up in Fort Worth, TX. He received the B.A. degree in mathematics from Williams College, Williamstown, MA, in 1973, the M.A. degree in electrical sciences from Cambridge University, Cambridge, U.K., in 1975, and the Ph.D. degree in electrical engineering from the University of California at Berkeley, in 1980.

From 1975 to 1976, he worked as an Aerosystems Engineer on microwave data links for General Dynamics (now Lockheed-Martin), Fort Worth, TX. Since 1980, he has been teaching at the California Institute of Technology, Pasadena, where he works on microwave circuits and antennas. His research group developed key ideas in integrated-circuit antennas, including lens-coupled antennas, which appear widely in radio–astronomy receivers. His group demonstrated anisotropic etching for fabricating horns and membrane technology for suspending metal antennas. The group first described leakage from planar transmission lines, and first demonstrated many active quasi-optical components, including phase shifters, oscillators, mixers, and amplifiers. Recently, the group has developed Class-E HF power amplifiers for industrial and amateur use. He has authored or co-authored over 200 publications, including the widely distributed educational microwave computer-aided design package *Puff*, with 15 000 copies worldwide He was a Visiting Scientist at CSIRO, N.S.W, Australia (Summer 1985), the Research Institute for Electrical Communication, Tohoku University, Sendai, Japan, (Spring and Summer 1988), and the National Defense Academy, Yokosuka, Japan (Fall 1995).

Dr. Rutledge is a member of the AP-S AdCom. He was a distinguished lecturer for the Antennas and Propagation Society from 1991 to 1993, and has served as chairman for 19 doctoral candidates. He was one of the recipients of the MTT-S Microwave Prize in 1993, and was honored with the Teaching Award of the Associated Students of Caltech. Five of his students have been awarded Presidential Investigator and Career Awards.

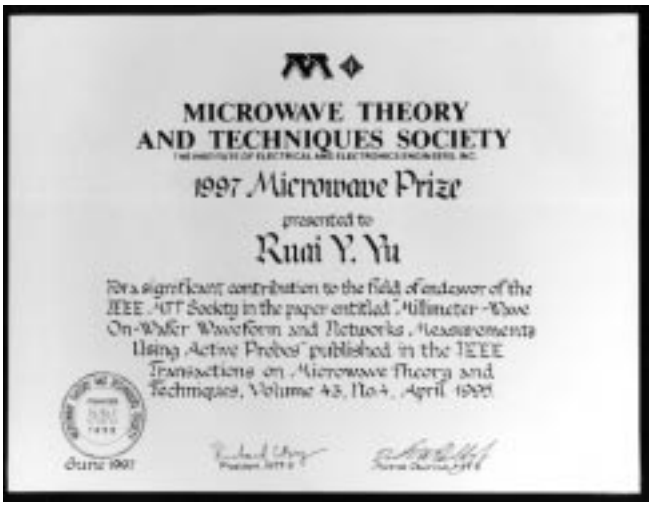
MICROWAVE PRIZE

The Microwave Prize is awarded annually to the author or authors of a paper published in the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES (or any other IEEE publication) that is judged to be the most significant contribution in the field of interest to the Society in the calendar year preceding that in which the selection is made.

The 1997 Microwave Prize is awarded to Ruai Y. Yu, Madhukar Reddy, Joseph A. Pusl, Scott T. Allen, Michael Case, and Mark J. W. Rodwell for their paper entitled "Millimeter-Wave On-Wafer Waveform and Networks Measurements Using Active Probes," IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, vol. 43, no. 4, pp. 721–729, April 1995.

