Contributors

John P. Agrios (M'63) was born in Summit, N. J., on January 9, 1930. He received the B.E.E. and M.E.E. degrees from New York University, New York, N. Y., in 1952 and 1968, respectively.

In 1954 he joined the U.S. Army Electronics Command, Fort Monmouth, N. J., and until 1962 he was engaged in research and development activities on RF and pulse cables. Since 1962 he has been concerned with research and development activities in microwave filters and ferrite devices. He is presently the Chief of the Microwave Devices Section of the Electronic Components Laboratory.

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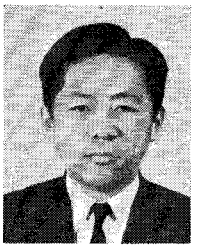
James L. Allen (S'57–M'62) was born in Graceville, Fla., on September 25, 1936. He received the B.E.E., M.S.E.E., and Ph.D. degrees in electrical engineering from the Georgia Institute of Technology, Atlanta, in 1959, 1961, and 1966, respectively.

From January, 1959, to June, 1961, he was with the Radar Section of the Georgia Institute of Technology Engineering Experiment Station where he worked on high-speed microwave radar scanners. From June, 1961, to September, 1963, he was employed by Sperry Microwave Electronics Co., a Division of Sperry Rand Corp., of Clearwater, Fla., and worked on ferrimagnetic limiters and microwave filters. He was an Instructor at the School of Electrical Engineering, Georgia Institute of Technology, from September, 1963, to March, 1966. In April, 1966, he returned to the Sperry Microwave Electronics Division, where he is currently on the permanent consulting staff. He is also an Associate Professor of Electrical Engineering at the University of South Florida, Tampa.

Dr. Allen is a member of Sigma Xi.



Kazuo Ayaki was born in Osaka, Japan, on March 8, 1934. He received the B.S. and Dr.Eng. degrees from Osaka University in 1956 and 1966, respectively.

He joined the Nippon Electric Company, Ltd., in 1956, and is now a Research Manager of the Electron Device Research Laboratory, Central Research Laboratories. He has been engaged in the research and development of millimeter-wave electron tubes, television tubes, microwave solid-state oscillators, and microwave integrated circuits.

Dr. Ayaki is a member of the Institute of Electronics and Communication Engineers of Japan.

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Seymour B. Cohn (S'41–A'44–M'46–SM'51–F'59) for a photograph and biography, please see p. 793 of the October, 1969, issue of this TRANSACTIONS.

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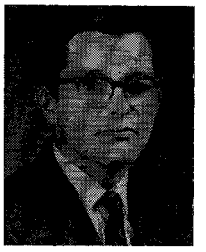
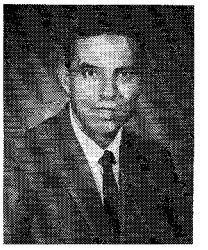


William J. Evans (S'64–M'67) was born in Windsor, Ont., Canada, on July 5, 1938. He received the B.S. degree in engineering, and the M.S. and Ph.D. degrees in electrical engineering from the University of Michigan, Ann Arbor, in 1960, 1964, and 1968, respectively.

From 1960 to 1963 he was with the U. S. Air Force, Eglin AFB, Fla., where he was involved with the engineering evaluation of electronic countermeasures systems. From 1964 to 1966 he was associated with the Optical Radio Systems Laboratory and from 1966 to 1968 with the Electron Physics Laboratory, both at the University of Michigan. In 1968 he joined the staff at Bell Telephone Laboratories, Murray Hill, N. J., where he is currently working on avalanche diodes.

Dr. Evans is a member of Phi Kappa Phi, Sigma Xi, and Tau Beta Pi.



Charles P. Heinzman (M'68) was born in Cullman, Ala., on January 23, 1928. He received the B.S.E.E. degree from Purdue University, West Lafayette, Ind., in 1951.

Since his graduation he has been employed by the U. S. Army Electronics Command, Fort Monmouth, N. J. As a Senior Development Engineer he is engaged in the research and development of microwave transmission lines and components.

