

Contributors



Eugene O. Ammann (S'58-M'64) was born in Portland, Ore., on June 26, 1935. He received the B.S. degree *maxima cum laude* in general engineering from the University of Portland, Portland, Ore., in 1957. He received

the M.S. and Ph.D. degrees in electrical engineering in 1959 and 1963, respectively, from Stanford University, Stanford, Calif. While at Stanford University, he was a Research Assistant, National Science Foundation Fellow, and Research Associate, working on solid-state microwave masers and microwave filters.

In April, 1963, he joined Sylvania Electric Products, Inc., Mountain View, Calif. He is presently engaged in research concerning the modulation and demodulation of light.

Dr. Ammann is a member of Delta Epsilon Sigma, Sigma Xi, the American Physical Society, and the Optical Society of America.



Joji Hamasaki (S'61-M'62) was born on October 25, 1931. He received the B.S., M.S., and Ph.D. degrees in electrical engineering from the University of Tokyo, Tokyo, Japan, in 1953, 1955, and 1958, respectively.

He was appointed an assistant professor of the Institute of Industrial Science of the University of Tokyo in 1958. In 1961, he took a leave of absence from the University and joined Bell Telephone Labs., Inc., Murray Hill, N. J., as a temporary member of technical staff. At Bell Labs. he worked on solid-state microwave amplifiers and related components. In 1963, he returned to the University of Tokyo. He is presently an assistant professor of the Institute of Industrial Science and is conducting research on microwave solid-state devices and optical circuit components.

Dr. Hamasaki is a member of the Institute of Electrical Communication Engineers of Japan and the Institute of Electrical Engineers of Japan.



George L. Matthaei (S'49-A'52-M'57-F'65) was born in Tacoma, Wash., on August 28, 1923. After leaving college for three years of military service, he returned to the University of Washington, Seattle, Wash.

and received the B.S. degree in electrical engineering in 1948. He then did graduate work at Stanford University, Stanford, Calif., and received the Ph.D. degree in electrical engineering in 1952.

While at Stanford University he was a Research Assistant in the Electronics Research Laboratory where he did research on network synthesis. In 1951 he joined the faculty of the Division of Electrical Engineering of the University of California at Berkeley, Calif., where he became an assistant professor. He continued research on network synthesis and supervised graduate student research in that field. During 1955 to 1958 he was a member of the Technical Staff of the Ramo-Wooldridge Corp., Inglewood, Calif. He was engaged in system analysis and research on microwave components.

From 1958 to 1964 he was at Stanford Research Institute where he did research on microwave devices. He became Manager of the Electromagnetic Techniques Laboratory of SRI in 1962. In July, 1964 he joined the Department of Electrical Engineering of the University of California, Santa Barbara, Calif., where he is a Professor.

Dr. Matthaei is a member of Sigma Xi and Tau Beta Pi. He was the winner of the 1961 Microwave Prize of the IRE Professional Group on Microwave Theory and Techniques.



Melvin G. Gray (M'55) was born in Baltimore, Md., on March 27, 1924. He received the B.E.E.E. degree from Johns Hopkins University, Baltimore, Md., in 1951.

He joined the Westinghouse Electric Corp., Baltimore, Md., in 1951 and he is presently a Senior Engineer there. He has worked in various departments there: 1951 to 1958 he worked on the design and development of airborne, fire-control radar transmitters and receivers; 1958 to 1960 he concentrated on the design and development of Bomarc pulse-doppler missile receivers; 1960 to June 1964 he was concerned with the design and development of Typhon phased-array prototype transmitters; and from 1964 to the present he has been working on systems operations and communications for lunar exploration systems for Apollo (LESA).

Mr. Gray is a registered Professional Engineer of the State of Maryland.



Kaneyuki Kurokawa (M'60) was born in Tokyo, Japan, on August 14, 1928. He received the B.S. degree in 1951 and the Doctor of Engineering degree in 1958, both from the University of Tokyo. He was a participant of the Foreign Student Summer Project held at the Massachusetts Institute of Technology, Cambridge, Mass., in 1954. In 1957, he became an assistant professor at the University of Tokyo. In 1963, he came back to the Bell Telephone Labs., Inc., Murray Hill, N. J., where he had previously worked from 1960 to 1961, while on leave of absence from the University.

Dr. Kurokawa is the author of a book "An Introduction to the Theory of Microwave Circuits" (in Japanese). He is a member of the IEE of Japan and the Institute of Electrical Communication Engineers of Japan.



Barry S. Perlman (S'59-M'61) was born in Brooklyn, N. Y. on December 5, 1939. He received the B.S.E.E. degree from City College of New York, N. Y. in 1961 and the M.S.E.E. degree from the Polytechnic Institute of Brooklyn, New York, N. Y., in June of 1964.

