

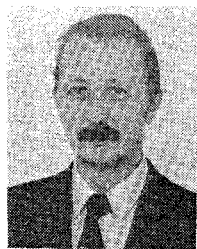
# Contributors



**Bruno Crosignani** was born in Rome, Italy, on November 19, 1938. He received the Laurea degree in physics and the Libera Docenza degree in theoretical physics from the University of Rome, Italy, in 1962 and 1971, respectively.

After spending four years at the Laboratorio Gas Ionizzati, Fracati, Rome, Italy, where he worked in the Theory Division, he joined the Laser Laboratory of Fondazione Ugo Bordoni, Rome, Italy, where he has done research on photon-counting statistics, light scattering, wave propagation in stochastic media, and optical fibers. He spent one academic year (1970-1971) as a Research Fellow in the Department of Electrical Engineering of the California Institute of Technology, Pasadena. He is presently an Associate Professor at the University of Rome, where he lectures on optoelectronics in the Department of Electrical Engineering. He is coauthor of the book *Statistical Properties of Scattered Light* (New York: Academic, to be published).

Dr. Crosignani is a member of the European Physical Society.



**Benedetto Daino** was born in Caltabellotta (Agrigento), Italy, on August 21, 1935. He received the Laurea degree in electrical engineering from the University of Palermo, Italy, in 1960, and the Libera Docenza degree in electromagnetic fields in 1971.

Since 1961 he has been working with Fondazione Ugo Bordoni, Rome, Italy. His research was concerned with solid-state devices at VHF until 1963 and, since that time, with applications of lasers to telecommunications.

In 1966 he spent one year at the Microwave Laboratory of the Stanford University, Calif., working on the measurement of the frequency stability of lasers. His most recent research is on optical communications through the atmosphere and in optical fibers, and on the coherence properties of optical fields. Since 1972 he has been responsible for the Laser and Optoelectronic Division of the Fondazione Ugo Bordoni.

Dr. Daino is a member of the American Optical Society and the Italian Electronic and Electrical Society (AEI).



**Paolo Di Porto** was born in Rome, Italy, on April 3, 1939. He received the Laurea degree in physics and the Libera Docenza degree in theoretical physics from the University of Rome, Rome, Italy, in 1962 and 1971, respectively.

In 1966 he joined the Laser Laboratory of Fondazione Ugo Bordoni, Rome, Italy, where he is currently working in the fields of photon counting, nonlinear optics, and the interaction of light with stochastic media.

He is presently an Associate Professor at the University of Rome, where he lectures on solid-state physics in the Department of Elec-

trical Engineering. He is coauthor of the book *Statistical Properties of Scattered Light* (New York: Academic, to be published).

Dr. Di Porto is a member of the European Physical Society.



**David A. Hill** (M'72) was born in Cleveland, Ohio, on April 21, 1942. He received the B.S.E.E. and M.S.E.E. degrees from Ohio University, Athens, in 1964 and 1966, respectively, and the Ph.D. degree in electrical engineering from Ohio State University, Columbus, in 1970.

From 1970 to 1971 he was a Visiting Fellow with the Cooperative Institute for Research in Environmental Sciences. Since 1971 he has been with the Institute for Telecommunication Sciences in the Office of Telecommunications, U.S. Department of Commerce, Boulder, Colo. His research activities have been in pulse propagation, guided waves, and antenna and scattering problems.

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



**Paul R. McIsaac** (S'49-A'59-M'60) was born in Brooklyn, N. Y., on April 20, 1926. He received the B.E.E. degree from Cornell University, Ithaca, N. Y., in 1949, and the M.S.E. and Ph.D. degrees from the University of Michigan, Ann Arbor, in 1950 and 1954, respectively. During the 1951-1952 academic year, he studied at the University of Leeds, Leeds, England, on a fellowship.

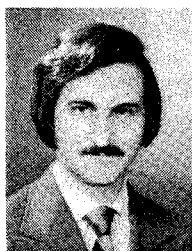
From 1954 to 1959 he was a Research Engineer in the Microwave Tube Division of the Sperry Gyroscope Company, Great Neck, N. Y. In 1959 he joined the faculty of Cornell University, where he is currently Professor of Electrical Engineering. During the 1965-1966 academic year he was a Visiting Professor at Chalmers University of Technology, Gothenburg, Sweden. His fields of interest include microwave theory and the application of symmetry analysis to electromagnetic theory.