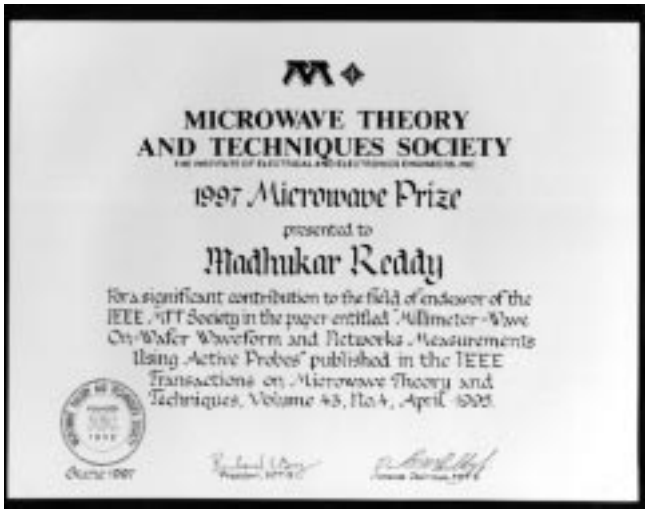
Ruai Y. Yu received the B.S. degree in electrical engineering from San Francisco State University, San Francisco, CA, in 1988, and the M.S. and Ph.D. degrees in electrical engineering from the University of California at Santa Barbara (UCSB), in 1991 and 1994, respectively.

From 1988 to 1989, he was a Research Engineer at Ampex Corporation, where he was engaged in the research and development of advanced equalization schemes for high-speed digital recording channels, and a complete hardware and software development of an adaptive equalizer using transversal filters was successfully demonstrated. While at UCSB, he developed novel high-speed integrated circuits and built systems for microwave and millimeter-wave instrumentation. He implemented on-wafer probe systems which are capable of performing waveform and network measurements up to 200 GHz. He demonstrated the world's first monolithic traveling-wave resonant tunneling diode (RTD) pulse generator and was involved in development of a novel biasing scheme for RTD oscillators. In February 1994, he joined the High-Speed Circuits Department, Rockwell Science Center, Thousand Oaks, CA, as a Member of Technical Staff, where he is currently a Senior Scientist. His current research interests include the design and packaging of high-speed high-resolution analog-to-digital converters, broad-band integrated circuits for 40-Gb/s optical transmission systems, and RF/microwave transceiver circuits for wireless communication applications. He has implemented numerous packaged high-speed/low-noise analog/RF integrated circuits using submicron CMOS, and advanced Si BJT, and AlGaAs/GaAs HBT technologies. He has authored or co-authored over 50 publications in the areas of high-speed integrated circuits and systems.



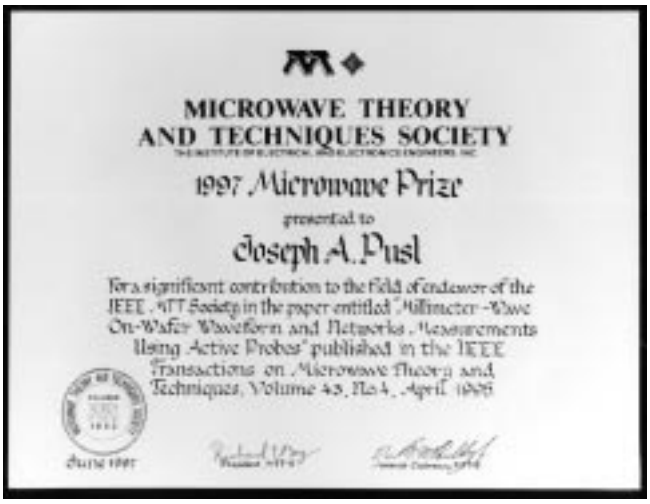
Madhukar Reddy (S'84–M'85) was born in Hyderabad, India, on November 4, 1969. He received the B.Tech. degree in electronics and communication engineering from the Indian Institute Technology, Madras, India, in 1991, and the M.S. and Ph.D. degrees in electrical engineering from the University of California at Santa Barbara, in 1993 and 1996, respectively.

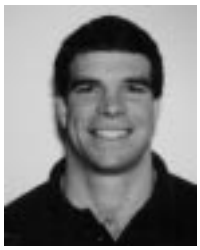
He had been with the University of California, at Santa Barbara, working in the area of high-speed electronic devices and circuits. and developed a monolithic Schottky collector resonant tunnel diode oscillator arrays for generating power at submillimeter-wave frequencies. During the summer of 1996, he worked as a Summer Intern at Rockwell Semiconductor Systems, Newport Beach, CA. He is currently with Rockwell Semiconductor Systems, involved in the development of RF circuits for wireless applications.



