

Contributors

Victor J. Albanese (A'48-SM'55) was born on February 2, 1927, in New York, N. Y. He received the B.E.E. degree in 1947 and the M.E.E. degree in 1949 from the Polytechnic Institute of Brooklyn, Brooklyn, N. Y.

From 1947 to 1949, he was a research assistant at the Microwave Research Institute. From 1949 to 1951, he was a member of the antenna group at Airborne Instruments Laboratory, Mineola, N. Y., where he worked on the development of flush-mounted antennas and associated components for jet aircraft. In 1951, he joined the engineering staff of the W. L. Maxson Corp., New York, N. Y. He became a project engineer in 1953, responsible for RF component development for electronic countermeasures systems.

He has been associated with the Bogart Manufacturing Corp., Brooklyn, N. Y., since 1955, and currently holds the position of assistant chief electronics engineer in charge of research and development.

He has been a member of the evening teaching staff at the Polytechnic Institute of Brooklyn since 1951.

Mr. Albanese is a member of Tau Beta Pi, Eta Kappa Nu, and Sigma Xi.

Lawrence K. Anderson (S'55) was born on October 2, 1935, in Toronto, Ont., Canada. He received the B.E. degree in engineering physics from McGill University, Montreal, Que., Canada, in 1957.

He has been employed for the last three summers by the Radio and Electrical Engineering Division of the National Research Council of Canada. At the present time Mr. Anderson is studying at

Stanford University, Stanford, Calif., where he holds an appointment as a research assistant in the Microwave Laboratory.

Carlos M. Angulo (S'50-A'52-M'52-SM'56) was born in Pinto (Madrid), Spain, in 1921. He received the degree of Ingeniero de Telecomunicacion from the Escuela Oficial de Telecomunicacion in Madrid, Spain, in 1946; the M.E.E. degree in communication engineering in 1951 and the D.E.E. in electro-physics in 1955, both from

the Polytechnic Institute of Brooklyn.

From 1946 to 1948, he worked as an assistant technical director of Transradio Espanola S. A. in Madrid in radio telegraphy and radio telephony. In 1947 he became a research associate of the Spanish Council of Scientific Research in Madrid and worked in electroacoustics.

He joined the Polytechnic Institute of Brooklyn as a research associate in 1949 and as instructor of electrical engineering in 1950; his research during this period was in microwaves. He became an assistant professor of engineering in 1952 and associate professor in 1955 at Brown University, Providence, R. I., where he is at present doing research in antennas and propagation, and teaching.

During the summer of 1956, he was a visiting research associate professor at the Control Systems Laboratory of the University of Illinois, working in propagation problems.

Dr. Angulo is a member of Tau Beta Pi, Sigma Xi, and the American Association for the Advancement of Science.

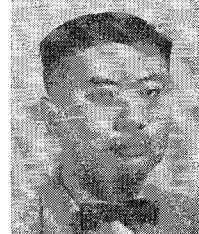


C. M. ANGULO

William S. C. Chang was born in Kiangsu, China, on April 4, 1931. He received the B.S.E. degree in 1952 and the M.S.E.

degree in 1953 from the University of Michigan, Ann Arbor, Mich. He continued to study at Brown University, Providence, R. I., where he received the Ph.D. degree in electrical engineering in 1957. At Brown University he was associated with the theoretical research on dielectric antennas. At present, he is a research associate at the Stanford Electronics Laboratories, Stanford, Calif., engaged in the research of solid-state masers.

Dr. Chang is a member of Sigma Xi and Tau Beta Pi.



W. S. C. CHANG



Franklin S. Coale (A'53) was born in Plainfield, N. J., on February 16, 1931. He received the B.S. degree in engineering physics from Lehigh University, Bethlehem, Pa., in 1952, subsequently taking postgraduate work in applied mathematics at New York University, New York, N. Y.

In 1953, he joined the Sperry Gyroscope Company, Great Neck, N. Y., as an associate engineer in microwave components and antennas engineering. He became a research engineer in the Microwave Group of the Antenna Systems Laboratory at Stanford Research Institute, Menlo Park, Calif., in 1955, and in December, 1957, he joined Microwave Engineering Laboratories, Inc., Palo Alto, Calif., as a senior engineer. He is presently engaged in research and development on filters, multiplexers, and solid-state physics.

