

*Ex-Officio Members:*

1977 President: L. R. Whicker, Naval Research Laboratory  
 1978 President: H. Sobol, Rockwell International  
 1979 President: D. Parker, Hughes Aircraft Company

*Honorary Life Members:*

A. C. Beck  
 S. B. Cohn  
 D. D. King  
 W. W. Mumford  
 A. A. Oliner  
 K. Tomiyasu  
 T. S. Saad

## 1979 MTT Awards

H. SOBOL, FELLOW, IEEE

AT THE annual Symposium Banquet, MTT-S President Steve Adam presented the following MTT Society awards announced in October of 1979.

Microwave Career Awards—{ Seymour Cohn  
 Werner J. Kleen }

Microwave Prize—{ Eric R. Carlson  
 Martin V. Schneider  
 Thomas F. McMaster }

Microwave Application Award—Erwin Belohoubek

IEEE President Leo Young presented Fellow Certificates to E. G. Cristal, H. Howe, R. H. Knerr, and J. D. Rhodes. J. B. Horton, a former president of AdCom and K. J. Button, a present member and organizer of the International Conference on Submillimeter Waves and their Application received Distinguished Service Awards.

### 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. Two outstanding individuals, Seymour Cohn and Werner J. Kleen were named in 1979 to receive Microwave Career Awards in recognition of their extensive contributions.

Dr. Cohn began his microwave activity at the Harvard Radio Research Laboratory during World War II and continued at Sperry, Stanford Research Institute, Rantec, and for the past thirteen years has served as an independent consultant to the microwave industry. He has made many very significant contributions to the art and science of microwaves in field theory, waveguide structures, strip-

line, and filters. He is an IEEE Fellow, served as MTT AdCom Chairman, and received the Microwave Prize and the IEEE Lamme Gold Medal.

His Career Award Citation reads, "for a career of meritorious achievement and outstanding technical contributions in the field of microwave theory and techniques." As a recipient of the Microwave Career Award, Dr. Cohn received a certificate, plaque, and a check for \$500. Further biographical information on Dr. Cohn and a copy of his certificate follows.



**Seymour B. Cohn** (S'41-A'44-SM'51-F'59) was born in Stamford, CT, on October 21, 1920. He received the B.E. degree in electrical engineering from Yale University, New Haven, CT, in 1942, and the M.S. and Ph.D. degrees in engineering sciences and applied physics from Harvard University, Cambridge, MA, in 1946 and 1948, respectively.

From 1942 to 1945 he was employed as a Special Research Associate by the Radio Research Laboratory of Harvard University, and also represented that laboratory as a Technical Observer with the U.S. Air Force. From 1948 to 1953 he was with Sperry Gyroscope Company, Great Neck, NY, where he advanced to the position of Research Engineer. From 1953 to 1960 he was with the Stanford Research Institute, Menlo Park, CA, as Head of the Microwave Group and from 1957 as Manager of the Electromagnetics Laboratory. In 1960 he joined Rantec Division, Emerson Electric Company, Calabasas, CA, as Vice President and Technical Director. In 1967 he formed S. B. Cohn Associates, Inc., and since that date has practiced as an independent consultant to various companies in the microwave industry.

Dr. Cohn is a member of Tau Beta Pi and Sigma Xi. In 1954 he received the Annual Award for the Advancement of Basic and Applied Science given by the Yale Engineering Association. He is a former member and ex-chairman of the G-MTT Administrative Committee, and was the recipient of the G-MTT 1964 Microwave Prize. He is an Associate Editor of the Microwave Journal, and a member of the

Editorial Board of the Advances in Microwave series published by Academic Press. In 1974 he was given the Lamme Gold Medal, which is one of the six major annual awards of the IEEE.



### Microwave Theory and Techniques Society 1979 Microwave Career Award

to

Seymour B. Cohn

for a career of meritorious achievement and outstanding technical contribution in the field of microwave theory and techniques.