Joseph A. Pusl was born in San Diego, CA, on September 19, 1968. He received the B.S. degree and the M.S. degree in electrical engineering from the University of California at Santa Barbara, in 1990 and 1992, respectively.

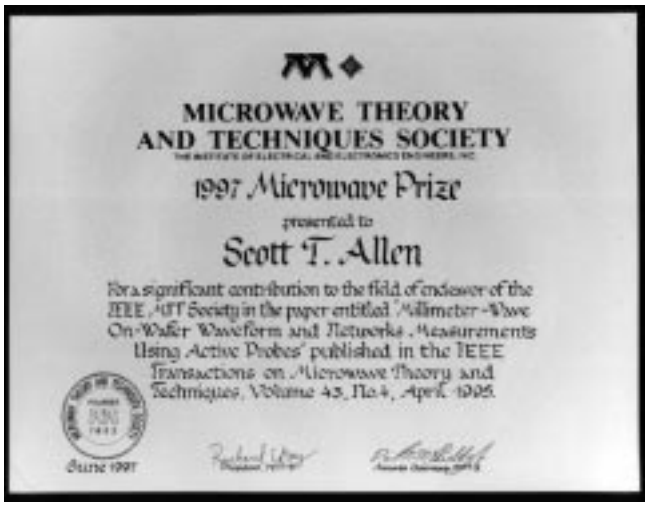
His work has involved microwave circuit design and solid-state device physics and modeling, and his research interests have included millimeter-wave network analysis technologies and broad-band millimeter-wave MMIC designs. For millimeter-wave network analysis, he worked on the characterization and optimization of coplanar transmission lines for broad-band applications to 200 GHz. His work on broad-band (dc-100 GHz) MMIC's was done in collaboration with Hughes Research Laboratories, Malibu, CA, and involved the development of active device models for InP-based HEMT's valid up to millimeter-wave frequencies, the determination of circuit topologies suitable for the application, and the design of low-parasitic high-bandwidth coplanar structures. Since July 1992, he has been with Hughes Space and Communications Company, Los Angeles, CA, where he is involved with three-terminal device development, large-signal characterization, large-signal modeling, MIC and MMIC design, packaging, and semiconductor reliability testing. He has developed an active harmonic loadpull system with waveform sampling capability for the large-signal characterization of active devices in the frequency and time domains. He is currently working on a collaborative effort with Hughes Research Laboratories to develop a GaAs-based power pHEMT process suitable for high-efficiency applications from 1 to 20 GHz.





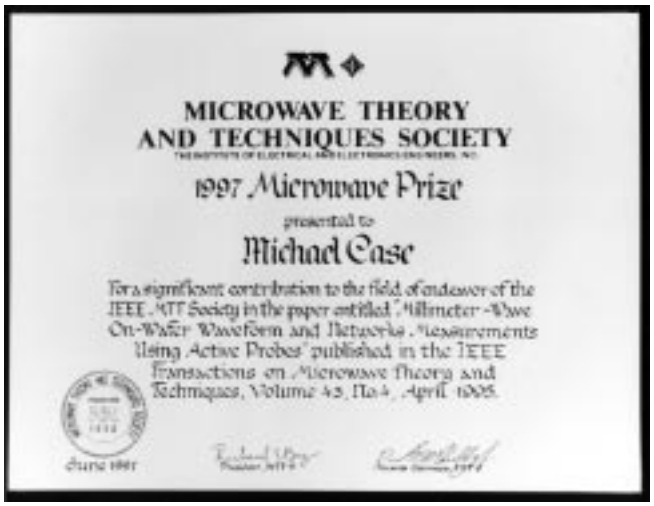
Scott T. Allen received the B.S. degree from Cornell University, Ithaca, NY, in 1987, the M.S. degree from the University of Massachusetts, Amherst, in 1989, and the Ph.D. degree in electrical engineering from the University of California at Santa Barbara, in 1994.

