

Contributors



A. F. Dietrich was born in New York, N. Y. on November 24, 1909.

In 1942 he joined the Bell Telephone Laboratories, and is now a member of the Radio Research Group at the Crawford Hill Laboratory, Holmdel, N. J. He has been engaged in experimental studies on broadband, baseband and microwave systems. This has included experimental research work on both FM and PCM, ultra-short pulse terminals and repeaters for microwave radio and waveguide applications. He is presently engaged in experimental studies of light transmission systems.

Frank E. Goodwin (S'57-M'58) was born in Hastings, Neb., on September 7, 1927. He received the M.S. degree in applied physics from the University of California at Los Angeles, Calif. in 1957.

He joined Hughes Research Laboratories, Malibu, Calif., in 1957. During 1957 and 1958 he conducted applied research on electronic scanning of microwave antennas. From 1959 until 1962 he headed a group concerned with the development of solid-state masers and their applications to radar and allied systems. Since 1962, he has been involved with laser propagation studies.

Mr. Goodwin is a member of AIAA.



Ralph Levy was born in London, England, on April 12, 1932. He received the M.A. degree in physics from Cambridge University, England, in 1953, and at present is completing requirements for the Ph.D. degree at the University of London, England.

From 1953 to 1959 he was a member of the Scientific Staff at the Applied Electronics Laboratories of the General Electric



Marion L. Hensel (A'43-M'55) was born in Fremont, Ohio on March 2, 1902. He received a B.S. degree in 1926 from the University of Colorado, Boulder.

He then joined the Michigan Bell Tele-



James E. Kiefer (M'61) was born in Wichita, Kansas, on August 27, 1931. He received the B.S. degree in Engineering Physics from the University of Tulsa, Okla., in 1958, and the M.S. degree in Applied Physics from the University of California at Los Angeles in 1960.

In 1958 he joined the Hughes Aircraft Company, Culver City, Calif., as a participant in their Master of Science Fellowship program; he is now a member of the technical staff of the Hughes Research Laboratories, Malibu, Calif. Since 1958 he has been principally engaged in the development of solid-state masers and their applications to microwave systems.

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



Company, Stanmore, Middlesex, England. In 1959 he joined Mullard Research Laboratories, Redhill, Surrey, England, working in the broadband receiver section on systems research and development, microwave component design and network synthesis.

Mr. Levy is an associate member of the Institution of Electrical Engineers (London).



Gaylord E. Moss (S'57-M'59) was born in Philadelphia, Pa., on December 28, 1934. He received the B.S.E.E. degree in 1957 from Tufts University, Medford, Mass., and the M.S.E.E. degree in 1959 from the University of Southern California, Los Angeles.

In 1957 he joined the Hughes Aircraft Company, Culver City, Calif. as a participant in their Master of Science Fellowship program, during which period he worked on various projects associated with fire control systems. Since 1959 he has been a member of the technical staff of the Hughes Research Laboratories, Malibu, Calif., where he has worked on maser systems, developing several new microwave components. He has also worked on low-level stable instrumentation for the microwave region and is presently studying semiconductor detectors and associated circuitry for laser communication systems.

Mr. Moss is a member of Tau Beta Pi.

Arthur A. Oliner (M'47-SM'52-F'61) was born in Shanghai, China, on March 5, 1921. He received the B.A. degree from



Brooklyn College, N. Y., in 1941, and the Ph.D. degree from Cornell University, Ithaca College, N. Y., in 1946.

While at Cornell he held a graduate teaching assistantship in the Physics Department and also conducted research on an Office of Scientific Research and Development project. Since 1946 he has been with the Polytechnic Institute of Brooklyn, where he is Professor of Electrophysics. Since 1946 he has also been associated with the Polytechnic's Microwave Research, where he has conducted research in a wide variety of topics in the microwave field.

Dr. Oliner is Past Chairman of both the IRE Professional Group on Microwave Theory and Techniques and the IRE Committee on Antennas and Waveguides. He is Chairman of U.S.A. Commission I and a member of Commission VI of the URSI, and is also Chairman of a National Academy of Sciences Advisory Panel to the National Bureau of Standards.

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Thomas R. O'Meara was born in Kansas City, Mo., on December 1, 1924. He received the B.S., M.S. and Ph.D. degrees in electrical engineering from the University of Illinois, Urbana, in 1948, 1949 and 1957, respectively.

From 1948 to 1955, he worked half time as a Graduate Research Assistant in the Radio Direction Finding Laboratories of the University of Illinois while completing his graduate studies. In 1955 he accepted employment with the Ramo-Wooldridge Corporation, Communications Division. He is presently with the Hughes Aircraft Company, where he has been since 1957.

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Philip M. Paterno (A'51-M'56) was born on November 28, 1926 in New York, N. Y. He received the B.E.E. and M.E.E. degrees from the Polytechnic Institute of Brooklyn, N. Y., in 1955 and 1958, respectively.

He also attended the Graduate School of Mathematics and Science, New York, N. Y., from 1957 to 1959.

He has worked as a Research Associate at the Microwave Research Institute of the Polytechnic Institute of Brooklyn and as a

Senior Engineer at Convair, Pomona, N. Y., from 1959-1960. At the present time he is a Staff Member at PRD Electronics, Brooklyn, N. Y., where he is primarily concerned with ECM techniques and microwave calibration standards. He is also currently a Lecturer at the Polytechnic Institute of Brooklyn evening division.

Mr. Paterno is a member of Sigma Xi.

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Erich O. Schulz-DuBois was born in Frankfurt, Germany on March 17, 1926. He received the Dipl. Phys. degree in 1950 and the Dr. phil. nat. degree in 1954 from Johann Wolfgang Goethe University, Frankfurt, Germany. In graduate studies, he carried out microwave investigations of gas discharges.

