1984 MTT-S Awards

DON PARKER, FELLOW, IEEE

THE FOLLOWING AWARDS were presented at the Annual Symposium Banquet by MTT-S President, H. George Oltman, Jr.:

Microwave Career Award—John R. Pierce
Microwave Prize—Reinmut K. Hoffmann
Johann Siegl
Microwave Application Award—Paul J. Meier
Distinguished Service Award—Alvin Clavin
Distinguished Microwave Lecturer—Stephen F. Adam

In addition to the above awards, IEEE Centennial Medals were presented to 19 members of MTT-S in recognition of their contributions to the Society and its areas of technology. Bruno Weinschel, Board Candidate for 1985 IEEE President-Elect, presented Fellow Awards to five members of MTT-S. President Oltman also presented the Past President's Pin to Charles T. Rucker. Certificates of Recognition were given to Steven March, Past Editor of the MTT *Newsletter* (1981–1983), Harlan Howe, Chairman, Ralph Levy, Technical Program Committee Chairman, and Gordon P. Riblet, Co-Chairman, Technical Program Committee of the 1983 MTT-S Symposium. Martin Schneider was given a Certificate of Recognition for stimulating the organization of four chapters of MTT-S. Yoshihiro Konishi was given a Certificate of Recognition for his contribution as a member of AdCom during 1983.

MTT Society Awards

Microwave Career Award

The Microwave Career Award is presented aperiodically to an individual for a career of meritorious achievement and outstanding technical contributions in the field of microwave theory and techniques. The 1984 Career Award was presented to John R. Pierce in recognition of his contributions to the field over the past 50 years.

Dr. Pierce has made major and fundamental contributions to the development of high-frequency electron tubes, particularly traveling-wave tubes. He has been granted more than 80 patents for his inventions in electron tubes and communication circuits, especially electron multipliers, electron guns, and microwave tubes. The "Pierce Gun," built to design principles laid down by him, is an ubiquitous device in modern electronics.

In 1954, Dr. Pierce analyzed the possibilities of radio relay by way of an artificial satellite, and in 1955, two years before the first satellite, offered the first concrete proposals for satellite communications. The Echo 1 satellite embodied his ideas. He was instrumental in initiating the Echo program, and the east coast ground station was constructed in his department. Telstar resulted from satellite work that he initiated.

His career interests, responsibilities, and influence spanned such fields as radio, electronics, acoustics and vision, mathematics, economic analysis, psychology, and even computer music. Dr. Pierce has published nearly 400 papers and articles, and a number of science fiction stories, some published under the name of J. J. Coupling.

From 1963 to 1966, he served as a member of the President's Science Advisory Committee. He has been a Trustee of the Aerospace Corporation and of the Battelle Memorial Institute. Dr. Pierce has been granted ten honorary degrees, including a doctor of engineering from the University of Bologna in Italy in 1974.

Some of his published books include *Theory and Design of Electron Beams* (1949), *Traveling Wave Tubes* (1950), *Electrons, Waves and Messages* (1956), *Symbols, Signals and Noise* (1961), *Electrons and Waves* (1964), *Quantum Electronics* (1966), *Waves and Messages* (1967), *The Beginnings of Satellite Communications* (1968), *Science, Art and Communication* (1968), *Almost All About Waves* (1974), *Introduction to Communication Science and Systems* (1980), *Signals, the Telephone and Beyond* (1981), and *Information Technology and Civilization* (1983).

Dr. Pierce's Career Award citation reads, "For a Career of Meritorious Achievement and Outstanding Technical Contributions in the Field of Microwave Theory and Techniques." The award includes a plaque, a certificate, and $1000.

John Robinson Pierce (S'35–A'38–SM'46–F'48–LF'76) was born March 27, 1910, in Des Moines, IA. He received the B.S., M.S., and Ph.D. degrees in electrical engineering in 1933, 1934, and 1936, respectively, from the California Institute of Technology, Pasadena, CA.