He spent three years as a Device Engineer at Lockheed Martin's Electronics Laboratory, working on the development of HEMT technology, extensive device modeling of both GaAs pHEMT's and InP HEMT's, and the design of low-noise MMIC amplifiers. In 1994, he joined the Research and Development Group, Cree Research, Durham, NC, to work on silicon carbide MESFET's for microwave power applications. Since that time, he has become the Principal Investigator on an S-band power MESFET program and a MAFET Thrust 3 X-band power MESFET program. He also recently demonstrated the first GaN/AlGaN HEMT fabricated on a silicon carbide substrate. His research has focused on GaAs devices and circuits for sub-millimeter-wave applications, and he has developed a nonlinear-transmission-line-based sampling circuit that had a 3-dB bandwidth of 725 GHz. He has authored or co-authored over 40 papers published in various conference proceedings and refereed journals, and has also been cited as a co-inventor of three patent applications pertaining to silicon carbide microwave technology.



Michael Case (S'88–M'91–S'91–M'93) was born in Ventura, CA, in 1966. He received the B.S., M.S., and Ph.D. degrees from the University of California at Santa Barbara in 1989, 1991, and 1993, respectively.

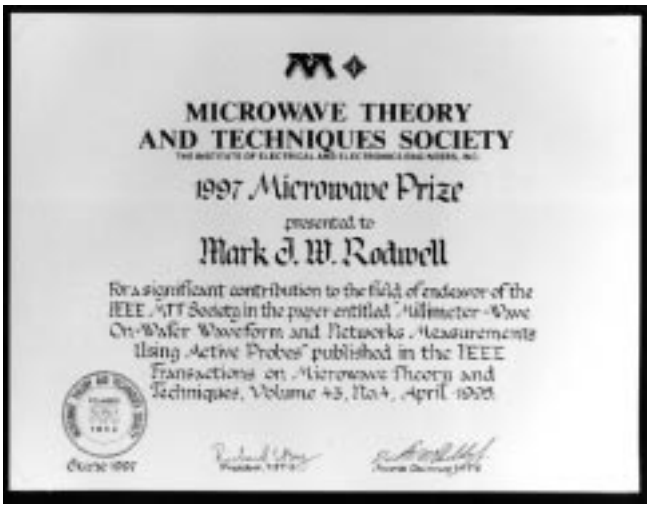
He currently works at Hughes Research Laboratories, Malibu, CA, where he is involved with GaAs-, InP-, and SiGe-based device characterization and circuit design. Applications range in frequency from L- to W-band and encompass satellite, ground terminal, RADAR, and automotive systems. His research interests have included ultra-high-speed waveform generation and measurement. He has authored 35 technical papers and holds five patent applications.



Mark J. W. Rodwell (M'89) was born in Altrincham, Cheshire, U.K., in 1960. He received the B.S. degree in electrical engineering from the University of Tennessee, Knoxville, in 1980, and the M.S. and Ph.D. degrees in electrical engineering from Stanford University, Stanford, CA, in 1982 and 1988, respectively.

From 1982 to 1984, he worked at AT&T Bell Laboratories, developing optical transmission systems. From January to September 1988, he worked as a Research Associate at Stanford University. In September 1988, he joined the Department of Electrical and Computer Engineering, University of California at Santa Barbara, where he is currently a Professor. His current research involves submicron scaling of millimeter-wave HBT's and development of HBT integrated circuits for microwave receivers and fiber-optic transmission systems. His group has developed deep submicron Schottky-collector resonant-tunnel diodes with Terahertz bandwidths, and has developed monolithic submillimeter-wave oscillators with these devices, and has worked extensively in the area of GaAs Schottky-diode integrated circuits for subpicosecond pulse generation, signal sampling at submillimeter-wave bandwidths, and millimeter-wave instrumentation. He has authored an invited paper on submillimeter-wave diode IC's in PROCEEDINGS OF THE IEEE.

Dr. Rodwell was the recipient of a 1989 National Science Foundation Presidential Young Investigator Award.