May 29, 1980

President, MTT

Chairman,  
MTT Awards Committee

MICROWAVE THEORY  
AND TECHNIQUES



### Microwave Theory and Techniques Society 1979 Microwave Career Award

to

Werner J. Kleen

for contributions in developing modern microwave tubes and their theory and in introducing advanced microwave technology into the European space effort.



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Dr. Kleen began his microwave career in 1936 and served as Director of the Siemens Research Laboratory in Munich, Germany. He also served as Director of the European Space Research and Technology Center in the Netherlands. He has made many contributions on classical and microwave electron tubes. He is an IEEE Fellow and has received many honors in Europe. His Career Award Citation reads, "for contributions in developing modern microwave tubes and their theory and in introducing advanced microwave technology into the European space effort." As a recipient of the Microwave Career Award, Dr. Kleen received a certificate, plaque, and check for \$500. Further biographical information on Dr. Kleen and a copy of his certificate follow.



**Werner J. Kleen** (SM'50-F'57-LF'80) studied physics at the Universities Hannover, Gottingen, and Heidelberg. He received the Dr. phil. nat. degree in 1931 and the Dr. habil. degree in 1936.

He worked until 1946 at Telefunken, Berlin, Germany. From 1946 to 1950 he worked at CSF, Paris, France; from 1950 to 1952 he was at the Instituto Nacional de Electronica, Madrid, Spain; and from 1952 to 1967 he worked at Siemens AG, where he finished as the Director of the Research Laboratory in Munich,

Germany. From 1968 to 1971 he was elected Director of the European Space Research and Technology Centre (ESTEC) of Noordwijk, the Netherlands of ESRO (now ESA). He has taught at the University of Munich, the University of Madrid, Technical University of Stockholm, and Chalmers University of Goeteborg. He is the author and coauthor of many publications and several books on classical and microwave electron tubes.

Dr. Kleen has received the Plaque of Svenska Teknolog Foereningen, the Gauss-Weber Medal of the University Gottingen, and the Ring of Honour of the Verband Deutscher Elektrotechniker (VDE). Also, he was elected Honorary Professor at the Technical University, Munich. He was one of the cofounders of the IEEE Section West Germany and was Chairman of this section from 1973 to 1978. He has served on the IEEE Fellow Committee and on the Editorial Board of Spectrum.

### 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 official IEEE publication during the year ending June 30. The 1979 Microwave Prize was awarded for the paper "Subharmonically Pumped Millimeter Wave Mixers," published in the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, vol. MTT-26, October 1978.

The authors Eric R. Carlson, Martin V. Schneider, and Thomas F. McMaster each received a certificate and a check for \$100. A copy of the certificate and brief biographies of the authors follow.



**Eric R. Carlson** (M'73) was born in Cleveland, OH, on August 26, 1941. He received the B.S., M.S., and Ph.D. degrees in physics from Yale University, New Haven, CT, in 1963, 1965, and 1972, respectively.

From 1972 to 1973 he was a Research Staff Physicist at Yale University, and in 1973 he joined the Radio Physics Research Department at Bell Laboratories, Crawford Hill, in Holmdel, NJ. He has worked primarily on circuits and solid-state devices for millimeter-wave receivers

in the 100-300-GHz frequency range and the applications of these receivers in radio astronomy and upper atmospheric measurements.

Dr. Carlson is a member of the American Physical Society.

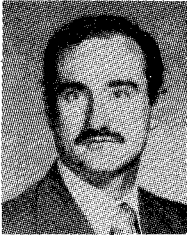


**Martin V. Schneider** (M'56-SM'71-F'76) was born in Bern, Switzerland. He received the Diploma in physics and the Doctorate in natural sciences from the Swiss Federal Institute of Technology, Zurich, Switzerland in 1956 and 1959, respectively.

