

## Contributors



**Alfred I. Grayzel** (S'55-M'56) was born in Brooklyn, N. Y., on May 24, 1933. He received the B.A. degree from Columbia College, New York, N. Y., in 1954, and the B.S. degree in electrical engineering from the Columbia

University School of Engineering in 1955. He received the M.S. degree in February, 1961, the E.E. degree in June, 1961, and the Ph.D. degree in September, 1963, from the Massachusetts Institute of Technology, Cambridge, Mass., under the Lincoln Laboratory Staff Associate degree.

In 1955 he joined the Staff of Lincoln Laboratory where he worked on various communication problems for the Sage system and later for the Mercury program. At present he is a Staff Member at Lincoln Laboratory, working on solid-state devices for space communications.



**Sven I. Hagelin** (M'66) was born in Hedemora, Sweden, on October 10, 1937. He received the Civilingenjör degree in electrical engineering from the Royal Institute of Technology, Stockholm, Sweden, in 1962.

Since 1961 he has been employed by The Research Institute of National Defence (FOA), Stockholm, Sweden, where he has been working with microwave ferrites and nonreciprocal components.



**James W. Mink** (S'59-M'64) was born in Elgin, Ill., on April 23, 1935. He received the B.S. degree in 1961, the M.S. degree in 1962, and the Ph.D. degree in 1964, all in electrical engineering, from the University of Wisconsin, Madison.

He was a research assistant at the University of Wisconsin from 1961 to 1964. Since 1964, he has been an Electronic Engineer in the Institute of Exploratory Research, U. S. Army Electronics Command, Fort Monmouth, N. J. His research has been concerned chiefly with guided electromagnetic wave beams; much of this work has been with applications of resonators based on reiterative wave beams.

Dr. Mink is a member of Sigma Xi and Eta Kappa Nu.



**Elmer H. Scheibe** (A'42-M'43-SM'51) born in Milwaukee, Wis., on July 2, 1913. He received the B.S. degree in 1940 and the M.S. and Ph.D. degrees in electrical engineering in 1948 and 1951, respectively, from the Uni-

versity of Wisconsin, Madison.

He was an instructor at the University of Wisconsin from 1942 to 1944. In 1944 he joined Jansky and Bailey, consulting radio engineers, in Washington, D. C., and during World War II conducted tests on the vulnerability to jamming of Armed Forces communications equipment. After the war, he designed directional antennas, conducted AM and FM field intensity studies, and worked on the development of FM field intensity measuring equipment. He returned to the University of Wisconsin in 1947 to teach and continue graduate work, and at present is Professor of Electrical Engineering. He has been Project Director on government contracts since 1951, conducting research in the microwave area on surface wave lines, surface wave antennas, microwave filters, and beam waveguides.

Dr. Scheibe is a member of Sigma Xi, Eta Kappa Nu, Tau Beta Pi, Pi Mu Epsilon, and the American Society for Engineering Education.



**William H. Steier** (S'58-M'60) was born in Kendallville, Ind., on May 25, 1933. He received the B.S. degree in electronic



engineering from Evansville College, Evansville, Ind., in 1955, and the M.S. and Ph.D. degrees, both in electrical engineering, from the University of Illinois, Urbana, in 1957 and 1960, respectively.

From 1960 to 1962 he was on the faculty of the Department of Electrical Engineering at Illinois, and also was a consultant to Ramo-Woolbridge Research Laboratories and Space Technology Laboratories, Los Angeles, Calif. Since 1962 he has been a member of the Technical Staff of the Crawford Hill Laboratory, Bell Telephone Laboratories, Inc., Holmdel, N. J. He has done research in millimeter-wave transmission, detection, and generation, and is currently working in optics.



**Charles C. H. Tang** was born in Shanghai, China, on September 27, 1924. He received the B.S. degree in physics from the University of Shanghai in 1946, and the M.S. degree in electrical engineering from the Oklahoma

State University, Stillwater, in 1952. He entered Harvard University, Cambridge, Mass., on a Gordon McKay Scholarship, and received the Ph.D. degree in applied physics in 1956. From 1956 to 1957 he was a post-doctoral Fellow at Harvard.

He has held the following academic appointments: From 1946 to 1949 he taught in the Department of Physics at the University of Shanghai; from 1957 to 1958 he was an Assistant Professor at the University of California, Berkeley; and from 1958 to 1959 he was an Associate Professor in physics at Tunghai University, Taichung, Formosa. Since 1959 he has been affiliated with Bell Telephone Laboratories, Inc., Murray Hill, N. J.

Dr. Tang is a member of Sigma Xi and Phi Kappa Phi.