

Contributors

Saburo Adachi was born in Yamagata-Ken, Japan on September 2, 1930. He received the B.E., M.E., and D.E. degrees from the Tohoku University, Sendai, Japan in 1953, 1955 and 1958, respectively. In 1958 he was appointed as an instructor in the Electrical Communications Department of the Tohoku University.

From August, 1958 to January, 1960 he was on leave from Tohoku University and worked at The Ohio State University Antenna Laboratory, Columbus, as a Research Associate. He has been engaged in research on antennas and electromagnetic field problems.

Dr. Adachi is a member of the Institute of Electrical Engineers of Japan, the Institute of Electrical Communication Engineers of Japan, and Sigma Xi.

Donald D. Bartholomew was born in Atlanta, Ga. on August 2, 1929. He received the B.S. degree in physics from the Georgia Institute of Technology, Atlanta, Ga., and did advanced work in nuclear science at Georgia Tech until joining The Sperry Microwave Electronics Company at Clearwater, Fla. in 1958.

While attending Georgia Tech, he participated in work being done on several research programs which were sponsored by the National Science Foundation and The Atomic Energy Commission, and worked for the Lockheed Aircraft Corporation, Nuclear Division, in the Theoretical Nuclear and Reactor Operations Groups.

Since joining the Solid State Devices Group at the Sperry Microwave Electronics Company, he has been actively engaged in the design and development of microwave components and has more recently been working with the Sperry Microline Products Group.

Mr. Bartholomew is a member of Tau Beta Pi and Sigma Pi Sigma.



S. ADACHI

Branch, N. J., and is presently undertaking graduate study at Rutgers University, New Brunswick, N. J.



M. BENANTI

N. J., working in the components field primarily on solid state devices.

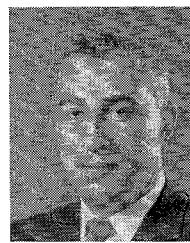
From 1948 to 1956 he was engaged in teaching and writing in the electronic field for private and Government organizations. Since 1956 he has been employed as an electronic engineer at the U. S. Army Signal Research and Development Laboratory, Fort Monmouth,

rently with the Research Division of Varian Associates, Palo Alto, Calif.

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



Frank A. Brand (M'58) was born in Brooklyn, N. Y. on June 26, 1924. He attended Hofstra College, Hempstead, N. Y., from 1946 to 1948 and the Polytechnic Institute of Brooklyn, Brooklyn, N. Y., receiving the B.S. degree in physics in 1950 and the M.S. degree in physics in 1958.



F. A. BRAND

He joined the U. S. Army Signal Research and Development Laboratory, Fort Monmouth,

N. J. in 1950 as a research physicist and has since been engaged in research and development activities concerned with electron devices and semiconductor physics. He is currently Chief of the Physical Electronics Branch, U. S. Army Signal Research and Development Laboratory at Fort Monmouth. For the past three years, he has been a part-time faculty member of the Electrical Engineering Department of Monmouth College, West Long Branch, N. J.



Richard Benjamin was born in Spring Lake, N. J. on June 20, 1930. He received the A.A. degree from Monmouth College, West Long Branch, N. J., in June, 1958. At present, he is studying for the B.S. degree in electronic engineering at Monmouth College, where he is also employed as an electronic specialist.



R. BENJAMIN

National Guard Unit. He has been employed in both government and industrial positions as an electronic specialist.

Mr. Benjamin is a member of Lambda Sigma Tau.



R. M. Bevensee (M'58) was born in Minneapolis, Minn., on May 9, 1930. He received the M.S. degree from the University of Minnesota, Minneapolis, in 1954; the E.E. degree from the Massachusetts Institute of Technology, Cambridge, in 1958; and the Ph.D. degree from Stanford University, Stanford, Calif., in 1960.



R. M. BEVENSEE

During 1954 and 1955, he worked in the Microwave Tube Division of the Sperry Gyroscope Company, Clearwater, Fla. From 1955 to 1958, he was a research assistant in the Research Laboratory of Electronics at M.I.T. He also worked in the same capacity in the Hansen Microwave Laboratory at Stanford University, until 1960. He is cur-

ently with the Research Division of Varian Associates, Palo Alto, Calif.



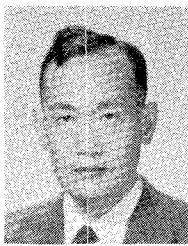
E. S. CASSEY, JR.

