

MICROWAVE THEORY AND TECHNIQUES SOCIETY

1975 MICROWAVE CAREER AWARD

TO

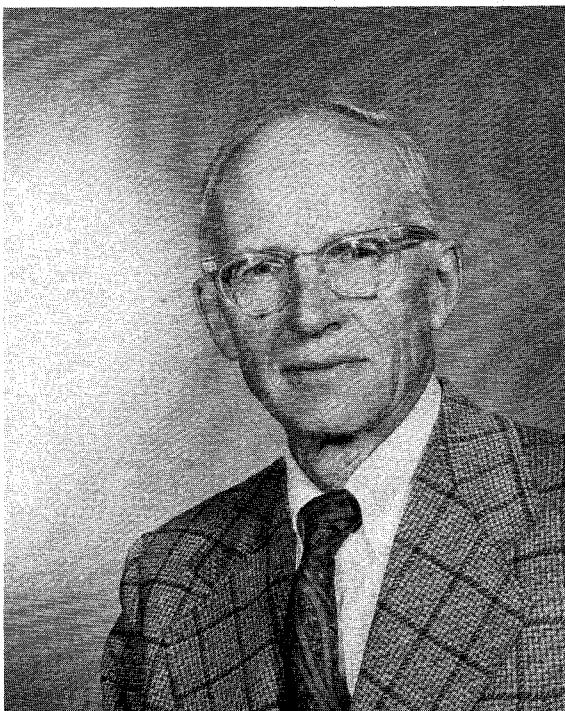
Henry J. Riblet

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

Henry J. Riblet received the B.S. degree in 1935, a Master's degree in 1937 and the Ph.D. degree in 1939, all from Yale University and all in mathematics.

He taught mathematics for three years, first at Adelphi College and then at Hofstra College, both on Long Island. It was then that he received his introduction to microwave circuits from W. W. Hanson for whom he made some of the first calculations of the resonant frequencies of Klystron cavities. At Bill Hanson's suggestion, he joined the Radiation Laboratory where he worked under L. C. Van Alta as head of that section of the antenna group specializing in linear arrays. When the war ended, he joined the Submarine Signal Co. as head of their antenna group. When the Submarine Signal Co. was merged into the Raytheon, he, with three of his associates--T. S. Saad, N. Tucker, and R. Williston, formed the Microwave Development Laboratories where he has been employed since as President and Treasurer. He has also served since (at various times) as an officer and director of the Ferrotac Corp., Parametric Industries, and Americon Microwave in the formation of each, of which he played some part. From 1960 to 1963 he taught at Harvard University with the title of Professor of Engineering Practice.

His interest in electromagnetic theory, mechanical devices and applied mathematics has resulted in papers concerned with the theory and design of microwave circuits, as well as a number of patents for antennas and R. F. components. This includes the design and/or work on the theory of omni-directional antennas, the slotted dipole, multi-hole topwall directional couplers, side and topwall 3 db hybrids, crossguide couplers, rotary



joints, waveguide switches, stepped impedance transformers, direct coupled and inter-digital filters and stepped waveguide twists.

More recently he has written a series of notes concerned with the characteristic impedance of coaxial structures in which one or both of the conductors is rectangular and has just completed the development of a class of reactively compensated optimum impedance transformers.

1975 MICROWAVE PRIZE

TO K

W. F. G. Mecklenbräuker

T. E. Rozzi

For the best paper on a microwave subject published during the previous year: "Wide-band Network Modeling of Interacting Inductive Irises and Steps," MTT Transactions, Vol. MTT-23, pp. 235-246.



Wolfgang F. G. Mecklenbräuker was born in Dortmund, Germany, on June 16, 1938. In 1964 he received the Dipl.-Ing. degree in Electrical Engineering from Aachen University, Aachen, Germany, and in 1969 the Dr.-Ing. degree in Electrical Engineering from Darmstadt University, Darmstadt, Germany.