From 1959 to 1961 he was a Research Assistant at the Swiss Federal Institute of Technology, and in 1961 he joined the Radio Research Laboratory at Bell Laboratories, Inc. in Holmdel, NJ. He has worked on thin film solid-state devices and circuits, Schottky barrier photocircuits. He is presently engaged in advanced work on millimeter-wave devices and circuits for

use in communication receivers and for remote sensing. He is a Visiting Professor of Electrical Engineering at the University of Virginia, Charlottesville.

Dr. Schneider is a member of the Editorial Board of MTT. He has been actively engaged in IEEE matters by serving as MTT Group Chapter Chairman and as Section Chairman for the New Jersey Coast Section of the IEEE. He enjoys hiking in his spare time and he has gone on extended bicycle trips along the canals of Burgundy and Nivernais in France.



**Thomas F. McMaster (M'77)** was born in New York City, NY, in 1944. He received the B.S.E.E. degree from Drexel University, Philadelphia, PA, in 1972, and the M.S.E.E. degree from the Polytechnic Institute of Brooklyn, Brooklyn, NY, in 1974.

He joined Bell Laboratories, Holmdel, NJ, in 1972, where he has worked on the development of millimeter-wave mixers and waveguide components, long-haul coaxial cable communication systems, and satellite Design Group in Holmdel.

Mr. McMaster is a member of Eta Kappa Nu and Phi Kappa Phi.



### Microwave Theory and Techniques Society 1979 Microwave Prize

to

E. R. Carlson  
M. V. Schneider  
T. F. McMaster

for a significant contribution to the field of endeavor of the IEEE MTT Society in their paper entitled 'Subharmonically Pumped Millimeter-Wave Mixers' published in the IEEE Transactions on Microwave Theory and Techniques, Volume MTT-26, Number 10, October 1978.



May 29, 1980

President, MTT

Chairman,  
MTT Awards Committee

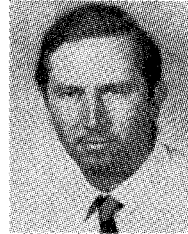
MICROWAVE THEORY  
AND TECHNIQUES



### Microwave Application Award

The Microwave Application Award is presented aperiodically to an individual for an outstanding application of microwave theory and techniques. Erwin Belohoubek was named as the recipient of the 1979 Micro-

wave Applications Award for his work in pioneering the concepts and practical implementation of internal matching of microwave transistors. Dr. Belohoubek received a certificate and a check for \$100. A copy of his certificate and a brief biography follows.



**Erwin F. Belohoubek (M'56-SM'70-F'75)** received a Diplom-Ingenieur degree in 1953 and the Ph.D. degree in electrical engineering in 1955 from the Technical University in Vienna, Austria. From 1953 to 1955 he worked as a Research Assistant at the Institute for High-Frequency Techniques at the Technical University.

In 1956 he joined the RCA Tube Division in Harrison, NJ, as Research Engineer and, in 1957, transferred to the David Sarnoff Research

Center, Princeton, NJ, as a Member of Technical Staff, where he worked on the development of magnetrons, electrostatically and magnetically focused traveling-wave tubes, and a crossed-field microwave delay tube. In 1969 he was put in charge of a group working on microwave hybrid integrated circuits. Currently, as Head of Microwave Circuits Technology at the Microwave Technology Center, he is responsible for the development of passive and active MIC circuits, including high-power transistor amplifiers, multipliers, linear bipolar and FET amplifiers, active microwave filters, various solid-state radars, and other microwave subsystems. He holds eight patents and has written more than 25 papers in the areas of microwave techniques, traveling-wave tubes, and microwave integrated circuits.

Dr. Belohoubek received an Outstanding Performance Award from the RCA Electronic Components Division in 1963 and an RCA Laboratories Achievement Award in 1967.



### Microwave Theory and Techniques Society 1979 Microwave Application Award

to

Erwin F. Belohoubek

for contributions  
in the area of internal matching  
of microwave transistors.



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