In 1950 he worked for the Potomac Electric Power Company, Washington, D. C., and in 1951 he joined the U. S. Naval Ordnance Laboratory, White Oak, Md., working on telemetering problems, UHF circuit and antenna design. In 1954 he joined the Radiation Laboratory of The Johns Hopkins University, where he was engaged in research on electromagnetic scattering and microwave problems. In 1960 he joined the academic research staff at the Microwave Research Institute of the Polytechnic Institute of Brooklyn, Brooklyn, N. Y.

Dr. Cassedy is a member of Sigma Xi, the American Physical Society, and the AAAS.

Tsung-Shan Chen (A'48-M'55) was born in Hebei, China on February 2, 1913. He received the B.S. degree from Tangshan Chiao-Tung University in 1933, and the M.S. degree from Purdue University, Lafayette, Ind., in 1934. He attended the Massachusetts Institute of Technology, Cambridge, and received the M.S. degree in 1935 and the D. Sc. degree in 1938, both in electrical engineering.

T. S. CHEN



He was professor of electrical engineering at the National Central University, China, until 1947. He joined RCA in 1951, and is now with the Microwave Tube Department, Electron Tube Division, Harrison, N. J.

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Marvin Cohn (S'59-A'51-M'57) was born in Chicago, Ill., on September 25, 1928. He received the B.S. degree in 1950 and the M.S. degree in electrical engineering in 1953, both from the Illinois Institute of Technology, Chicago.

From 1951 to 1952, he was employed by the Glenn L. Martin Company, Baltimore, Md.; he was with the Radiation Laboratory of The Johns Hopkins University,

Baltimore, from 1952 until he entered the U. S. Army Signal Corps in 1953. He was stationed at White Sands Proving Grounds where he worked on the analysis of missile tracking systems.

In 1955 he returned to the Radiation Laboratory, where he has done research and development work on broad-band and super-heterodyne receivers and surface-wave transmission lines. He was head of the Millimeter Wave Techniques Group of the Radiation Laboratory.

In June of 1960 he completed the requirements for the Doctor of Engineering degree at the Johns Hopkins University. He is presently a research scientist with the research division of Electronic Communications, Inc., of Timonium, Md.

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

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George A. Espersen (A'34-SM'51-F'56) was born in Jersey City, N. J., on May 17, 1906. He attended the Institute for Theoretical Physics, Copenhagen, Denmark, and received the B.S. degree in physics from New York University in 1931.

He was an electron tube development

engineer for Hygrade Sylvania Corporation from 1932 to 1939, and for National Union Radio Corporation in 1939 and 1940. From 1940 to 1942, he was project engineer engaged in research and development of klystrons at Sperry Gyroscope Company. From 1942 to 1945, he was research engineer with North American Philips Company, Inc., Irvington-on-Hudson, N. Y. Since

1945, he has been with Philips Laboratories, as section chief of the Microwave Tube and Electron Optics Sections, and, since 1959, as research physicist and staff assistant for electron tubes.

Mr. Espersen is chairman of the IRE Technical Committee on Electron Tubes, and a member of the American Physical Society and the American Rocket Society.

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Nicholas George (A'51-M'56) was born in Council Bluffs, Iowa, on October 29, 1927. He received the B.S. degree in engineering physics from the University of California, Berkeley, the M.S. degree from the University of Maryland, College Park, and the Ph.D. degree from the California Institute of Technology, Pasadena, in 1949, 1956, and 1959 respectively.

From 1949 to 1952, he was a physicist with the National Bureau of Standards, doing research on microwave receivers, and from 1952 to 1954, he was a project leader with the Diamond Ordnance Fuze Laboratories. From 1954 to 1956, he was the chief of the physics section at the Emerson Research Laboratories. In 1956, he joined the Hughes Aircraft Company Fellowship Program; and at the present time he is a senior staff physicist at Hughes, Culver City, Calif., and an associate professor at the California Institute of Technology. For the past three years, he has specialized in the fields of radar resolution, thermal radiation, and noise theory.

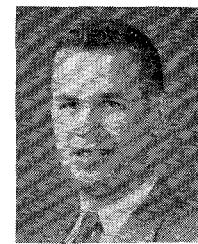
Dr. George is a member of Tau Beta Pi, Phi Beta Kappa, Phi Kappa Phi, and an associate member of Sigma Xi.

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T. J. Goblick was born in Old Forge, Pa., on March 30, 1935. He received the B.S. degree in electrical engineering from Bucknell University, Lewisburg, Pa., in 1956, and the M.S. and Engineer's degrees from the Massachusetts Institute of Technology, Cambridge, in 1958 and 1960 respectively.

While at M.I.T. he was a research assistant in the Research Laboratory of Electronics. He was employed for two summers by the Aircraft Products Department of General Electric Co., Johnson City, N. Y., and in 1959, was a staff member at the M.I.T. Lincoln Laboratory, Lexington, Mass. He is presently continuing his studies at M.I.T.