He was employed by Bell Telephone Laboratories from 1936 to 1971. He progressed from a member of the Technical Staff to Director of Electronics Research (1952–1955), and eventually to Executive Director of the Research and Communications Sciences Division (1965–1971). From 1971 to 1980, he was a Professor at the California Institute of Technology. From 1979 to 1982, he served as Chief Technologist at the Jet Propulsion Laboratory. As of December 1983, he has been with the Department of Music at Stanford University.

Dr. Pierce is a Life Fellow of the IEEE, a Fellow of the American Physical Society, a Fellow of the Acoustical Society of America, a Member of the American Academy of Arts and Sciences, the American Philosophical Society, the National Academy of Engineering, the National Academy of Sciences, and is a Foreign Member of the Royal Academy of

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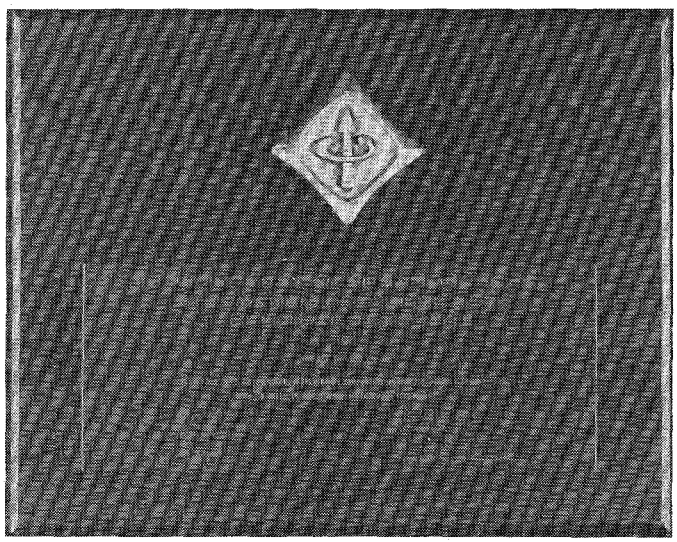
Sciences (Sweden). He is also a member of Tau Beta Pi and Eta Kappa Nu.

Dr. Pierce has received a number of honors and prizes during his career. These include the IRE Morris N. Liebmann Memorial Prize in 1947, the IEEE Edison Medal in 1963, and the IEEE Medal of Honor in 1975. He also received the Stuart Ballentine Medal from the Franklin Institute (1960), the Certificate of Achievement from the American Astronautical Society (1961), the H. H. Arnold Trophy as the Aerospace Man of the Year from the Air Force Association (1962), the Golden Plate Award of the Academy of Achievement (1962), and the General Hoyt S. Vandenberg Trophy from the Arnold Air Society (1962). Dr. Pierce also received the National Medal of Science in 1963, the Valdemar Poulsen Gold Medal from the Danish Academy of Technical Sciences in 1963, the H. T. Cedergren Medal in 1964, and the John Scott Award from the Franklin Institute in 1974. He has also been the recipient of the Marconi Award (Silver Medal) in 1974, the National Academy of Engineering Founder's Award in 1977, and the Marconi International Fellowship in 1979.

Microwave Prize

The Microwave Prize is awarded annually for the paper making the most significant contribution in the field of interest to the Society among those published in an IEEE publication during the year ending June 30th. The 1984 Microwave Prize was awarded for the papers, "Microstrip-Slot Coupler Design—Part I: *S*-Parameters of Uncompensated and Compensated Couplers" and "Microstrip-Slot Coupler Design—Part II: Practical Design Aspects," IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, vol. 30, pp. 1205–1216, August 1982.

The authors Reinmut K. Hoffmann and Johann Siegl each received a certificate and a check for $150. A biography of each author and a copy of the certificate follow.



THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Microwave Theory and Techniques Society
1984 Microwave Career Award
to
John R. Pierce
for a career of meritorious achievement and outstanding technical contributions in the field of microwave theory and techniques.