In 1961 he joined the RCA Communications Systems Div. New York Systems Lab., where he was concerned with the develop-

ment of wide-band and low-noise parametric amplifiers and upconverters. He also developed several large signal, high-efficiency nonlinear parametric devices for an all-solid-state radio relay system.

He was temporarily assigned in 1963 to the RCA Labs. in Princeton, N. J. in the Quantum Electronics Dept. where laser devices were designed and developed. Returning to CSD, N. Y. in late 1963, he began construction of a laser communication system designed to ascertain feasibility of a practical coherent optical communication system. An important phase of this work was the development of wide-band modulators to more effectively utilize the information capacity of the laser. His Master's Thesis was entitled "Quasi-Coherent Visual-Optical Communication." He has recently become involved in a program to develop new criteria for reducing intermodulation distortion in RF amplifiers, in addition to developing criteria for the design of broadband nonlinear reactance devices.



Johns Hopkins University, Baltimore, Md., in 1950.

From 1937 to the present he has been employed by the Westinghouse Electric Corp., Baltimore, Md., in various specialized areas; 1937 to 1945 he worked with the design and development of Navy communication transmitters and receivers; 1945 to 1952 he was concerned with design and development of induction and dielectric heating generators, AFC systems, and vibration detection devices; 1953 to 1956 he was supervisory engineer responsible for radar receiver and indicator design and development; 1957 to 1960 he was section manager in charge of design and development of major radar components; 1960 to June 1964 he was Manager of the transmitter section, Weapon Control Dept.; and from 1964 to the present he is manager of Support Engineering.

Mr. Rambo is a member of the Maryland Society of Professional Engineers, Tau Beta Pi, and Sigma Xi.



David G. Vice (M'57) was born in Kitchener, Ontario, Canada, on July 10, 1933. He received the B.Sc. degree in electrical engineering from Queen's University, Kingston, Ontario, in 1955. He did graduate studies toward

the M.Eng. degree at Carleton University, Ottawa, Ontario. During the summer of 1962 he took a course on varactor applications at Massachusetts Institute of Technology, Cambridge, Mass.

Since 1955 he has been with the Northern Electric Co., Ottawa. He has had four years experience in the design and development of radar and tropospheric scatter systems, followed by four years of similar work on parametric amplifiers in VHF and C bands. He is presently a Supervisor of Scientific Staff, Research and Development Labs., engaged in satellite communications system design.

Mr. Vice is a member of APEO.



Harold A. Wheeler (A'27-M'28-F'35) was born in St. Paul, Minn., on May 10, 1903. He received the B.S. degree in physics in 1925 from George Washington University, Washington, D. C., and continued post-graduate studies until 1928 at The Johns Hopkins University, Baltimore, Md.

He was employed by the Hazeltine Corp., Little Neck, N. Y., from 1924 to 1946, advancing to Vice-President and Chief Consulting Engineer. In 1959, he resumed some activity with this company as a Vice-president and a Director. Since 1947 his principal occupation has been as President of Wheeler Laboratories, Inc., Great Neck, N. Y., now a subsidiary of Hazeltine Corp. In this capacity he is directing their Great Neck and Smithtown Labs., specializing in microwaves and antennas.

Mr. Wheeler has served the IRE in such positions as Director (1934, 1940 to 1945) and Chairman of the Standards Committee; he has contributed many papers to IRE periodicals and received the Morris N.

Liebmann Memorial Prize from IRE in 1940. He was awarded the Medal of Honor by IEEE in 1964. He has served the U. S. Government in various capacities, most recently as a member of the Defense Science Board in 1962-1964. He is a Fellow of Radio Club of America, Associate Member of IEE (British), and a member of Sigma Xi and Tau Beta Pi.



Joseph F. White (S'60-M'61) was born in Cleveland, Ohio on June 5, 1938. He received the B.S. degree in electrical engineering from Case Institute of Technology, Cleveland, Ohio, in June 1960.

From then until December 1961 he was a member of the Advanced Radar Techniques Department of the MITRE Corp., Bedford, Mass. Since December, 1961 he has been engaged in the development of high power, solid-state, microwave control devices at Microwave Associates, Burlington, Mass.



Kenneth Woo (S'55-M'58) was born in China, on October 20, 1929. He received the B.S. degree in electrical engineering from the Massachusetts Institute of Technology, Cambridge, Mass., in 1951. He then obtained the M.S. and the Ph.D. degrees from the Illinois Institute of Technology, Chicago, Ill., in 1953 and 1960, respectively.

From 1955 to 1959 he was a member of the faculty of the Electrical Engineering Dept., Illinois Institute of Technology. Then from 1960 to the present he has been a member of the Technical Staff of Bell Telephone Labs., Inc., Holmdel, N. J., primarily engaged in guided wave systems and components research.

Dr. Woo is a member of Eta Kappa Nu, Tau Beta Pi, and Sigma Xi.