He was Research Associate at Darmstadt University from 1964 to 1970, where he worked on network theory and system theory. In 1971 he joined the Philips Research Laboratories, Eindhoven, The Netherlands. During 1975 he was a Visiting Scientist on sabbatical leave at the Massachusetts Institute of Technology, Cambridge. His research interests are in network theory and digital signal processing.

Dr. Mecklenbräuker is a member of the Nachrichtentechnische Gesellschaft (NTG), Germany

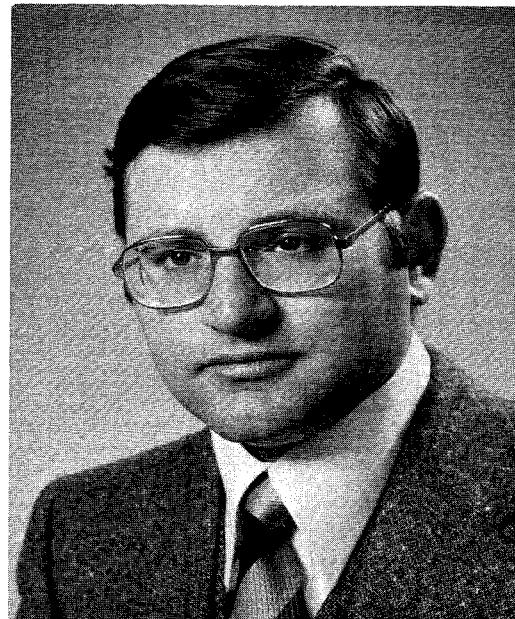
Tullio E. Rozzi was born in Civitanova, Italy on Sept. 13, 1941. In 1965 he obtained the degree of "dottore" in physics at the University of Pisa, Italy, and in 1968 the Ph.D. degree in Electrical Engineering at the University of Leeds, U.K.

While at Leeds University, he was engaged in research in the synthesis of microwave directional couplers in TEM-line and waveguide as well as in the synthesis of coaxial low-pass filters.

Since 1968, Dr. Rozzi is a research scientist at the Philips Research Laboratories, Eindhoven, the Netherlands. In this institute, he has worked at various problems in the field theory of guided waves and in circuit theory, such as: the nonlinear propagation on an optical waveguide, the wide-band network representation of waveguide discontinuities and the algebraic invariants of multiport networks in a linear embedding.

During 1975 Dr. Rozzi has spent a sabbatical year as a visiting Research Professor at the Electromagnetics Laboratory, University of Illinois at Champaign-Urbana. At Illinois he has worked on the problems of transverse field confinement in a d.h. strip geometry laser, of coupling between two antennas on an infinite ground plane and of propagation in a waveguide loaded with resonant irises.

Since 1974 Dr. Rozzi is a senior member of the IEEE.



1975 MICROWAVE APPLICATION AWARD

TO

Joseph F. White

For an outstanding application of microwave theory and techniques in the development of practical high-power PIN diode phase shifters utilized in various phased array radars.

Joseph F. White is the Technical Director of the Device Group at Microwave Associates, Burlington, Massachusetts. He is best known for inventing the high power periodically loaded line phase shifter, a low loss technique that enabled semiconductor diodes to steer phased array antennas with tens of kilowatts of power per element. He directed the refinement of this method and it was chosen for the steering element control in the U.S. Safeguard System, Missile Site Radar (MSR) and later for the Perimeter Acquisition Radar (PAR). He has also performed advanced developments with numerous other microwave semiconductor duplexer, the highest power (100 KW) switch and a temperature stabilized Gunn source for communication systems.

His doctoral thesis, completed in January, 1968, at Rensselaer Polytechnic Institute, described the first application of bulk semiconductor properties for phase shifting. In addition to numerous IEEE papers for Conferences, Proceedings and Transactions he has presented many lectures and talks both in the United States and Europe. These include the Chalmers University Phased Array Seminar, Gothenberg, Sweden and the Microwave Semiconductor Intensive Course given annually at the University of Michigan. He is a member of Eta Kappa Nu, Sigma Xi, and the IEEE and a Technical reviewer for the Microwave Journal and the MTT Transactions. Currently he is completing a book entitled "Introduction to Microwave Semiconductor Control".