FOUNDED NEW YORK 1884

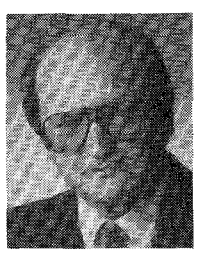
May 31, 1984

MICROWAVE THEORY AND TECHNIQUES

Reinmut K. Hoffmann, was born in Hof/Saale, Germany, on July 9, 1942. He received the Dipl.-Ing. degree in electrical engineering from the Technical University in Munich, Germany, in 1967.

In October 1967, he joined the Central Communications Laboratories of Siemens AG in Munich, where he was engaged in the development of microwave integrated-circuit components and in research in microstrip transmission lines and couplers. Since 1973, he has been head of a development group for MIC components, such as mixers, amplifiers, phase shifters in radar and communication equipment, and for computer-aided design methods for microwave integrated circuits.

Mr. Hoffmann is author of the book *Integrierte Mikrowellen-schaltungen* ("Microwave Integrated Circuits") published by Springer-Verlag, Berlin, Germany, in June 1983.



Johann Siegl was born in Landshut, Germany, on June 5, 1947. He received the Ing. (grad.) degree from the Ingenieurschule München, Germany, in 1970 and the Dipl.-Ing. degree from the Technical University in Berlin in 1973.

From 1973 to 1978, while at the Institute of High-Frequency Engineering, he was a Research and Teaching Assistant at the Technical University in Berlin. He has been engaged in investigations into the properties of slot lines and finlines in the millimeter-wave frequency range. In 1978, he received the Dr.-Ing. degree from the Technical University in Berlin. At the beginning of 1979, he joined the Communications Group at Siemens AG in Munich, his first assignment being the development of tools for the computer-aided design of microwave integrated circuits (including planar transmission lines, discontinuities, couplers, appropriately terminated multiconductor systems), and the practical verification of the tools. Since 1981, he has been involved in the development of high-speed PCM transmission systems.

Mr. Siegl is now a Professor of Electrical Engineering (circuit design, high-frequency circuit design, and components for optical transmission systems) at the Fachhochschule Nürnberg.

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Microwave Theory and Techniques Society
1984 Microwave Prize
to
Reinmut K. Hoffmann

for a significant contribution in the field of endeavor of the IEEE MTT Society in the paper, co-authored by Johann Siegl, entitled "Microstrip-Slot Coupler Design-Part I: S-Parameters of Uncompensated and Compensated Couplers" and Part II: Practical Design Aspects," published in the IEEE Transactions on Microwave Theory and Techniques, Volume MTT-30, Number 8, August 1982.

May 31, 1984

MICROWAVE THEORY AND TECHNIQUES

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Microwave Theory and Techniques Society
1984 Microwave Prize
to
Johann Siegl

for a significant contribution in the field of endeavor of the IEEE MTT Society in the paper, co-authored by Reinmut K. Hoffmann, entitled "Microstrip-Slot Coupler Design-Part I: S-Parameters of Uncompensated and Compensated Couplers" and Part II: Practical Design Aspects," published in the IEEE Transactions on Microwave Theory and Techniques, Volume MTT-30, Number 8, August 1982.

May 31, 1984

MICROWAVE THEORY AND TECHNIQUES

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Microwave Theory and Techniques Society
1984 Microwave Application Award
to
Paul J. Meier

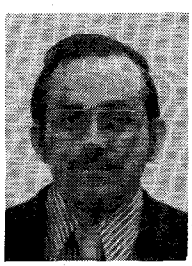
for pioneering development of Fin-Line Transmission Medium and Related Components using Photolithographic Techniques.

May 31, 1984

MICROWAVE THEORY AND TECHNIQUES

Microwave Application Award

The Microwave Application Award is presented aperiodically to an individual for an outstanding application of microwave theory and techniques. Paul J. Meier was named recipient of the 1984 Microwave Application Award for pioneering development of finline transmission media and related components using photolithographic techniques. Dr. Meier received a certificate and a check for $300. A brief biography and a copy of the certificate follow.