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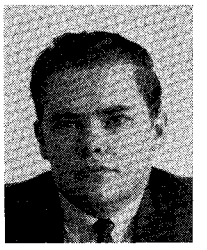

A. Fred Hinte (S'64–M'67) was born in Merrick, N. Y., on June 17, 1945. He received the B.S. degree in electrical engineering in 1967 and has recently completed the course requirements for the M.S. degree in electrophysics.

In 1967, he joined the Filter Technology and Applications Department, Airborne Instruments Laboratory, Deer Park, N. Y., and has been responsible for several filter production programs and the application of filters to microwave channelizing systems. He is currently working on the development of integrated circuit filters.

Mr. Hinte is a member of Eta Kappa Nu.

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LaRue A. Hoffman (S'43 – A'51 – M'56 – SM'59) was born in Berkeley, Ill., on August 15, 1915. He received the B.S. degree in electrical engineering and the M.S.E.E. degree from the University of Southern California, Los Angeles, in 1950 and 1953, respectively.

In 1953 he was employed by Gilfillan Bros., Inc., as a circuit design engineer. He

joined the Ramo-Wooldridge Corporation (later TRW Systems) in 1957. At TRW Systems, as Department Head, he was responsible for receiving and transmitting subsystems for the nation's first moon probes and on the Pioneer series spacecraft. He became affiliated with The Aerospace Corporation, Redondo Beach, Calif., in 1963, shortly after its formation. He is now Associate Director of the Electronics Research Laboratory in The Aerospace Corporation Laboratory Operations. He is responsible for directing research and engineering in millimeter-wave radar, radiometry, and radar astronomy; laser physics and systems applications; and solid-state devices.

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

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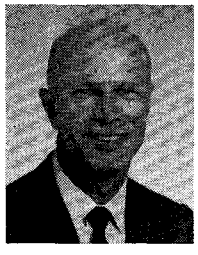

Keith H. Hurlbut was born in Oshkosh, Wis., on August 28, 1923. He received the B.S. degree in electrical engineering from the University of California, Berkeley, in 1950, and the M.S. degree in electrical engineering from Stanford University, Stanford, Calif., in 1954.

From 1954 to 1963 he was a Member of the Technical Staff of Hughes Aircraft Company, Culver City, Calif., Litton Industries, Beverly Hills, Calif., and Space Technology Laboratories, Redondo Beach, Calif. In these positions he has been concerned with circuit design directed primarily toward the development of receivers for space applications. At present he is Manager of the Applied Electronics Section at The Aerospace Corporation, El Segundo, Calif., where he is responsible for the development of the 94-GHz radar.

Mr. Hurlbut is a member of Eta Kappa Nu and Tau Beta Pi.

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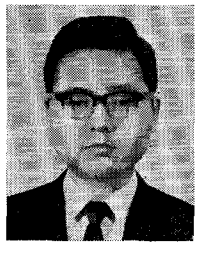
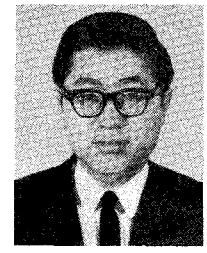


Eiichi Igarashi was born in Japan on May 12, 1937. He received the B.S. degree in electronics engineering from Shizuoka University in 1962.

In 1962, he joined Nippon Electric Company, Ltd., where he is now a member of the Electron Device Laboratory, Central Research Laboratories. He has been engaged in research on millimeter-wave electron tubes and microwave integrated circuits.

Mr. Igarashi is a member of the Institute of Electronics and Communication Engineers of Japan.



Yuji Kajiwara was born in Japan on May 23, 1942. He graduated from Tsuruoka Technical High School in 1961 and the Science University of Tokyo in 1967. He joined the Nippon Electric Company, Ltd., in 1961 and is now a Research Engineer in the Electron Device Research Laboratory, Central Research Laboratories. He has been engaged in the development of millimeter-wave traveling-wave tube and microwave integrated circuits.

Mr. Kajiwara is a member of the Institute of Electronics and Communication Engineers of Japan.

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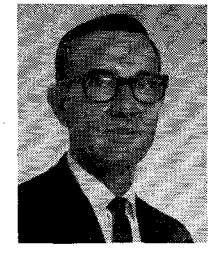

Dale E. Kind (M'56) was born in St. Cloud, Minn. on September 22, 1924. He received the B.S.E.E. degree from Montana State University in 1951.