Mr. Coale is a member of the American Physical Society and the Research Society of America.

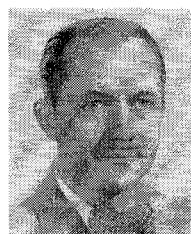


F. S. COALE



Robert W. Beatty (S'43-A'45-M'50-SM'53) was born in York, Pa., on May 31, 1917. He received the B.S. degree in electrical engineering in 1939 from George Washington University, Washington, D. C., and the S.M. degree in electrical communication in 1943 from the Massachusetts Institute of Technology, Cambridge, Mass. From 1940 to 1942, he was associated with the Naval Research Laboratory in work on underwater sound and radio direction finding. He was a staff aid at the M.I.T. Radar School in 1943 and served in the U. S. Naval Reserve from 1943 to 1946. He has had several years experience in the field of consulting radio engineering for the radio broadcast industry. Since 1948, he has been associated with the National Bureau of Standards, Boulder, Colo., working in the field of microwave standards, and is Chief of the Microwave Circuit Standards Section.

Mr. Beatty is a member of Sigma Tau, Theta Tau, RESA, and chairman of Commission I of the U.S.A. National Committee of the International Scientific Radio Union.



R. W. BEATTY

Rudolf G. de Buda was born in Vienna, Austria, on January 21, 1924. He attended the University in Vienna where he received the degree of Dipl. Ing. in electrical engineering (communications) and the Ph.D. degree in mathematics. He went to Canada in 1951, and joined the Canadian General

Electric Company, Ltd., and until 1954 he worked at its Davenport and Guelph Works as design engineer of power transformers.

In 1954, he transferred to the Electronic Equipment and Tube Department of the same company in Toronto, where he now works as an engineering consultant.

Dr. de Buda is a member of the Association of Professional Engineers of Ontario.

R. G. DE BUDA

B. J. Duncan, for a photograph and biography, please see page 115 of the January, 1958, issue of these TRANSACTIONS.

Kazuo Fujisawa was born on August 24, 1921, in Tokyo, Japan. At Osaka University, he graduated from the Faculty of Engineering in 1943, finished the graduate course in 1948, and received the Ph.D. degree in engineering in 1955.

He was appointed assistant professor of Osaka University in December, 1948. In July, 1954, he transferred to Kobe University, Kobe, Japan, where he was appointed professor in April, 1955.

Since 1948, he has been engaged in research on microwave electronics.

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

Robert V. Garver (A'57) was born on June 2, 1932, in Minneapolis, Minn. He attended the University of Maryland, College Park, Md., where he was awarded the Bachelor of Science degree in physics in 1956. In 1956 he became affiliated with the Microwave Development Section of Diamond Ordnance Fuze Laboratories, Washington, D. C., where he has been working on microwave semiconductors.

Mr. Garver is a member of the American Physical Society.

Edward L. Ginzton (S'30-A'40-SM'46-F'51) was born in Russia on December 27, 1915, and came to the United States in 1929. He received the B.S. and M.S. degrees in electrical engineering from the University of California, Berkeley, Calif., in 1936 and 1937, respectively. He received the E.E. de-

gree in 1938, and the Ph.D. degree in 1940 from Stanford University, Stanford, Calif.

He is now a professor of applied physics and electrical engineering at Stanford University, and Director of the Microwave Laboratory there.

He has been a member of the Board of Directors of Varian Associates, Inc., Palo Alto, Calif., since that company's organization in 1948, and was appointed an assistant to the chairman of the Board in 1957.

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



E. L. GINZTON

Henry H. Grimm (A'44-M'52) was born in Annville, Pa., on March 29, 1913. He received the A.B. degree in physics and mathematics in 1935 from Lebanon Valley College, at Annville, and the M.A. degree in physics in 1936 from the University of Pennsylvania. From 1936 to 1941 he taught high school science and mathematics at New Cumberland, Pa.

During 1941 to 1943 he was a graduate student and instructor in the physics department of Pennsylvania State University. From 1943 to 1946 he was employed on countermeasures development as a physicist in the Special Projects Laboratory at Wright Field, Dayton, Ohio. He worked from 1946 to 1951 as a physicist specializing in electronic standards and microwave research at the Naval Research Laboratory.