Paul J. Meier (S'55–M'59–SM'69) was born in New York, NY, in 1936. He received the B.E.E. degree from Manhattan College, New York, in 1958, and the M.S. degree from Long Island University, Greenvale, NY, in 1969.

From 1958 to 1965, he was a Development Engineer, and later a Senior Development Engineer at Wheeler Laboratories, which is now part of the Hazeltine Corporation. There his work included the study of dielectric-lined and periodically loaded circular waveguides and their application to phased-array radiators and polarization converters.

In 1966, he joined AIL, which is now a division of Eaton Corporation. There, as a Project Engineer in the Radar Techniques Department, he was responsible for the development of phased-array antenna elements and ferrite phase shifters. Later at AIL, he served as a Project Engineer in the Applied Electronics Division on programs resulting in the development of a high-power solid-state switch, an *X*-Band MIC sweeping receiver, and a multibeam quasi-optical millimeter receiver. He is currently a Staff Consultant in the Receiver Systems & Technology Department, engaged in the development of millimeter-wave hybrid and monolithic integrated circuits. He holds a U.S. Patent for Integrated Fin-Line and has published over 30 papers concerning microwave and millimeter-wave components.

Mr. Meier is a member of Eta Kapp Nu. He has served on the MTT-S New York/Long Island Chapter from 1970 to 1975 (Chairman 1972–1973) and the MTT-6 Technical Committee from 1977 to 1980. He is presently a member of the Standards Committee on Planar Transmission Lines.

Distinguished Service Award

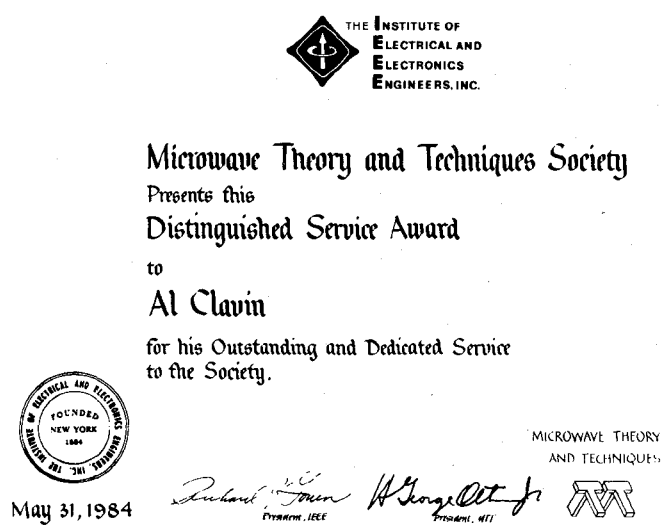
The Distinguished Service Award is a relatively new IEEE award and was presented only for the second time this year. The award is given to honor an individual who has given outstanding service for the benefit and advancement of the Microwave Theory and Techniques Society.

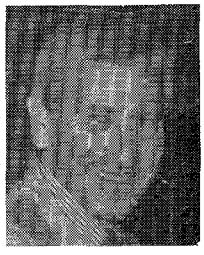
The second recipient of the Distinguished Service Award is Alvin Clavin. In addition to many years of service to MTT-S, Mr. Clavin initiated new ideas that helped orient the direction of MTT-S. For example, he established the *Newsletter* as a forum for membership opinion. He organized the first Symposium panel session on professional activities. He also organized and moderated technology forecasting and assessment panel discussions for the 1975 and 1976 International Microwave Symposia. He sponsored the contest that led to our unique MTT logo and he started the MTT Directory.

Mr. Clavin was elected to the MTT-S Administrative Committee in 1967. He has served as Editor of the *News-*

letter, Vice-President in 1971, and President of the Administrative Committee in 1972. He has served on the Technical Program Committee for many MTT Symposia and was the keynote speaker of the 1973 International Microwave Symposium held in Boulder, CO. Mr. Clavin was Publicity Chairman of the 1970 Symposium and Chairman of the Steering Committee of the 1981 Symposium in Los Angeles. He has served on the MTT-S Awards Committee for several years. Mr. Clavin was very active in bringing about IEEE Constitutional changes which allowed for professional activities by the Institute. He served as the MTT Society's representative to the IEEE Technical Activities Board (TAB). Mr. Clavin has also served as Vice-Chairman and Chairman of the Los Angeles Chapter of MTT-S.