DISTINGUISHED SERVICE AWARD
Mr. Vladimir G. Gelnovatch

The Distinguished Service Award is presented to honor an individual who has given outstanding service over a period of years for the benefit and advancement of MTT-S.

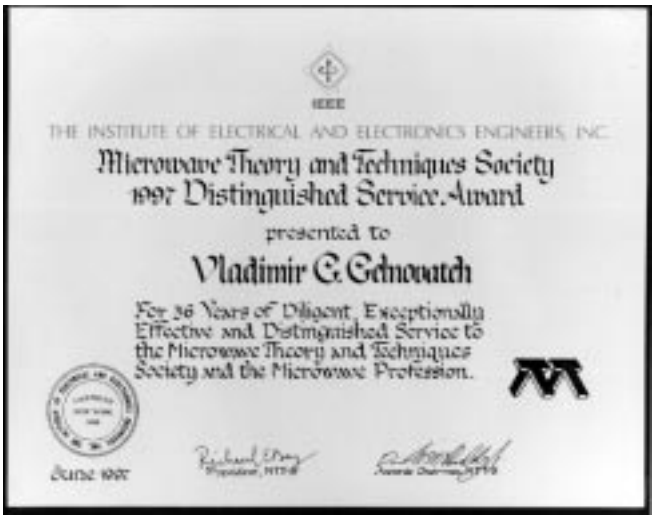
This year's honoree is Mr. Vladimir G. Gelnovatch, Acting Director of the Physical Sciences Directorate of the U.S. Army Research Laboratory. He served as President of MTT-S AdCom in 1989. He is an IEEE Fellow.

His Citation reads: "FOR 36 YEARS OF DILIGENT, EXCEPTIONALLY EFFECTIVE AND DISTINGUISHED SERVICE TO THE MICROWAVE THEORY AND TECHNIQUES SOCIETY AND THE MICROWAVE PROFESSION."

Vladimir G. (Walt) Gelnovatch (S'61–M'64–SM'69–F'82) was born in New York City in 1938. He received the B.S. degree in electronic engineering from Monmouth College, West Long Branch, NJ, in 1963, the M.S. degree in electrical engineering from New York University (NYU), in 1967, and has completed post M.S.E.E. degree work at NYU.

From 1956 to 1959, he served as the Site Chief in the Signal Corps of the Holenstadt Microwave Radio Station, Germany. Since February 1995, he has been Acting Director of the Physical Sciences Directorate of the U.S. Army Research Laboratory, Fort Monmouth, NJ. Prior to this appointment, he served as the Director of the Microwave/Lightwave Component Division, EPSD, for the past 18 years. He has additionally served as the Army Project Manager of the ARPA sponsored MIMIC and MAFET programs. He began his government career at the Signal Corps Engineering Laboratory (SCEL), Fort Monmouth, NJ. He is a Visiting Professor of electrical engineering at the University of Virginia, Charlottesville. He has made many significant contributions to the area of microwave/millimeter-wave components and circuits. He has authored or co-authored over 40 reports and publications, and has pioneered the use of optimal seeking CAD to design microwave circuits, authoring a program called DEMON. He is known for his development of MIC's and MMIC's.

Mr. Gelnovatch has served as the president of the IEEE Microwave Theory and Techniques Society (1989), and has been a member of the Electrical Engineering Department Industrial Advisory Board, University of Virginia, Charlottesville, since 1995. He currently serves as an associate editor of *Microwave Journal*. In 1974, he visited Russia on an IEEE exchange program, visiting many unclassified institutes. He is currently the Army's Principal member of the JDL/Defense Reliance Technology Panel for Electron Devices, and the Army member of the DoD Advisory Group on Electron Devices, since 1965. He was the recipient of the 1972 Army Research and Development Award, and the 1990 Army Meritorious Civilian Service Award.



N. WALTER COX AWARD
Dr. Reynold S. Kagiwada

The N. Walter Cox Award has been established in recognition of the qualities of N. Walter Cox and his service to the MTT Society prior to his untimely death in 1988. It is given periodically to a Society Volunteer whose efforts on behalf of MTT-S best exemplify his spirit and dedication.