From 1954-1955, he held a research associate position with the solid state physics group at Purdue University, Lafayette, Ind., where he worked on paramagnetic resonance in irradiated semiconductors. In 1956 he joined the Research Division of the Raytheon Manufacturing Company, Waltham, Mass., where he was concerned with the development of ferrite materials and devices. After joining Bell Telephone Laboratories in 1957 he worked with paramagnetic materials, slow-wave structures and ferrimagnetic isolators for application to solid state maser devices. More recently, he was responsible for a group engaged in development of traveling-wave masers and in related exploratory studies. Since September 1963, he has been on a sabbatical leave as Visiting Professor at Technische Hochschule, Karlsruhe, Germany.

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W. M. Sharpless (A'28-M'38-SM'43-F'58) was born in Minneapolis, Minn. He received the B.S. degree in electrical engineering and the E.E. degree from the University of Minnesota, Minneapolis.

He is a member of the Radio Research Department of the Bell Telephone Laboratories, Holmdel, N. J., where he has been associated with many important research projects. His most recent work has been on studies having to do with the investigation of the resistive and reactive properties of high frequency point-contact photodiodes.

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



Theodor Tamir (A'54-M'58-SM'62) was born on September 17, 1927 in Bucharest, Rumania. He received the B.S., Dipl. Ingenieur, and M.S. degrees in electrical engineering from the Technion, Israel Institute of Technology, Haifa, Israel, in 1953, 1954, and 1958, respectively, and the Ph.D. degree in electrophysics from the Polytechnic Institute of Brooklyn, New York, N. Y. in 1962.

From 1953 to 1965, he was employed as a Research Engineer by the Scientific Department of the Ministry of Defense, Israel, where he worked on research and development of microwave systems and components. From 1956 to 1958, he was associated with the research and teaching staff of the Technion, Israel Institute of Technology, where he worked in the microwave field and also gave courses in high-frequency techniques.

In 1958, he joined the Microwave Research Institute of the Polytechnic Institute of Brooklyn where he is presently a Research Assistant Professor in the Electrophysics Department; during this time, he has been engaged in analytical studies of wave propagation, radiation and diffraction in ionized media, periodic structures and other related topics.

Dr. Tamir is an Associate Member of the Institution of Electrical Engineers (London) and a member of Sigma Xi.

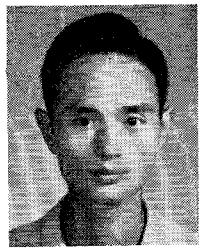
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Charles C. H. Tang was born in Shanghai, China, on September 27, 1924. He received the B.S. degree in physics in 1946, from the University of Shanghai. He received the M.S. degree in electrical engineering in 1952, from Oklahoma State University, Stillwater. He entered Harvard University, Cambridge, Mass., on a Gordon McKay Scholarship, and received the Ph.D. in applied physics in 1956.

From 1946 to 1949, he taught in the physics department at the University of Shanghai. From 1950 to 1951, he was Chief Accountant at the Universal Textile Company, Ltd., Hongkong, China. From 1956 to 1957, he was at Harvard University as a Post-Doctoral Research Fellow. From 1957 to 1958, he was an Assistant Professor at the University of California, Berkeley. From 1958 to 1959, he was an Associate Professor in physics at Tunghai University, Taiwan. Since 1959, he has been with the Bell Telephone Labs., Murray Hill, N. J.

Dr. Tang is a member of Sigma Xi and Phi Kappa Phi.



Han-chiu Wang was born in Chekiang, China, on May 27, 1932. He received the B.S.E.E. degree from the Cheng Kung University, Taiwan, in 1955 and the M.S.E.E. degree from the University of Notre Dame, South Bend, Ind., in 1960. He is currently completing the requirements for the Ph.D. degree in electrophysics at the Polytechnic Institute of Brooklyn, N. Y.

From 1956 to 1958, he worked as a Radio Equipment Engineer in the Chinese Government Radio Administration, Taiwan. He was a Teaching Assistant at Notre Dame from 1958 to 1960. In 1960, he joined the Electrophysics Department of the Polytechnic Institute of Brooklyn, where he is presently a Senior Graduate Assistant. At this Institute, he has been carrying out research in wave propagation and scatter-

ing, periodic structures and other related electromagnetic problems.

Mr. Wang is an associate member of Sigma Xi.

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Harold A. Wheeler (A'27-M'28-F'35), for a photograph and biography, please see page 264 of the March, 1964, issue of these TRANSACTIONS.

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Dante C. Youla (SM'59) was born in Brooklyn, N. Y. on October 17, 1925. He received the B.E.E. degree from the College of the City of New York, N. Y. in 1947 and the M.S. degree from New York University in 1950.

From 1947 to 1949, he was employed as an instructor in the Department of Electrical Engineering of C.C.N.Y. He attended the



New York University Graduate School of Mathematics as a full time student from 1948 to 50. For the next two years, he worked at Fort Monmouth, N. J. and the Brooklyn Naval Shipyard on problems of UHF microphonics. In 1952 he joined the communication group at the Jet Propulsion Laboratory, Pasadena, Calif., and participated in the design of antijam radio links for guided missiles. In 1955 he joined the Microwave Research Institute of Polytechnic Institute of Brooklyn, where he was engaged in practical and theoretical study of codes for combating noise and improving efficiency. He is now an Associate Professor of Electrophysics working on network synthesis problems, stability of time-varying structures, solid-state devices and N-port filtering.

Mr. Youla is a member of Sigma Xi.