He has had four years experience in secure communication systems as a field engineer with the RCA Service Company, and eight years in circuit design applied to ECM, radar, and space communications with the National Radio Corp., Litton Industries, and Ramo-Wooldridge Corporation, (later TRW, Space Technology Laboratories). He became a Member of the Technical Staff of The Aerospace Corporation, El Segundo, Calif., in 1963, where he has been mainly involved in the research and development of the millimeter-wave radar project.

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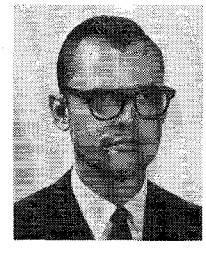

Kenneth L. Kotzebue (S'56–M'59) was born in San Antonio, Tex., on December 4, 1933. He received the B.S. degree in mechanical engineering from the University of Texas, Austin, in 1954, the M.S. degree in engineering from the University of California at Los Angeles in 1956, and the Ph.D. degree in electrical engineering from Stanford University, Stanford, Calif., in 1959.

From 1954–1956 he was a member of the technical staff of Hughes Aircraft Company, Los Angeles, Calif., while a participant in the Master's Cooperative Program at U.C.L.A. He was a Research Assistant at Stanford University for two years, working in the field of solid-state parametric amplifiers. In 1958 he joined Texas Instruments Incorporated, Dallas, Tex., where he worked in the field of parametric amplifiers and harmonic generators. In 1959 he became associated with Watkins-Johnson Company, Palo Alto, Calif., and was engaged in research and development of solid-state microwave devices. Since 1964 he has been a member of the faculty of the University of California at Santa Barbara where he is currently Professor of Electrical Engineering.

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

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David A. Leedom (S'67) was born in Turlock, Calif., on April 4, 1945. He received the B.S. degree in 1967 and the M.S. degree in 1969, both in electrical engineering, from the University of California, Santa Barbara, Calif.

At present he is pursuing graduate studies at the same university as a Research Assistant. Since June, 1967, he has been engaged in research on quasi-optical filter techniques.

Mr. Leedom is a member of Eta Kappa Nu.

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Shing-gong Liu (S'57–M'63) was born in Soochow, China, in 1933. He received the B.S. degree in electrical engineering from Taiwan University, Taipei, Taiwan in 1954, the M.S. degree in electrical engineering from North Carolina State College, Raleigh, in 1958, and the Ph.D. degree in electrical engineering from Stanford University, Stanford, Calif., in 1963.

From 1958 to 1959 he worked with the IBM Laboratories, Poughkeepsie, N. Y. From 1960 to 1963, he did research work on microwave ferrites in the Hansen Microwave Laboratories, Stanford University. He joined RCA Laboratories, Princeton, N. J., in August, 1963, where he has been engaged in research on the use of high-field nonlinear effects in GaAs for microwave devices and optical modulation and beam deflection devices, and more recently, on avalanche-diode microwave oscillators.

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

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Elio A. Mariani (M'65) was born in Trenton, N. J., on April 13, 1937. He received the B.S.E.E. degree from Drexel Institute of

Technology, Philadelphia, Pa., in 1960.

He has been employed by the U. S. Army Electronics Command, Fort Monmouth, N. J. since 1960. At present he is a Senior Project Engineer engaged in the research and development of microwave devices.

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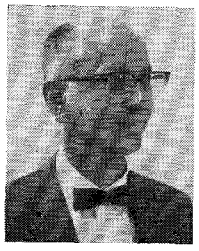

George L. Matthaei (S'49 – A'52 – M'57 – F'65) was born in Tacoma, Wash., on August 28, 1923. He received the B.S. degree from the University of Washington, Seattle, in 1948, and the Ph.D. degree from Stanford University, Stanford, Calif., in 1952.

From 1951 to 1955 he was on the faculty of the University of California, Berkeley, where he was an Assistant Professor, and his specialty was network synthesis. From 1955 to 1958 he was engaged in system analysis and microwave component research at the Ramo-Wooldridge Corporation. From 1958 to 1964 he was at Stanford Research Institute where he was engaged in microwave device research and became Manager of the Electromagnetic Techniques Laboratory in 1962. In July, 1964, he joined the Department of Electrical Engineering at the University of California, Santa Barbara, where he is a Professor.