Mr. Clavin's citation reads, "For his Outstanding and Dedicated Service to the Society." He received a plaque.





Alvin Clavin (A'51–M'56–SM'60–F'68) was born in Los Angeles, CA, on June 17, 1924 and received his B.S.E.E. degree in 1948 from the University of California at Los Angeles.

He began his career at Hughes Aircraft Company, Culver City, CA, as a member of the Technical Staff. His duties included the design of radomes, antennas, and other microwave components. He received the E.E. degree in 1954 from UCLA on a Hughes Fellowship. In 1956, he helped found Rantec Corporation, Calabasas, CA, where he served as Manager of the Microwave Department and a Corporate Director. He rejoined Hughes Aircraft Company, Missile Systems Division, in 1966 and became Manager of the Radar Laboratory. In 1981, Mr. Clavin was appointed Manager of the Technology Development Staff in the Missile Development Division. He retired from Hughes on July 1, 1983.

Distinguished Microwave Lecturer

The title Distinguished Microwave Lecturer was previously known as National Lecturer. The title was changed to reflect the fact that the lectures are now given to MTT-S Chapters throughout the world and not solely within the United States.

The Distinguished Microwave Lecturer is selected annually by AdCom to present a lecture to MTT-S Chapters on a subject of important and current interest to members. He must be an individual who has made significant contributions in the field of his talk. The 1984 Distinguished Microwave Lecturer was Stephen Adam. The title of his lecture was "Modern Microwave Measurements." As of July 1, 1984, Dr. Adam has presented his talk 39 times, including lectures in Japan.

A brief biography and photograph of his plaque follow.

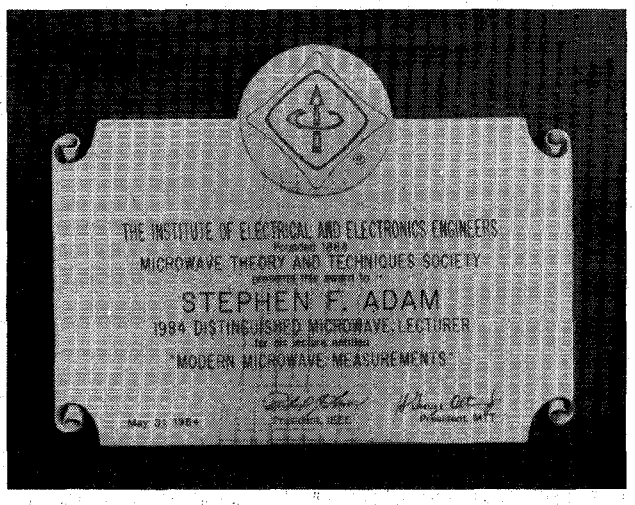
Stephen F. Adam (M'59–SM'70–F'81) is a native of Hungary. He holds B.S. and M.S. degrees in mechanical engineering, M.S. and Ph.D. degrees in electrical engineering, (1952, 1955, and 1965, respectively) and a California Teaching Life Credential.

He has been involved in microwave research and development since 1952. He is a consultant with Adam Consulting in Los Altos, CA, in the field of microwave measurements and techniques. He was formerly employed by Hewlett-Packard Company in various R&D and engineering management positions since 1957. His last assignment was as the Principal Microwave Engineer of the Microwave and Communications Instruments Products Group.