Since 1951 he has been associated with the Electronics Laboratory of General Electric Company, Syracuse, N. Y., where he has worked in the fields of high-power coherent radar, countermeasures, ferrites, and low noise microwave amplifiers. He is now a consulting engineer in the Antenna and Microwave Component Division.

Mr. Grimm is a member of RESA.



M. A. HARPER

work on microwave components.

Mrs. M. A. Harper was born in Washington, D. C., on July 28, 1929. She was a student at George Washington University, Washington, D. C. She then was employed by the National Bureau of Standards, and attended the NBS graduate school.

Since the activation of the Diamond Ordnance Fuze Laboratories in 1953, Mrs. Harper has been engaged in research and development

Archibald Hendry (S'50-A'52-M'58) was born on April 1, 1929, in Newcastle, Ont., Canada. He received the B.S. degree in physics from Queen's University, Kingston, Ontario, in 1952.

He has been employed in the Radio and Electrical Engineering Division of the National Research Council of Canada, in Ottawa, Ontario, since 1952, where he has been engaged in the study of low-noise amplifiers and the development of microwave radar receivers.



A. HENDRY

Edward M. T. Jones (S'45-A'51-SM'56) was born in Topeka, Kan., on August 19, 1924. He received the B.S. degree in electrical engineering from Swarthmore College, Swarthmore, Pa., in 1944 and the M.S. and Ph.D. degrees in electrical engineering from Stanford University, Stanford, Calif., in 1948 and 1950, respectively.

He was a radar maintenance officer in the U. S. Navy from 1944 to 1946. From 1948 to 1950 he was a research associate at Stanford University, and in 1950 he joined the staff of the Stanford Research Institute, Menlo Park, Calif., where he is now head of the microwave group of the electromagnetics laboratory.

Dr. Jones is a member of Sigma Tau and RESA.



E. M. T. JONES

From 1948 to 1950 he was a research associate at Stanford University, and in 1950 he joined the staff of the Stanford Research Institute, Menlo Park, Calif., where he is now head of the microwave group of the electromagnetics laboratory.

Dr. Jones is a member of Sigma Tau and RESA.



J. B. LINKER, JR.

J. Burton Linker, Jr. (S'48-A'49-M'56) was born in Durham, N. C., in 1923. He received the B.S. degree in physics from the University of North Carolina in 1944. He then entered the service and trained at Harvard University and the Massachusetts Institute of Technology radar schools, to become a naval electronics officer. After the war he returned to graduate school and received the M.S. degree in electrical engineering from the College of Engineering of the University of North Carolina. Since 1949 he has been associated with the Electronics Laboratory of the General Electric Company, Syracuse, N. Y.

He has been concerned with advanced development in color television for two years, and with problems related to missile electronic guidance systems for five years. During the past two years he has

worked in the field of microwave measurements, with particular emphasis on the measurement of ferrite characteristics. He became a professional registered engineer in the State of New York in 1955 and graduated from the three-year advanced engineering program at General Electric in 1958.

Mr. Linker is an associate member of Sigma Xi and a member of RESA and Eta Kappa Nu.

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William P. Peyer (SM'52) was born on April 15, 1918, in New York, N. Y. He received the B.S. degree from the College of the City of New York in 1939 and continued there for one year of graduate study in chemistry and education.

He was a civilian coordinator of instruction at the Army Air Force Radio School, Scott Field, Ill., from 1941 to 1944. While serving with the U. S. Navy from 1944 to 1946, he also was a student at the Bellevue Radio Materiel School, Naval Research Laboratories, Washington, D. C.

He joined Airborne Instruments Laboratory, Mineola, N. Y., in 1946 as a project engineer in the Special Devices Group, where he contributed to the development of a UHF swept frequency voltage standing-wave-ratio indicator and a VHF airborne direction-finding antenna.

From 1953 to 1956 he was with the Bogaert Manufacturing Corp., Brooklyn, N. Y., as supervisor of engineering in charge of development programs in microwave components and assemblies.

He returned to the Airborne Instruments Laboratory in January, 1957, and was assigned to the Department of Special Systems and Components. He is now group leader in the Reconnaissance Systems Department and is active in the field of passive countermeasures.