Dr. Matthaei was the winner of the 1961 Microwave Prize. He is a member of Tau Beta Pi and Sigma Xi.

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R. J. Murphy (S'66) was born in Worcester, Mass., on August 1, 1945. He received the B.S. and M.S. degrees in electrical engineering in 1967 and 1968, respectively, from Rensselaer Polytechnic Institute, Troy, N. Y., where he is currently pursuing the Ph.D. degree in the area of the approximation and synthesis of distributed microwave circuits.

He has worked for Melpar Inc., IBM, and Sprague Electric in the areas of computer and circuit design.

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

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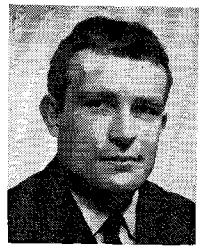
John D. Rhodes (M'67) was born in Doncaster, Yorkshire, England, on October 9, 1943. He received the B.Sc. and Ph.D. degrees



in electrical engineering from the University of Leeds, England, in 1964 and 1966, respectively.

From 1964 to 1966 he was a Research Assistant in the Department of Electrical and Electronic Engineering, University of Leeds, where he worked in the areas of microelectronic and microwave network theory. In the academic year 1966 to 1967, he was a Research Fellow in the same department. In the fall of 1967 he joined Microwave Development Laboratories, Inc., Natick, Mass., as a Senior Research Engineer, where he was in a program to design new classes of microwave filters with particular reference to linear phase filters. He returned to Leeds University as Lecturer in 1969, while remaining as Consultant to M.D.L.

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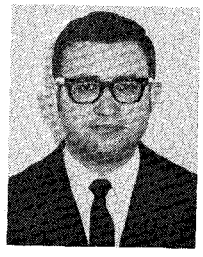

Gerald H. Robinson (M'69) was born in Mobile, Ala., on May 9, 1940. He received the B.S.E.E. degree from Georgia Institute of Technology, Atlanta, in 1962.

In 1962 he joined Sperry Microwave Electronics Division, where he is presently a Senior Engineer. His work has involved microwave component design and development including ferrite devices, YIG filters, microwave acoustic delay lines, and miniature microwave devices.

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Irving Rubinstein (M'62) was born in Pinsk, Poland, on June 15, 1929. He received the B.S. degree in physics from Brooklyn College, Brooklyn, N. Y., in 1958, where he is currently doing graduate work at Columbia University, New York, N. Y.

Since joining the Airborne Instruments Laboratory, Deer Park, N. Y., in 1964, he has been developing techniques for individual mode analysis and antenna prediction for multimode waveguide transmission systems. He is Project Engineer on the development of extremely low-loss narrow-band tunable filters. He has developed techniques for the design of high-Q helical-resonator filters and has been involved in the study of properties of elliptic-function filters and their adaptation to distributed constant networks. Prior to joining AIL, he had worked on the development of microwave components as well as microwave subsystem integration for ground and Doppler navigation radar. This included development of octave tunable waveguide and interdigital filters, single-sideband modulators in stripline configuration, and low-noise single-sideband receivers. He has also participated in the development of lightweight Ku-band FM Doppler navigation systems as well as systems development of the AN/FPS-74 ground radar.

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Robert L. Sleven (M'65) was born in New York, N. Y., on April 25, 1932. He received the B.E.E. degree from the City College of New York in 1953, and the M.E.E. degree from the Polytechnic Institute of Brooklyn, Brooklyn, N. Y., in 1959.

He worked in the field of electronic countermeasures at RCA and W. L. Maxson. In 1958 he joined Airborne Instruments Laboratory, Deer Park, N. Y., and as Head of their Filter Technology and Applications Department, is now responsible for a wide range of filter development and production programs. This includes computer aided filter design and the development of cryogenic and active filter techniques.

Mr. Sleven serves on the Editorial Board of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES.