**Harrison E. Rowe** (S'49-A'53-M'58-SM'65-F'71) was born in Chicago, Ill., on January 29, 1927. He received the B.S., M.S., and Sc.D. degrees from the Massachusetts Institute of Technology, Cambridge, in 1948, 1950, and 1952, respectively.

He joined Bell Laboratories, Holmdel, N. J., in 1952. His fields of interest have included parametric amplifier theory, noise and communication theory, propagation in random media, and related problems in waveguide, radio, and optical systems.

Dr. Rowe is a member of Sigma Xi, Tau Beta Pi, Eta Kappa Nu, and Commission 6 of the International Scientific Radio Union.



G. N. Tsandoulas (S'67-M'67) was born in Preveza, Greece, on August 14, 1939. He attended the Phillips Exeter Academy, Exeter, N. H., and received the B.A. and B.S.E.E. degrees from Harvard University, Cambridge, Mass., and the Ph.D. degree from the University of Pennsylvania, Philadelphia, in 1961, 1963, and 1967, respectively.

From 1963 to 1964 he was with KEL Corporation, Belmont, Mass., working on low-frequency filter design. In 1967 he joined the Array Radars Group at the Massachusetts Institute of Technology, Lincoln Laboratory, Lexington, where he was involved in array antenna research under a wide variety of topics, particularly in problems associated with active array characterization, impedance matching, and frequency response. Since July 1974 he has been with the Electromagnetic Techniques Group at Lincoln Laboratory working on high-precision airborne phased arrays. He has participated in numerous studies associated with the application of phased-array technology to national defense, including evaluation and monitoring of various radar systems.

Dr. Tsandoulas is a member of the American Association for the Advancement of Science and Sigma Xi.



James R. Wait (SM'56-F'62) was born in Ottawa, Ont., Canada, on January 23, 1924. He received the B.S. and M.S. degrees in engineering physics in 1948 and 1949, respectively, and the Ph.D. degree in electromagnetic theory in 1951, all from the University of Toronto, Toronto, Ont., Canada.

From 1942 to 1945 he was a Radar Technician in the Canadian Army. From 1948 to 1951 he was associated with Newmont Exploration Ltd., New York, N.Y., and Jerome,

Ariz., where his research led to several patents for electromagnetic and induced-polarization methods of geophysical prospecting. From 1952 to 1955 he was a Section Leader at the Defence Research Telecommunications Establishment, Ottawa, where he was primarily concerned with electromagnetic problems. Since joining the National Bureau of Standards, Boulder, Colo., in 1955, he has concentrated on the theoretical aspects of radio propagation. In 1961 he was appointed Adjoint Professor of Electrical Engineering at the University of Colorado, Boulder. During 1960 he was a Visiting Research Fellow at the Laboratory of Electromagnetic Theory in the Technical University of Denmark, Copenhagen. For the academic year 1966-1967 he was a Visiting Professor at Harvard University, Cambridge, Mass. From 1963 to 1967 he was a Senior Research Fellow at Boulder, where he was also a Consultant to the Director of the Institute for Telecommunication Sciences and Aeronomy. From 1967 to 1970 he was Senior Scientist in the Office of the Director of the ESSA Research Laboratories, Boulder. In September of 1970 he became the Senior Scientist in the Office of the Director of the Institute for Telecommunication Sciences of the Office of Telecommunications, U.S. Department of Commerce, Boulder, Colo. In October 1971, he returned to his position in the Office of the Director of the Environmental Research Laboratories of NOAA (formerly designated ESSA), but remains as a Consultant to the Director of ITS. In addition, he is a Fellow of the Cooperative Institute for Research in the Environmental Sciences.



D. T. Young (S'56-M'60) received the B.S. degree in 1956, the M.E.E. degree in 1960, and the Ph.D. degree in 1966, all from the University of Oklahoma, Norman.

He joined the Guided Wave Research Department of Bell Laboratories, Murray Hill, N. J., in 1960. He initially worked on millimeter solid-state devices. Later he was involved in optical fiber transmission research. He is currently working in the Millimeter Systems Laboratory on the development of a millimeter waveguide system.

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