Mr. Peyer has been on the evening teaching staff of the Polytechnic Institute of Brooklyn since September, 1955.

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John Reed (A'48-SM'53) was born in Cambridge, Mass., on March 9, 1922. He received the B.S. degree in applied physics from Massachusetts Institute of Technology in 1943, and for two years thereafter was on the staff of the M.I.T. Radiation Laboratory in the Radio Frequency Components Group. After graduate study at Cornell University he joined the Submarine Signal Company in 1947 and then transferred to the Raytheon Manufacturing Company in 1948, where he is currently employed as consultant on microwave problems.

J. REED



Henry J. Riblet (M'55) was born on July 21, 1913, in Calgary, Canada. He received the Ph.D. degree from Yale University in 1939 and then taught mathematics for three years at Adelphi College and at Hofstra College on Long Island. He joined the M.I.T. Radiation Laboratory in 1942 and at the close of the war was in charge of one of the three development sections of the Antenna Group. From

1946 to 1948 he headed the VHF group at the Submarine Signal Company. He is presently at the Microwave Development Laboratories, Inc., of which he was a co-founder.

Dr. Riblet is a member of the American Mathematical Society and the American Physical Society.

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George E. Schafer (SM'57) was born in Lincoln, Neb., on April 27, 1922. He received the B.A. degree in physics from Macalester College, St. Paul, Minn., in 1943, the M.A. degree in physics from the University of Minnesota, Minneapolis, in 1949, and the Ph.D. degree in physics from the University of Colorado, Boulder, in 1958.

He served as a weather officer in the Air Force from 1943 to 1946, taught physics from 1948 to 1950, and joined the National Bureau of Standards, Boulder, Colo., in 1951. He is presently engaged in work on microwave attenuation and field strength standards.

Dr. Schafer is a member of the American Physical Society, American Association of Physics Teachers, Colorado and Wyoming Academy of Science, RESA, and Sigma Xi.

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Erich O. Schulz-DuBois was born in Frankfurt, Germany, on March 17, 1926. He received the Dr. phil. nat. degree in physics in 1954, at the J. W. v. Goethe University in Frankfurt, where he carried out microwave investigations of gas discharges. He then accepted a position as research associate with the solid-state physics group at Purdue University, Lafayette, Ind., and worked on paramagnetic resonance in irradiated semiconductors. In 1956, he joined the Raytheon Manufacturing Company, Waltham, Mass., where he was engaged in the development of ferrite materials and devices.

SCHULZ-DUBOIS



At present, he is a member of the technical staff at Bell Telephone Laboratories, Murray Hill, N. J., where he is participating in the development of solid-state maser devices.

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James K. Shimizu (S'51-A'52-M'57) was born in San Diego, Calif., on October 28, 1924. He received the B.S. degree in electrical engineering in 1950 from Indiana Technical College, Fort Wayne, Ind. He received the M.S. degree in electrical engineering in 1952 from the University of Notre Dame, Notre Dame, Ind.

While at Notre Dame he was a teaching fellow in the Electrical Engineering Department, and was also employed as a research assistant for the Office of Air Research. In 1952 he joined the staff of the Stanford Research Institute, Menlo Park, Calif., where he has been working on research and development of various microwave antennas and components.

Mr. Shimizu is a member of the Scientific Research Society of America.

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Marshall H. Sirvetz was born in Lynn, Mass., in 1924. In 1950 he received the Ph.D. degree in chemical physics from Harvard University, Cambridge, Mass., where he did work in microwave spectroscopy. After spending two years at Brookhaven National Laboratory, Long Island, he joined the Research Division of Raytheon Manufacturing Company, Waltham, Mass., in March, 1953.

His present work deals with the microwave properties and applications of ferrites and with solid-state microwave amplifiers.

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L. Solymar was born on January 24, 1930, in Budapest, Hungary. In 1952 he received the diploma of Electrical Engineer from the Technical University of Budapest, where from 1952 to 1953 he was assistant to the professor.

From 1953 to 1956 he was a research engineer at the Research Institute of Telecommunication, Budapest, and was engaged in antenna theory and design. In 1956 he became a research en-



L. SOLYMAR

gineer at the Standard Telecommunication Laboratories Ltd., Enfield, Middlesex, England, where he was concerned with various topics in microwave transmission.