He was 1980 President of the Microwave Theory and Techniques Society of IEEE, Administrative Committee Member since 1973, Member of the Fellow Awards Committee, 1983/84 IEEE/MTT-S Distinguished Microwave Lecturer, Past Chairman of the Standards Coordinating Committee, Technical Program Committee Chairman and Member since 1973, Member of the Transnational Relations Committee of the Technical Activities Board, Guest Editor of the IEEE TRANSACTIONS OF MICROWAVE THEORY AND TECHNIQUES, Chairman of the Morris E. Leeds Award subcommittee, Chairman of the Instrumentation and Measurements Society Awards Committee, Member of the Association of Old Crows, Member of the Executive Committee of the Conference on Precision Electromagnetic Measurements, Past Secretariat to the Interna-

tional Electrotechnical Commission, Technical Committee 66/WG-5, which dealt with microwave measurements and is a recepient of the 1984 IEEE Centennial Medal.

Dr. Adam is the author of the book *Microwave Theory and Applications* (Prentice Hall, 1969). He has several patents in the microwave field, some more pending. He is the author of many articles dealing with microwave measurements and related subjects.



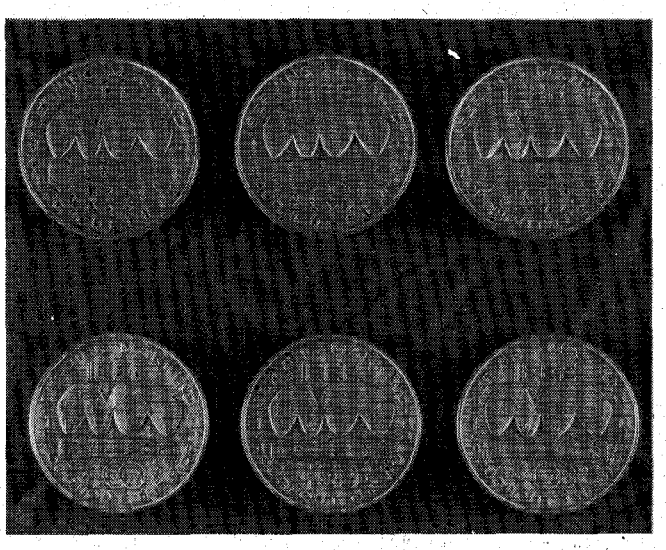
Centennial Medals

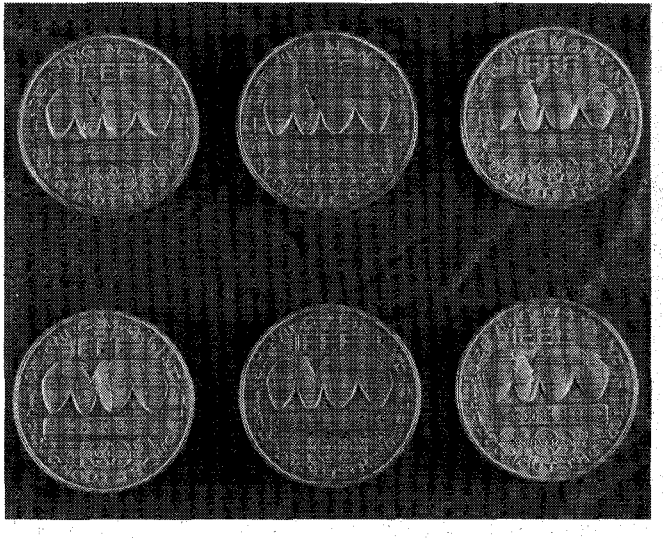
1984 is the 100th year of the Institute of Electrical and Electronic Engineers. In commemoration of this Centennial Year, the Institute awarded Centennial Medals to 1984 of its members. Each Society and section of the Institute were allocated a specified number. The Microwave Theory and Techniques Society was allocated 19 medals. A special committee was appointed to select the 19 members of MTT-S to be recognized for their contributions to the Society and the profession. The names of those who were awarded Centennial Medals are listed below alphabetically.