T. J. GOBLICK



Mu Epsilon.

Mr. Goblick is a member of Tau Beta Pi, Sigma Xi, and Pi

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Hellmut Golde was born in Berlin, Germany, on February 6, 1930. He attended the Institute of Technology in Munich, Germany, from 1948 to 1953, receiving the degree of Diplom-Ingenieur.

After coming to the United States in 1953, he attended Stanford University, Stanford, Calif., where he received the M.S. degree in 1955 and the Ph.D. degree in electrical engineering in 1959.

At Stanford, he was engaged in research on microwave tubes in the Microwave Laboratory. He is now an assistant professor at the University of Washington, Seattle.

Dr. Golde is a member of Sigma Xi.

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E. S. Grimes, Jr. (S'53-A'55-M'58) was born on March 13, 1932 in Long Island City, N. Y. He received the B.E.E. degree

from New York University, N. Y., in 1954. After graduation he joined the Sperry Gyroscope Company, Great Neck, N. Y. in the Microwave Component Group. In 1957, he moved to Clearwater, Fla., to assist in starting the newly formed Sperry Microwave Electronics Company.

E. S. GRIMES



Since joining the company, he has been actively engaged in research and development work on solid state microwave components and parametric amplifiers. He is a Senior Engineer and group leader in the Applied Physics Section.

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Albert Louis Holliman was born in Sandersville, Ga., on July 31, 1926. After service in the U. S. Army Paratroops from 1944 to

1946, he received the B.M.E. and M.S.M.E. degrees in 1951 and 1957, respectively, from the Georgia Institute of Technology, Atlanta. He is currently doing graduate work in electrical engineering.



A. L. HOLLIMAN

construction of waveguide switches, antenna pattern plotting range, antenna ground plane, and radar antennas. He is also an Assistant Professor in the School of Mechanical Engineering at Georgia Tech.

Mr. Holliman is a member of Pi Tau Sigma, Tau Beta Pi, Phi Kappa Phi, and Associate Member of Sigma Xi.

He joined the staff of the Engineering Experiment Station of the Georgia Institute of Technology in 1951, where as a member of the Radar Branch he has directed programs on the design and construction of waveguide switches, antenna pattern plotting range, antenna ground plane, and radar antennas. At present he is Chairman of the Electrical Engineering Department of Monmouth College, West Long Branch, N. J.

He joined the staff of the Engineering Experiment Station of the Georgia Institute of Technology in 1951, where as a member of the Radar Branch he has directed programs on the design and construction of waveguide switches, antenna pattern plotting range, antenna ground plane, and radar antennas. At present he is Chairman of the Electrical Engineering Department of Monmouth College, West Long Branch, N. J.

He has also participated in instructional activity, having been associated with the Polytechnic Institute of Brooklyn, Brooklyn, N. Y., as an instructor in electrical engineering. At present he is Chairman of the Electrical Engineering Department of Monmouth College, West Long Branch, N. J.

Dr. Jacobs is a member of the American Physical Society.

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Kenneth M. Johnson was born on October 13, 1935, in Detroit, Mich. He received the B.S. degree in physics from



K. M. JOHNSON

Wayne University, Detroit, Mich., in 1957.

During 1957 and 1958, he was engaged in plasma and back-scattering studies at Convair in San Diego, Calif. In 1958 he joined Hughes Aircraft Company, Culver City, Calif., where he has since been engaged in research and development of parametric amplifiers.

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R. C. Johnson was born in Eveleth, Minn., on May 9, 1930. He received the B.S. and M.S. degrees in physics in 1953 and 1958, respectively, from the Georgia Institute of Technology, Atlanta. He is currently working toward a Ph.D. degree.

In 1953 he entered the U. S. Navy where he attended the Naval Electronic Materiel School, and served as Electronics Officer aboard the *U. S. S. Moale* (DD-693). Since 1956 he has been employed at the Engineering Experiment Station of the Georgia Institute of Technology, working on meteor-scatter propagation, microwave components, and microwave antennas.

Mr. Johnson is a member of Tau Beta Pi and Sigma Pi Sigma.

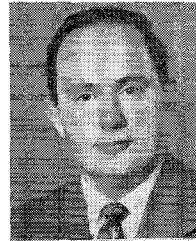
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Edward M. Kennaugh (A'55) was born in New York, N. Y., on October 3, 1922. He received the B.S.E.E. degree in electrical

engineering from the Ohio State University, Columbus, in 1947, the M.Sc. degree in physics in 1952, and the Ph.D. degree in electrical engineering in 1959.

