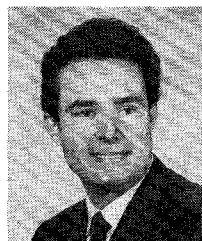


## Contributors



**James J. Campbell** was born in Philadelphia, Pa., on November 20, 1936. He received the B.S. degree in physics from St. Joseph's College, Philadelphia, in 1958, and the M.S. degree in physics from the University of Pennsylvania, Philadelphia, in 1960.

From 1958 to 1961 he was a Teaching and Research Assistant in Physics, University of Pennsylvania. From 1961 to 1962 he was an Instructor in Mathematics, La Salle College, Philadelphia. From 1962 to 1964 he was a Research Engineer at North American Aviation, Downey, Calif., where he conducted theoretical studies in electromagnetics and plasma reentry effects. From 1964 to 1966 he was a member of the Electromagnetic Radiation Section of the Electro-Countermeasures Systems Department, Philco Corporation (Aeronutronic Division), Newport Beach, Calif. Here he was engaged in analytical studies of wave propagation in inhomogeneous media, voltage breakdown phenomena, and antenna mismatch effects in the presence of ionized media. He is now a member of the System Techniques Department, Hughes Aircraft Corporation, Fullerton, Calif. Since joining Hughes he has been engaged in analytical studies of fixed beam radar tracking, signal processing, balanced strip delay lines, and the propagation of piezoelectric surface waves in quartz and lithium niobate crystals.



**Ralph Levy (SM'64)** was born in London, England, on April 12, 1932. He received the M.A. degree in physics from Cambridge University, Cambridge, England, in 1953, and the Ph.D. degree in electrical engineering from the University of

London in 1966.

From 1953 to 1959 he was a member of the Scientific Staff at the Applied Electronics Laboratories of General Electric Company, Stanmore, Middlesex, England, where he worked on guided missile, radar, and countermeasures systems, and on microwave components. In 1959 he joined Mulland Research

Laboratories, Redhill, Surrey, where he directed a section engaged in studies on broadband receiver design, microwave components, and network synthesis. In 1964 he was appointed to the post of Lecturer in the Department of Electrical and Electronic Engineering at the University of Leeds, Yorkshire, where he carried out research in the fields of microwave network synthesis and broadband microwave components, and held positions as an industrial consultant. Since July, 1967, he has been associated with Microwave Development Laboratories, Needham, Mass.

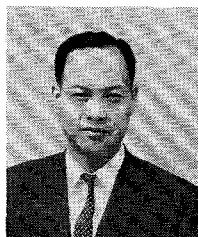
Dr. Levy is a member of the Institution of Electrical Engineers.



**Nagayoshi Morita (M'67)** was born in Toyama, Japan, on March 28, 1942. He received the B.S. and M.S. degrees in electrical communication engineering from Osaka University, Osaka, Japan, in 1964 and 1966, respectively.

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**Tullio E. Rozzi (M'66)** was born in Civitanova Marche, Italy, on September 13, 1941. He received the degree of Dottore in theoretical physics from the University of Pisa, Italy, in 1965.

Upon graduation in 1965, he joined the Department of Electrical and Electronic Engineering at the University of Leeds, Yorkshire, England, where he is now engaged in research into microwave passive circuit components including coaxial low-pass filters and directional couplers. He is presently working toward the Ph.D. degree in electrical and electronic engineering at the University.



**William A. Schilling (S'54-M'57)** received the B.E.E. degree from Manhattan College, New York, N. Y., in 1956 and the M.E.E. degree in microwave engineering from New York University, New York, in 1960.

In 1956 he joined the Western Union Telegraph Company where he worked on S- and C-band microwave relay systems. During 1962 he joined Waveline, Inc., where he designed all types of waveguide and coaxial components. In 1964 he joined the Microwave Applied Research Laboratory, RCA Electronic Components and Devices, Princeton, N. J., to do advanced development work on ferrite devices and frequency multipliers. In 1967 he joined the RCA Frequency Engineering Laboratories, Inc., at Farmingdale, N. J., as Manager of Microwave Products. In his new position he is responsible for the entire line of passive and active microwave devices.



**Eduard Schwartz** was born in Aachen, Germany, on November 20, 1930. He received the Diplom-Ingenieur, the Ph.D. degree, and the Habilitation in electrical engineering from Aachen University in 1956, 1959, and 1962, respectively.

He was an Assistant at the Institute of General and Theoretical Electrical Engineering at Aachen University from 1956 to 1962. Since 1962 he has been working at the Philips Zentrallaboratorium, Aachen. His main interests are in network theory and he is teaching in this field at Aachen University.

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**W. W. Siekanowicz** (A'49-M'55) was born in Poland, on January 3, 1928. He received the B.S. degree from the Imperial College of Science and Technology, London University, England, the M.S. degree from Columbia University, New York, N. Y., and the D.E.E. degree from the Polytechnic Institute of Brooklyn, Brooklyn, N. Y., in 1948, 1950, and 1960, respectively.

He joined the Microwave Tube Engineering Group of the RCA Electron Tube Division, Harrison, N. J., in July, 1950, and transferred to the Microwave Applied Research Laboratory, Princeton, N. J., in 1956. He has specialized in the fields of traveling-wave tubes, klystrons, electron beams, ferrite devices, and integrated microwave circuits.

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**Robert J. Wenzel** (S'61-M'62) was born in Milwaukee, Wis., on September 11, 1939. He received the B.S. degree in electrical engineering from Marquette University, Milwaukee, in 1961, and the M.S. degree in electrical engineering

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He joined the Research Laboratories Division, Bendix Corporation, Southfield, Mich., in 1962, where he has been engaged in the development of exact synthesis techniques for distributed networks, solid-state parametric devices, and harmonic generators.

Mr. Wenzel is a member of Tau Beta Pi, Eta Kappa Nu, Pi Mu Epsilon, and an associate member of Sigma Xi.