# Contributors

**Mark R. Barber** (M'62) was born in Wellington, New Zealand, on July 23, 1931. He received the B.Sc. and B.E. degrees from the University of Auckland, New Zealand, in 1954 and 1955, respectively, and the Ph.D. degree in electrical engineering from the University of Cambridge, England, in 1959. While in England he studied cathode loading and beam formation in high-current electron guns.

From 1959 to 1961 he was at the Naval Research Laboratory in Auckland, working on the processing of signals from underwater acoustic arrays. Since 1962 he has been with Bell Telephone Labs., Inc., Murray Hill, N. J., working on solid-state microwave devices.

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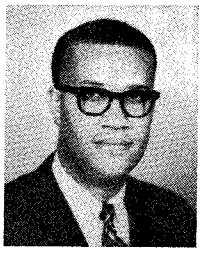
**Peter Daly** was born in Ayr, Scotland, on September 13, 1937. He received the B.Sc. degree in electrical engineering and the Ph.D. degree from the University of Glasgow, Scotland, in 1959 and 1962, respectively.

From 1962 to 1964 he was a Research Fellow at the California Institute of Technology, Pasadena. From 1964 to 1965 he taught in the Dept. of Applied Mathematics at the University of Glasgow. In 1966 he received a Research Fellowship from the Science Research Council, London, to study problems connected with propagation in moving media at the Technische Hochschule, Aachen, Germany, and subsequently, in 1967, at the Electromagnetic Theory Lab. at the Technical University of Denmark, Lyngby, Denmark.



**Samuel D. Ewing, Jr.** (S'60–M'62) was born in Topeka, Kans., on August 9, 1938. He received the B.E.E. degree from the University of Cincinnati, Cincinnati, Ohio, in 1961, and the M.S.E.E. degree from the University of Connecticut, Storrs, in 1964, where he held a Teaching and Research Assistantship. He is currently studying at Harvard Graduate School of Business Administration, Boston, Mass., where he is working towards a Master's degree in Business Administration.

From 1961 to 1962 he was with Norden Labs., Norwalk, Conn., where he worked in the areas of transistor circuit design, photosensor evaluation, and radar display techniques. From 1962 to 1963 he was employed at Bendix Research Labs., Bendix Corp., Southfield, Mich., engaged in design and development of miniature ferrite microwave components. In 1964 he joined the staff of M.I.T. Lincoln Lab., Lexington, Mass. Since 1964 his activities in the Phased Array Group have been in phased array system design, ferrite microwave components, and heat transfer problems associated with high-power microwave components.

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**Harry Gruenberg** (S'44–A'49–M'55–SM'64) was born in Vienna, Austria, on February 5, 1921. He received the B.A.Sc. degree from the University of British Colombia, Vancouver, Canada, in 1944, and the Ph.D. degree in electrical engineering from the California Institute of Technology, Pasadena, in 1949.

From 1949 to 1956 he was a Research Officer at the National Research Council, Ottawa, Canada, where he was engaged in microwave and antenna research. During this period he was also a part-time Lecturer at McGill University, Montreal. Since 1956 he has been associated with Syracuse University, Syracuse, N. Y., where he is now Professor of Electrical Engineering. During the academic year 1966–1967, he was a Visiting Professor at the Electromagnetic Theory Lab., at the Technical University of Denmark, Lyngby, Denmark, on a Fulbright Research Grant.

Dr. Gruenberg is a member of Sigma Xi.

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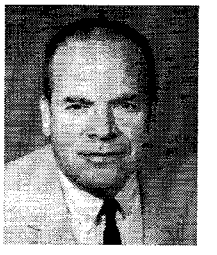

**Maurice B. Hall** (M'64) was born in Payson, Utah, on November 25, 1914. He received the B.S. and M.S. degrees from Brigham Young University, Provo, Utah, in 1937 and 1939, respectively, and the Ph.D. degree from Duke University, Durham, N. C., in 1942.

Before 1963, he was on the staff of the Radiation Lab. M.I.T., Cambridge, Mass., doing research and development work on microwave measuring and testing equipment (circa 3 to 30 kHz). He also worked at the Central Research Dept. of E. I. duPont de Nemours and Company, Wilmington, Del., and at the National Institutes of Health, Bethesda, Md., principally in the fields of molecular spectroscopy, microwaves, and semiconductor physics. Since January, 1963, he has been Chief of the Microwave Circuit Standards Section of the Engineering Division of the Radio Standards Lab. at the National Bureau of Standards, Boulder, Colo., where he has led millimeter wave and microwave field strength projects.

Dr. Hall is a member of the American Physical Society and the Scientific Research Society of America (RESA).

**William E. Little,** for a biography and photograph please see page 534 of the September, 1967, issue of this TRANSACTIONS.

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**Herman C. Okean** (S'55–M'57–SM'66) was born in New York, N. Y., on September 28, 1933. He received the B.A. and B.S. degrees in electrical engineering from Columbia University, New York, N. Y., in 1955 and 1956, respectively, and the M.E.E. degree from New York University, New York, N. Y., in 1960, and the Eng.Sc.D. degree from Columbia University in 1965.

He joined Bell Telephone Labs., Inc., New York, N. Y., in 1955, as a summer employee and worked as a Technical Assistant in the Electronic Power Development Department. He returned to Bell Labs., Whippany, N. J., in 1956, as a Member of the Technical Staff. From 1956 to 1960 he worked in the Military Systems Development Department and was engaged in the design and development of radar and missile guidance circuits. From 1961 to 1966, he was at the Murray Hill Laboratory where he was involved in research in the field of microwave solid-state device applications with particular emphasis on the exploratory development of tunnel-diode amplifiers and varactor harmonic generators. In 1966, he joined the Airborne Instruments Lab. of Cutler-Hammer, Inc., Melville, L. I., N. Y., as a Departmental Consultant in the Electro-Physics Dept. of the Applied Electronics Division. He is currently exploring the application of negative resistance amplifier broadbanding theory and microwave integrated circuit techniques to parametric amplifier design, and investigating the circuit applications of Gunn effect devices.

Dr. Okean is a member of Phi Beta Kappa, Tau Beta Pi, and Eta Kappa Nu.

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**Charles C. H. Tang,** for a biography and photograph please see page 329 of the May, 1967, issue of this TRANSACTIONS.

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**Jerald A. Weiss** (SM'61) was born in Cleveland, Ohio, on June 9, 1922. He received the A.B., M.A., and Ph.D. degrees in physics from Ohio State University, Columbus, in 1949 and 1953, respectively.

From 1953 to 1960 he was a Member of the Technical Staff at Bell Telephone Labs., Inc., Murray Hill, N. J., where he was engaged in ferrite device development. In 1958 he was made Supervisor of the Ferrite Device Group. In 1960 he joined in the founding of Hyletronics Corp., Burlington, Mass., where he worked on the development and manufacture of microwave solid-state components and subsystems. In 1962 he was appointed to the faculty of the Dept. of Physics at Worcester Polytechnic Institute, Worcester, Mass., where he now holds the position of Professor. Since 1962, concurrent with his position at the Institute, he has served as a Consultant to the Array Radar Group at M.I.T. Lincoln Lab., Lexington, Mass., where he is concerned with ferrite components and other problems relating to phased-array system design.

Dr. Weiss is a member of the American Physical Society, Phi Beta Kappa, and Sigma Xi.