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Edward G. Spencer (SM'57) was born on July 21, 1920, in Lynchburg, Va. He received the B.S.E. degree in physics from George Washington University and the M.A. degree in physics from Boston University. He did further graduate work at the Massachusetts Institute of Technology and the University of Maryland. From 1943 to 1946 he was engaged in microwave radar research at the Naval Research Laboratory.

From 1946 to 1949, he was associated with the Cambridge Air Force Research Laboratory, and from 1949 to 1953 with the Naval Research Laboratory. During this time he worked in microwave spectroscopy of gases and paramagnetic and nuclear magnetic resonance of solids. In 1953, he joined the National Bureau of Standards, Ordnance Electronics Division, which is now the Diamond Ordnance Fuze Laboratories. In March, 1958, he became associated with Bell Telephone Laboratories. He is engaged at present in microwave physics research.

Mr. Spencer is a member of the American Physical Society.

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Donald C. Stinson (S'50-M'57) was born in Malta, Idaho, on December 7, 1925. He received the B.S. degree from Iowa State College in 1947, the M.S. degree from the California Institute of Technology in 1949, and the E.E. degree and the Ph.D. degree from the University of California in 1953 and 1956, respectively.

He spent one year with the General Electric Company as a test engineer, and for three summers he was a member of the technical staff of the Research and Development Laboratories at Hughes Aircraft Company. He is now with the Missile Systems Division of Lockheed Aircraft Corp., Sunnyvale, Calif.

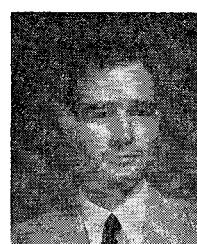
Dr. Stinson is a member of Sigma Xi, Eta Kappa Nu, and Pi Mu Epsilon.

Basil C. Vafades (A'53) was born in Boston, Mass., on May 14, 1929. He received the B.S. degree in physics from Boston College in 1951, and did graduate study at the Polytechnic Institute of Brooklyn, Brooklyn, N. Y., from 1952 to 1953. From June, 1951, to December, 1956, he was employed by the Microwave Electronics Division of the Sperry Gyroscope Company, Clearwater, Fla., where he was a member of the applied physics group working on microwave devices.

Since December, 1956, Mr. Vafades has been with Microwave Associates Inc., engaged in the study of ferrite properties and in the development of high-power gas switching tubes and ferrite devices.

Joseph H. Vogelman (M'44-SM'48) was born in New York, N. Y., on August 18, 1920. He received the B.S. degree in 1940 from the City College of New York, the M.E.E. degree in 1948 and the Dr.E.E. degree in 1957 from Polytechnic Institute of Brooklyn.

In 1945, after several years at the Signal



D. C. STINSON

Corps Radar Laboratory at Ft. Hancock and Belmar, N. J., he joined Watson Laboratories, Red, Bank, N. J., and served until 1951 as chief of the Development Branch, responsible for research and development of test equipment and microwave components and techniques. He then joined the Rome Air Development Center, where from 1951 to 1953 he was chief scientist in the General Engineering Laboratory and consultant on UHF and SHF theory and techniques to the U. S. Air Force; from 1953 to 1956, as chief of the Electronic Warfare Laboratory, he directed all research and development in ground based electronic warfare for the Air Force. Since 1956 he has been Technical Director of the Communications Directorate, directing the Air Force research and development effort in ground based and ground to air communications.

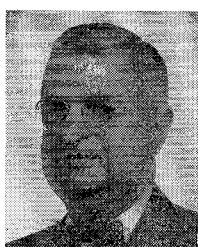
Dr. Vogelman is a member of Sigma Xi, the AIEE and the Armed Forces Communications and Electronics Association.

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Gershon J. Wheeler (SM'54) was born on July 11, 1913, in Massachusetts. He has been in the field of microwaves since 1942. From

1950 to 1957 he was with the Raytheon Manufacturing Company in Waltham and Wayland, Mass., where he worked as a consultant on special microwave problems.

At present, he heads the engineering and development department of Sylvania's Microwave Physics Laboratory, Mountain View, Calif. Mr. Wheeler is a member of RESA.



G. J. WHEELER

