

1996 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 \$2,000. 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 his B.A. and M.A. degrees in Physics from Cambridge University England in 1953 and 1957, respectively, and the Ph.D. in Applied Sciences from London University in 1966.

From 1953 to 1959, he was with GEC, Stanmore, where he worked on a variety of systems and waveguide components. In 1959 he joined Mullard Research Laboratories, Redhill, and continued research and development on microwave components and systems. Then from 1964 until 1967 he was a member of the faculty at Leeds University.

He emigrated to the USA in 1967, and was with Microwave Development Laboratories, Natick, Mass. as Vice President of Research until 1984 when he moved to California to join KW Microwave, San Diego, CA., as V.P. Engineering.

After a short period with Remec Inc., he became an independent Consultant in July 1989, and works with several companies on a wide variety of projects, mainly in the field of passive components.

Dr. Levy is the author of more than 60 papers, 2 books, and 12 patents. He has been involved in many MTT Society activities, including Editor of the *IEEE Transactions on Microwave Theory and Techniques* during 1986-88. 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.

His most important technical contributions, evaluated mainly on the basis of being widely referenced, are in chronological order:

1961 - Invention of the Digital IFM System. 1963 - Exact Synthesis of Asymmetric Coupled-Transmission-Line Directional Couplers. 1964 - Explicit formulas for Broadband Matching Networks. 1965 - Synthesis of Distributed Lowpass 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 Multi-Aperture 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 Lowpass Filters. 1976 - Filters Having Single Extra Cross Couplings. 1979 - Generalized Multiplexer Theory (with J. D. Rhodes). 1984-88 - 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.