This year's recipient is Dr. Reynold S. Kagiwada. The citation reads: "FOR EXEMPLARY SERVICE, GIVEN IN A SPIRIT OF SELFLESS DEDICATION AND COOPERATION."

Reynold S. Kagiwada (M'72–SM'79–F'89) received the B.S., M.S., and Ph.D. degrees from the University of California at Los Angeles (UCLA), in 1960, 1962, and 1966 respectively.

From 1966 to 1969, he was an Assistant Professor in Residence at UCLA. From 1969 to 1972, he was an Assistant Professor at the University of Southern California. In 1972 he joined TRW, Redondo Beach, CA, where he was the Assistant Program Manager, responsible for the fabrication, testing, assembly, and packaging of the MMIC chips on the DARPA MIMIC Program, and is currently the Advanced Technology Manager for Microwave Technology, where he is responsible for coordinating internal and external technology development activities and new business for RF Products and Advanced Microelectronics. He has co-authored 45 technical papers and holds eight patents.

Dr. Kagiwada is a member of Old Crows, Sigma Pi Sigma, and Sigma Xi. He has served the MTT-S Society in a number of key positions in the microwave symposia and AdCom. He was editor of the *MTT-S Newsletter* (1984–1987), and chaired a number of AdCom committees dealing with education, budget, and long-range planning before his election as vice-president in 1991 and MTT-S President in 1992. He has also been very active in the MTT-S International Microwave Symposia over the years, and has served as technical program chairman (1987 and 1989), and finance chairman (1994), has served on the Steering Committee of the Microwave and Millimeter-Wave Monolithic Circuits Symposium as local arrangements chairman (1984), vice-chairman (1986), finance chairman (1987), technical program chairman (1988), and chairman (1989), and has served on the IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society AdCom as secretary/treasurer (1982–1988), publication chairman (1979), and technical program chairman (1983) of the IEEE International Ultrasonics Symposium. He was the Gold Medal Recipient for the 1985 TRW Ramp Technology Transfer Award, and received the ESG Chairman's Award for Innovation in 1991.

VIII. Presentation of New IEEE Fellows

Twelve MTT-S members who were evaluated by our Society were elected to the grade of Fellow, effective 1 January 1997. Another eleven MTT-S members who were evaluated by other IEEE Societies were also elected to the grade of Fellow.

The grade of Fellow is conferred in recognition of unusual professional distinction. It is awarded at the initiative of the IEEE Board of Directors after a rigorous nomination and evaluation process. Individuals receiving this distinction have demonstrated extraordinary contributions to one or more fields of electrical engineering, electronics, computer engineering, and related sciences. This grade is not conferred automatically on nomination; only a fraction of those nominated are honored by elevation to the grade of IEEE Fellow.

Ted Saad, Honorary Life Member of the MTT-S AdCom, introduced the following ten new members who elected to receive their certificates at the 1997 IMS Awards Banquet in Denver, Colorado.

H. Clark Bell: For advancements in synthesis techniques and development of new prototype networks for microwave filters.

Kazuhiko Honjo: For contributions to the development of gallium–arsenide integrated circuits.

Asher Madjar: For contributions to large-signal modeling of MESFET's.

Toshio Nishikawa: For contributions to the development of microwave devices for mobile communication systems based on low-loss dielectric ceramics.

Anthony M. Pavio: For developments in broad-band active and passive GaAs monolithic mixers, and for contributions to microwave circuit technology.

Roger D. Pollard: For contributions to the development of microwave and millimeter-wave measurements, and active device characterization.

S. Michael Saad: For contributions to the analysis, design, and development of waveguide components.

Alwyn J. Seeds: For contributions to the development of microwave photonic devices and systems.

Richard V. Snyder: For contributions to the development of high-power miniature stopband filters and extremely wide-band bandpass filters for microwave applications.

Cheng Paul Wen: For contributions to the invention and the development of coplanar-waveguide-based microwave integrated-circuit and monolithic-microwave integrated-circuit techniques.