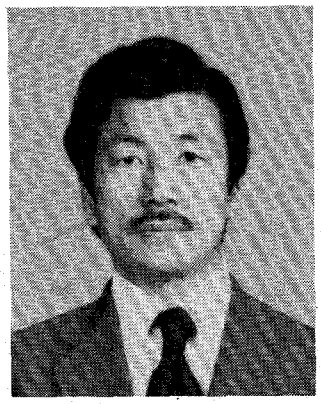
Stephen F. Adam	George P. Rodrigue
Alfred C. Beck	Fred S. Rosenbaum
Alvin Clavin	Charles T. Rucker
Seymour B. Cohn	Theodore S. Saad
Marion E. Hines	Phillip H. Smith
Donald D. King	Harold Sobol
William W. Mumford	Richard A. Sparks
Arthur A. Oliner	Kiyo Tomiyasu
Don Parker	Lawrence Whicker
	John R. Winnery

Two awardees did not receive their medals at the banquet. Phillip Smith's health did not permit his attendance. His medal was presented to him at the New Jersey Section Award Banquet in April. Donald D. King, a Past President of MTT-S died this spring. His medal was given to his widow.

Leo Young, Past President of IEEE and a Past President of MTT-S, was also nominated by MTT-S to receive the Centennial Medal. However, he was awarded his medal by the IEEE. It was presented to him at the Boston Centennial Convocation at the time the medal was presented to other IEEE Presidents. In recognition of his sustained and significant contributions to the MTT-S, Leo's medal was also presented to him at the banquet where he could be honored by his many MTT-S friends. A photograph of the 19 medals and a sample certificate are shown below.







Prof. Eikichi Yamashita

"For contributions to the analysis and design of microstrip networks."

The following members of IEEE were elected Fellows with the support of MTT-S but were presented their Fellow Awards elsewhere.

Mr. Louis F. Moose, "For contributions to microwave relay communication systems."

Dr. Gunther U. Sorger, "For innovative contributions to the development of precision electronic measuring instruments and standards."

Dr. Kunihiro Suetake, "For contributions to the theory and techniques of microwave absorbers and the introduction of educational technology."

1984 IEEE MTT-S International Microwave Symposium Keynote Address

JOHN A. YOUNG

THE THEME of the 1984 MTT-S International Microwave Symposium was "Expanding Microwave Horizons." The conference theme was a most appropriate one. Today's working engineers need to stretch their thinking, but in some nontechnical directions, because the factors most crucial to their success—and their industry's future—are *not* solely or even primarily technical in nature.

Engineers today are players in a high-stakes game called international competition in high technology. It's a contest waged in a vast arena—a world marketplace that is growing in size and interdependence. The players are thousands of individual firms in the private sector. But to make things complicated, hundreds of national public policies influence what those private-sector firms can do. So this is a game where government helps formulate the rules.

To develop a strategy for winning in this competition, the President's Commission on Industrial Competitiveness was formed in the fall of 1983. Its 30 commissioners plus staff are grappling with the question of what makes an industry—and a nation—able to compete successfully in world markets. And while many of the details studied are purely American, the questions asked and factors examined are really quite universal.

Due to report in December of 1984, the Commission members have come to one, definitive conclusion: The only people who think that the competitive question has a simple answer are politicians running for office. A nation's ability to compete is a complex subject. It's determined by many elements—all interrelated.

Since complexity doesn't scare engineers, they should find some value in going through the following factor analysis of competitiveness. Such an exercise will help them better understand what trends and forces affect nations and their ability to compete in high-technology markets. Better yet, perhaps it will spur them to consider some issues to which they haven't yet given much time.

Factor One: The "Givens"

The first factor can be labelled as "givens." They're things that already exist, like natural resources, infrastructure—roads and communications networks—and the size of the national market. When these are present in abundance, they become advantages that have a good-news–bad-news character. Their existence is a positive. But the competitive ease afforded can make a country somewhat wasteful and slow to respond to change.

Today, both America and Europe face strong challenges from nations that have a severe scarcity of natural resources—Japan and all the "new Japans" in the Pacific Rim. *All* their energy has to be imported. And just a few decades ago, these same nations had little in the way of roads or communication systems either. Now they're giving us a run for the money in technology.

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