

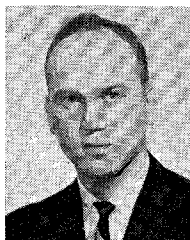
# Contributors



**Robert L. Brooke** was born in Chicago, Ill., on July 8, 1935. He received the B.S. degree in physics from the Michigan Technological University, Houghton, Mich., in 1957, and the M.S. degree in physics from the University of Colorado,

Boulder, Colo., in 1962.

He served in the U. S. Army Corps of Engineers from 1959 to 1961, and joined the staff of the National Bureau of Standards, Radio Standards Laboratories, Boulder, in 1962. He has engaged in research on high-frequency inductance, resistance, time-domain reflectometry, and, at the present time, swept-frequency techniques and resistive thin-film structures.



**Edward G. Cristal** (S'58-M'61-SM'66) was born in St. Louis, Mo., on January 27, 1935. He received both the B.S. degree in electrical engineering and the A.B. degree in mathematics from Washington University, St. Louis, in 1957.

He received the M.S. degree in electrical engineering from Washington University in 1958, and the Ph.D. degree in electrical engineering from the University of Wisconsin, Madison, in 1961.

He joined the staff of the Electromagnetic Techniques Laboratory at Stanford Research Institute, Menlo Park, Calif., in 1961 and has since been engaged in the research and development of microwave components.

Dr. Cristal is a member of the Scientific Research Society of America.



**José E. Cruz** was born in Tapicicita, N. Mex., on December 11, 1929. He received the B.S. degree in engineering physics from the University of Colorado, Boulder, in 1957.

During the 1957-1958 IGY he was in charge of the night air-

glow and aurora observatory for the South Dakota School of Technology, Rapid City, in collaboration with the National Bureau of Standards. He was employed as a microwave engineer by Goodyear Aircraft in 1959, work-

ing on high-resolution airborne radars. From 1960 to 1962 he worked for RCA, Van Nuys, Calif., on analog and digital systems. Since 1962 he has been with the National Bureau of Standards, Radio Standards Laboratories, Boulder. He has been project leader in design and development of coaxial impedance standards, UHF all-coaxial frequency-domain reflectometers, and measurement techniques for time-domain reflectometry.



**J. B. Davies** was born in Liverpool, England, on May 2, 1932. He received the B.A. degree in mathematics from Jesus College, Cambridge, England, in 1955. He received the M.Sc. degree in mathematics in 1957, and the Ph.D. degree

in mathematical physics in 1960, both from the University of London.

From 1955 until 1963 he worked at the Mullard Research Laboratories, Salfords, Surrey, England, except for the period 1958-1960 spent at University College, London. In 1963 he joined the staff of the Department of Electronic and Electrical Engineering, University of Sheffield, England. In October, 1967, he will join the staff at University College, London, in the Department of Electrical Engineering. His work has been concerned with problems of electromagnetic field theory, and he is currently interested in computer methods of solving such problems.

Dr. Davies is a member of the Institution of Electrical Engineers.



**Shung-Wu Lee** (S'63-M'66) was born in Kiangsi, China, on December 15, 1940. He received the B.S. degree in electrical engineering in 1961 from the Chung Kung University, Tainan, Taiwan, China, and the M.S. and Ph.D.

degrees in electrical engineering in 1964 and 1966, respectively, from the University of Illinois, Urbana.

From 1961 to 1962, he was in the Chinese Navy Military Police for Reserve Officer training. He has been with the Antenna Laboratory, University of Illinois, since 1963, where he is now an Assistant Professor. He is

also a Technical Staff Member at the Electromagnetics Laboratory, Hughes Aircraft Company, Fullerton, Calif., for the summers of 1966 and 1967.

He is a member of Sigma Xi.

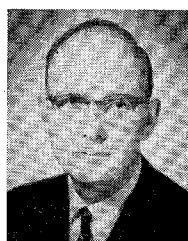


**Ralph Levy** (SM'64) was born in London, England, on April 12, 1932. He received the M.A. degree in physics from Cambridge University, Cambridge, England, in 1953, and the Ph.D. degree in electrical engineering from the University of

London in 1966.

From 1953 to 1959 he was a member of the Scientific Staff at the Applied Electronics Laboratories of the General Electric Company, Stanmore, Middlesex, England, where he worked on guided missile, radar, and countermeasures systems and on microwave components. In 1959 he joined Mullard Research Laboratories, Redhill, Surrey, where he directed a section engaged in studies on broadband receiver design, microwave components, and network synthesis. Since September, 1964, he has held the position of Lecturer in the Department of Electrical and Electronic Engineering at the University of Leeds, Yorkshire. His research interests are in microwave network synthesis and broadband microwave components.

Dr. Levy is joint editor of the international publication *Electronics Letters*. He is a member of the Institution of Electrical Engineers and serves on their professional group committee for microwave theory and techniques.



**Norman C. Wenger** (S'60-M'61) was born in Cleveland, Ohio, on November 30, 1938. He received the B.S., M.S., and Ph.D. degrees in electrical engineering from the Case Institute of Technology, Cleveland, in 1960, 1962, and 1965,

respectively.

Since 1960 he has been a member of the staff of the NASA Lewis Research Center, Cleveland, where he has been engaged in research and development in the areas of electromagnetic theory, magnetohydrodynamics, and plasmas.

Dr. Wenger is a member of Sigma Xi.