## **Contributors to This Issue**

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JAMES W. GEWARTOWSKI, B.S., 1952, Illinois Institute of Technology; S.M., 1953, Massachusetts Institute of Technology; Ph.D., 1958, Stanford University; Bell Telephone Laboratories, 1957—. Mr. Gewartowski was initially concerned with the development of high-power microwave tubes and electron guns. Since 1962 he has supervised a group concerned with varactor harmonic generators and upconverters and avalanche transit-time diode oscillators. He is co-author of the book, *Principles of Electron Tubes*, (Van Nostrand, 1965). Member, IEEE, Tau Beta Pi, Eta Kappa Nu, Sigma Xi.

A. GOETZBERGER, Ph.D. in Science, 1955, University of Munich; Bell Telephone Laboratories, 1963—. Mr. Goetzberger is a supervisor in the metal insulator semiconductor group. Prior to 1963, he was with the Shockley Laboratory in Palo Alto, where he worked on junction imperfections and avalanche breakdown phenomena in silicon. He also participated in the development of a power transistor. Member, American Physical Society, IEEE, Electrochemical Society.

W. M. HUBBARD, B.S., 1957, Georgia Institute of Technology; M.S., 1958, University of Illinois; Ph.D., 1963, Georgia Institute of Technology; Bell Telephone Laboratories, 1963—. Mr. Hubbard's work has included analyses related to the design of millimeter-wave solid-state repeaters for use in a waveguide transmission system and the construction of prototype high-speed repeaters for this type of system. Member, Sigma Xi, Tau Beta Pi, Phi Kappa Phi, American Physical Society. BELA JULESZ, Dipl. in Electrical Engineering, 1950, Budapest (Hungary) Technical University, Kandidat in Technical Sciences, 1956, Hungarian Academy of Sciences; Telecommunication Research Institute (Budapest) 1950–56; Bell Telephone Laboratories, 1956—. Mr. Julesz first taught and did research in communication systems and his thesis work reflected his later interest in analyzing and processing pictorial information. At the Laboratories he was first engaged in studies of systems for reducing television bandwidth. Since 1959 he has devoted full time to visual research, particularly in depth perception and pattern recognition, about which he has written extensively. Since 1964 Dr. Julesz is Head of the Sensory and Perceptual Processes Department, responsible for research in visual psychology and neurophysiology. Member, IEEE, AAAS, Psychonomic Society, Optical Society of America.

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IRWIN W. SANDBERG, B.E.E., 1955, M.E.E., 1956, and D.E.E., 1958, Polytechnic Institute of Brooklyn; Bell Telephone Laboratories, 1958—. Mr. Sandberg has been concerned with analysis of military systems, synthesis and analysis of active and time-varying networks, studies of properties of nonlinear systems, and with a few problems in communication theory. His current interests are in the area of numerical analysis. Member, IEEE, SIAM, Eta Kappa Nu, Sigma Xi, Tau Beta Pi.

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