

1999 PIONEER AWARD

Robert L. Eisenhart and Peter J. Kahn

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. The recipients this year of the Pioneer award are Robert L. Eisenhart and Peter J. Kahn.

The award consists of a plaque and an honorarium of \$1,000. The citation reads: "FOR APPLYING A GENERAL THEORETICAL FORMULATION AND MEASUREMENT TECHNIQUE OF DRIVING-POINT IMPEDANCE TO A DEVICE-MOUNTING STRUCTURE IN RECTANGULAR WAVEGUIDE, AND DEVELOPING A VALIDATING MEASUREMENT TECHNIQUE."

Robert L. Eisenhart (M '71, SM '92, F '95) was born in San Antonio, Texas, in 1938. He received the B.E.E. degree from Rensselaer Polytechnic Institute, Troy, New York in 1960, and the M.S.E. (1966) and Ph.D. (1970) degrees from the University of Michigan, Ann Arbor.

After graduating as a ROTC Distinguished Military Graduate from RPI, he spent two years as a Project Officer with the Research and Development Division, U.S. Army Security Agency (ASA), Arlington, Virginia, participating in the development of electronics equipment. Upon discharge in 1962, he remained with ASA as a civilian Staff Engineer in their European Headquarters, West Germany. During this period, he received a special letter of commendation from the Asst. Secretary of Defense, Eugene G. Fubini, for outstanding contributions to ASA. He returned to school in 1965, and became engaged in design of microwave circuitry, leading to waveguide circuit modeling as the basis for his thesis work. Upon completion of the doctorate, he went to California to work for Hughes Aircraft Company where his principal work was TRAPATT and IMPATT amplifier circuits. This evolved into power combining investigations, which led in 1977 to a transfer as head of the Solid State Transmitter Section, Microwave Laboratory of Hughes Missile Systems. He retired as a Chief Scientist from Hughes in 1994 and started a consulting business. While at Hughes he was honored with two Group Patent Awards and five Superior IR&D Awards for innovation and project management.



He taught a microwave course at Loyola University of Los Angeles, and was a Guest Lecturer at the University of California, Los Angeles and at the University of Michigan. He directed the research on five M.Sc. theses at UCLA and one at California State University at Northridge. He also has 38 papers in the field of microwave circuits covering a wide variety of subjects and ten patents with three pending. He is the inventor of the widely used "Eisenhart Connector".

Dr. Eisenhart is a member of IEEE Microwave Theory and Techniques Society, Antennas and Propagation Society, and the honoraries Sigma Xi, Tau Beta Pi, and Eta Kappa Nu. He was elected IEEE Fellow in 1995 "For contributions to the modeling, design, and measurement of microwave circuits and antennas."

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Dr. Eisenhart's professional Society contributions include: General Chairman of the 1999 International Microwave Symposium (IMS); Technical Program Chairman, 1994 IMS; Special Exhibits Chairman, 1989 IMS; Registration Committee, 1987 IMS; Guest Editor of MTT-S Transactions, 1981 IMS; Member of the Technical Program Committee, various IMS; and Member of MTT-S Transactions Editorial Review Board, 1971 to present. He has also given many presentations at local MTT-S Chapter meetings.

His personal interests include golf and tennis. He was a professional tennis official, highlighted by working a Davis Cup Match in 1979 and the U.S. Open in 1989. He lives in Woodland Hills, California with his wife Nancy, and has two grown sons.

Peter J. Khan (M'61-SM'79) received the B.Sc. degree in mathematics and physics, and the B.E. and Ph.D. degrees in electrical engineering, all from the University of Sydney, Australia in 1957, 1959, and 1963 respectively.

Following completion of his doctoral studies in parametric amplification, he came to the University of Michigan in Ann Arbor, Michigan, in 1963 on a Fulbright Postdoctoral Fellowship. He remained there until 1976 as an Associate Professor of Electrical and Computer Engineering and as Head of the Microwave Solid-State Circuits Group of the Cooley Electronics Laboratory. In 1976 he returned to Australia, and was Reader and Associate Professor of Electrical Engineering at the University of Queensland, carrying out research into microwave and millimeter-wave circuit design for oscillators and frequency converters, using GaAs semiconductor devices. During this period his special interests included the application of nonlinear mathematics in the analysis of microwave circuits, and the analysis of radial-line structures in rectangular waveguides.

In 1983 Dr. Khan joined the staff at the Bahá'í World Centre in Haifa, Israel, as a religious volunteer. Since 1987 he has been a member of the Universal House of Justice, the nine-person international elected body which coordinates the activities of the 179 National Assemblies of the Bahá'í Faith throughout the world.

