

W. R. Smith, H. M. Gerard, and W. R. Jones will share the 1973 Microwave Prize awarded for their paper, "Analysis and Design of Dispersive Interdigital Surface-Wave Transducers." The paper was published in the July 1972 issue of the IEEE Transactions on Microwave Theory and Techniques. The award of prize money and certificate will be made at the 1974 Symposium Banquet in Atlanta.

WILLIAM R. JONES was born in Globe, Arizona, on Nov. 8, 1932. He received the B.A. degree in mathematics from the Univ. of California, Riverside, in 1957, and the M.S. and Ph.D. degrees in mathematics from Stanford Univ. in 1958 and 1967, respectively.

From 1952 to 1954 he served in the U.S. Navy as a Training Devices Technician. From 1954 to 1957, while at the Univ. of Calif., he was employed at the U.S. Naval Ordnance Laboratory, Corona, Calif., as a Microwave Technician. From 1958-1960 he was employed at the IBM Watson Laboratory, Yorktown Heights, N.Y., as a member of a microwave computer group investigating the application of microwave techniques to the development of high-speed logical circuits. In June 1960, he joined Hughes Aircraft Company, Fullerton, Calif., where he concentrated primarily on the study of electromagnetic surface-wave excitation and diffraction problems. From 1962-1966 he returned to full-time academic study at Stanford Univ. with the aid of a Hughes Fellowship. At present Dr. Jones is a Senior Scientist at Hughes Ground Systems Group, where he is involved primarily with research and development in the areas of microwave acoustics and signal processing applications.

Dr. Jones is a member of Sigma Xi.

W. RICHARD SMITH was born in Salem, N.J. on July 2, 1942. He received the A.B. degree in physics from Princeton Univ., Princeton, N.J. in 1964, and the M.S. and Ph.D. degrees in applied physics from Stanford Univ., Stanford, Calif. in 1966 and 1970, respectively.

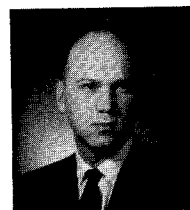
In 1969 he served as Technical Consultant to North American Rockwell Corporation, Autonetics Division, in the area of microwave acoustic surface waves. In 1970 he joined the technical staff at Hughes Aircraft Company, Fullerton, Calif. where he is now a Staff Physicist. His present research is concerned with the application of surface acoustic waves to filters, delay lines, radar and signal processing devices.

Dr. Smith is a member of Sigma Xi and is currently secretary of the Orange County Joint MTT/PGAP Chapter of the IEEE.

HENRY M. GERARD was born in Brooklyn, N.Y. on Nov. 7, 1942. He received the B.S. and M.S. degrees in physics in 1964 as a participant in the Unified Honors Program of the Polytechnic Institute of Brooklyn, Brooklyn, N.Y. As a research assistant at the Microwave Laboratory of Stanford Univ., Stanford, Calif., from 1964 through 1969, he studied piezoelectric surface waves and interdigital transducers leading to conferral of the Ph.D. degree in applied physics in 1970.

In 1969, he joined the technical staff at Hughes Aircraft Company, Fullerton, Calif. where he is now a Staff Physicist in the Receiver and Frequency Control Department. Since 1969, Dr. Gerard has been engaged in the development of acoustic surface wave filters and phase coded devices for broadband analog signal processing applications. He is presently involved in the study of reflective grating techniques for high efficiency, broadband surface wave applications.

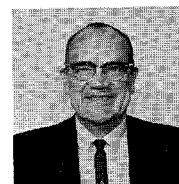
Dr. Gerard is a member of Sigma Xi.



E. G. Cristal

EDWARD G. CRISTAL was born in St. Louis, Missouri in January 1935. He received the B.S. and A.B. degrees in 1957 in electrical engineering and mathematics, respectively, and the M.S. degree in 1958 in electrical engineering from Washington Univ. (St. Louis). In 1961 he received the Ph.D. degree in electrical engineering from the Univ. of Wisconsin. From March 1961 to January 1972 he was with the Electromagnetic Techniques Laboratory of the Stanford Research Institute (SRI), Menlo Park, Calif. At SRI he participated in programs of applied research and development of microwave and UHF components, including filters, multiplexers, directional couplers, impedance matching networks, equalizers and multipliers. From January 1972 to June 1973 he was Associate Professor of Electrical Engineering at McMaster Univ., Hamilton, Ontario. He joined the Hewlett-Packard Laboratories in June 1973 where he is currently working in the area of telecommunications.

#### MICROWAVE APPLICATION AWARD RECIPIENT



W. W. Mumford

WILLIAM W. MUMFORD was born in Vancouver, Washington, on June 17, 1905. He received the A.B. degree in 1930 from Willamette Univ., Salem, Oregon, majoring in physics and mathematics. He at once joined the Technical Staff of the Bell Telephone Laboratories, where he has worked on ultra high frequency propagation and microwave components. Mr. Mumford's contributions in the microwave field include filters, directional couplers, wideband coaxial-to-waveguide transducers, helix-to-waveguide transistors and the gas-discharge noise generator. These are covered in 37 published papers and 19 patents. He is a coauthor of "Radar Systems and Components," D. Van Nostrand, 1949, and "Noise Performance Factors in Communications Systems," Horizon House Microwave, Inc., 1968. After retiring from the Bell Telephone Laboratories in 1970, Mr. Mumford served on the Board of Directors of the Weinschel Engineering Company. In 1971 he was appointed Adjunct Associate Professor of Environmental Medicine, at the New York University Medical Center where his chief contributions are in the field of Microwave Biological effects and Radio Frequency Radiation Hazards.

He is listed in American Men of Science, Who's Who in Engineering and Who's Who in America.

Lawrence K. Anderson	For contributions in the field of holographic optical memories.
Marvin Cohn	For contributions to micrometer wave technology, low-noise microwave integrated circuitry, electromagnetic surface wave excitation, and transmission.
Herbert Doring	For contributions to microwave electronics and to education.
Arwin A. Dougal	For contributions to the theory and teaching of plasma science and physical electronics.
John D. Dyson	For contributions to the development of log-spiral antennas.
Wolfgang W. Gaertner	For contributions to the development of microelectronic circuits and systems with low power consumption, high packing density, and adaptive self-healing features.
John J. Guarrera	For contributions to microwave technology.
Friedrich W. Gundlach	For contributions to the development of microwave tubes.
Bernard Hershenov	For contributions to microwave devices.
Bharat K. Kinariwala	For contributions to research in circuit and system theory and to engineering education.
Kaneyuki Kurokawa	For contributions to microwave solid-state circuits, oscillators, and devices.
Akio Matsumoto	For contributions to the theory and design of electrical networks and microwave filters.
Minoru Okada	For contributions to air traffic control automation and navigational electronic engineering.
Oliver T. Purl	For contributions to high-power travelling-wave tubes, and for leadership of microwave electron device engineering.
Leon J. Ricardi	For contributions to the theory and design of microwave antenna systems for communication satellites and deep space radar applications.
Shigebumi Saito	For contributions to microwave and laser technology.
Robert A. Soderman	For contributions to the development of instrumentation and measurement methods, and for leadership in the establishment and acceptance of associated standards.
* Hidenari Uchida	For contributions to the theory and practice of VHF and UHF antennas.
Hans G. Unger	For contributions to the theory of multimode millimeter waveguides.

\* Deceased October 1973