In 1949, he joined the staff of The Ohio State University Antenna Laboratory, Columbus, and since 1954 he has been an Associate Supervisor of that laboratory. His current field of interest is in microwave scattering and diffraction problems as well as the analysis and measurement of polarization properties of scattering objects.

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

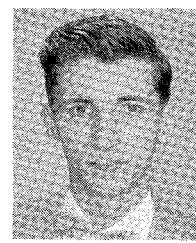


E. M. KENNAUGH

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Michael A. Kott (S'55-M'57) was born in Baltimore, Md., on February 20, 1935. He received the B.S. degree in electrical engineering from The Johns Hopkins University, Baltimore, Md., in 1956 and the M.S. degree from the same institution in 1959. In 1957 he joined the staff of the Radiation Laboratory of The Johns Hopkins University where he is presently working on microwave techniques, materials investigations and is engaged in part time graduate work.

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



M. A. KOTT

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James D. Meindl (S'57-M'59) was born in Pittsburgh, Pa. on April 20, 1933. He attended Carnegie Institute of Technology, Pittsburgh, Pa., from September, 1951 to September, 1958, receiving the B.S. degree in 1955, the M.S. degree in 1956, and the Ph.D. degree in 1958 in electrical engineering.

He is on military leave from Westinghouse Electric Corporation where he was employed as a research engineer. Since August, 1959 he has been assigned to the U. S. Army Signal Research and Development Laboratory, Fort Monmouth, N. J., where he is engaged in research work on semiconductor devices and circuits.

Dr. Meindl is a member of Tau Beta Pi, Sigma Xi, Eta Kappa Nu, Phi Kappa Phi, AIEE and the AFCEA.



J. S. HOLLIS

Experiment Station at Georgia Tech in 1948, where he was Assistant Head of the Radar Branch, and directed programs on specialized scanning techniques and radar system design. He is now Vice President—Engineering for Scientific-Atlanta, Inc., Atlanta, Ga.

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

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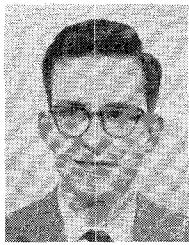
Harold Jacobs (SM'59) was born in Port Chester, N. Y. on November 21, 1917. He received the B.A. degree from The Johns Hopkins University, Baltimore, Md., in 1938 and the M.A. and Ph.D. degrees from New York University, N. Y., in 1940 and 1945, respectively.



H. JACOBS

He was employed as a physicist at RCA, Lancaster, Pa., from 1942 to 1945, and by Sylvania Electric Products from 1945 to 1949. He joined the U. S. Army Signal Research and Development Laboratory,

Donald C. Scott (S'56-M'58) was born in Ashland, Ky. on July 17, 1930. He received the B.S.E.E. degree from the University of Kentucky, Lexington, in 1958.



D. C. SCOTT

He was an electronics technician in the U. S. Air Force from 1950 to 1954. Since 1958, he has been employed by Sperry Microwave Electronics Company, Clearwater, Fla., where he is presently engaged in the design and development of microwave solid state devices.

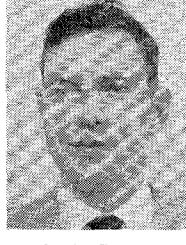
Mr. Scott is a member of Eta Kappa Nu.

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Sandy C. Sloan, Jr. (S'56-M'58) was born on March 11, 1930, in Cordele, Ga.

He served as a Senior Operations Intelli-

gence Specialist in the Air Force Security Service from 1951 to 1955. He received the B.E.E. degree in August, 1957, from the University of Florida, Gainesville, Fla.



S. C. SLOAN

Since joining Sperry Microwave Electronics Company Clearwater, Fla. in 1957, Mr. Sloan has been engaged in development of microwave solid-state devices.

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Rolf D. Weglein (A'52-SM'58), was born in Ichenhausen, Germany, on August 13, 1920. He received the B.S.E.E. and M.S.E.E. degrees from the California Institute of Technology, Pasadena, in 1953 and 1954, respectively.

In the years since his graduation, he has been a member of the technical staff of the Research Laboratory of the Hughes Aircraft Company, now at Malibu, Calif. Early work in research and development of backward-wave oscillators has recently resulted in his interests in solid-state devices. He now heads a group concerned with solid-state parametric amplifiers.

R. D. WEGLEIN

Mr. Weglein is a member of Tau Beta Pi, RESA, Sigma Xi, and the American Physical Society.

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Leo Young, for a photograph and biography please see page 470 of the July, 1960, issue of these TRANSACTIONS.