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Allan W. Snyder was born in Philadelphia, Pa., on November 23, 1940. He received the B.S. degree in electrical engineering from Pennsylvania State University, University Park, in 1963, the S.M. degree in electrical engineering from Massachusetts Institute of Technology, Cambridge, in 1965, and the M.S. degree in applied mathematics and physics from Harvard University, Cambridge, Mass., in 1967. He will receive the Ph.D. degree from the University of London, University College, in December, 1969.

From 1960 to 1961 he was employed by Peter Kiewitt & Sons for a communications study on the Dew Line Ice Cap Project in northern Greenland. During 1962 and 1963 he worked with the Ionospheric Research Laboratory of Pennsylvania State University on problems of ionospheric inhomogeneity and its relation to wave propagation. He joined the Applied Research Laboratory of Sylvania Electronic Systems, Waltham, Mass., in 1963 where until 1968 he investigated a variety of electromagnetic theory problems including a theoretical study of the electromagnetic properties of visual receptors and

their relationship to color vision. He was a Consultant to the Applied Research Laboratory during 1968 and is presently a Consultant to the Post Office Research Department of Great Britain, Dollis Hill, London, and the Standard Telecommunications Laboratory, Harlow, England, on the long distance fiber optic communication project.

Mr. Snyder is a member of Sigma Xi.

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Willem Steenaart (A'55–M'57) was born in Djakarta, Indonesia, on March 24, 1928. He received the Electrical Engineers degree in 1953 and the Doctor's degree in 1965 from the Technological University of Delft, Netherlands.

From 1953 to 1958 he worked at the Philips Research Laboratories, Eindhoven, Netherlands, the Northern Electric Company, Montreal, P.Q., Canada, and at Computing Devices of Canada, Ottawa, Ont. In 1958 he joined the staff of Bell Telephone Laboratories, Murray Hill, N. J., where he was concerned mainly with network synthesis and approximation. From 1963 to 1965 he was a Research Associate at the Technological University of Eindhoven, Netherlands, and in 1965 he joined the faculty of Rensselaer Polytechnic Institute, Troy, N. Y., as an Associate Professor. His current interests include microwave circuits, circuit theory, and digital communications.

Dr. Steenaart is currently a Vice Chairman of the Schenectady Chapter of G-MTT, and a member of Sigma Xi, the Royal Institute of Engineers in the Netherlands, and the Netherlands Radio Institute.

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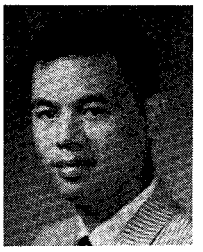
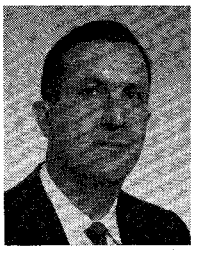


Cheng P. Wen was born in Canton, China, in 1933. He received the B.S., M.S., and Ph.D. degrees in electrical engineering from the University of Michigan, Ann Arbor, in 1956, 1957, and 1963, respectively.

From 1956 to 1963, he was employed in the Electron Physics Laboratory of the University of Michigan. In March, 1963, he joined the RCA Laboratories, Princeton, N. J., where he has worked on ultra-low-noise microwave tubes, gas lasers, microwave acoustics including delay lines, ferromagnetic semiconductors, and microwave integrated circuits.

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



Herbert J. Wintroub (M'58 – SM'69) was born in Omaha, Neb., on August 22, 1921. He received the B.S. degree in physics from the University of Southern California, Los Angeles, in 1950.

From 1950 to 1957 he was employed by Hughes Aircraft Company, Culver City, Calif., where he was engaged in the design of surveillance system displays and airborne fire control systems. He subsequently joined Litton Industries, Beverly Hills, Calif., and designed airborne data processing system displays. From 1958 to 1963 he was employed by Space Technology Laboratories, Inc., Redondo Beach, Calif., participating in the design of tracking, communications, and command systems for the Pioneer lunar probes and Syncom I. Since 1963 he has been associated with the Electronics Research Laboratory of The Aerospace Corporation, El Segundo, Calif., where he is presently Head of the Electromagnetic Techniques Department. He is engaged in millimeter-wave systems research and engineering.

Mr. Wintroub is a member of the Instrument Society and the Optical Society of America.

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