

## Contributors to This Issue

R. T. AIKEN, B.S., 1957, M.S., 1959, Ph.D., 1962, Carnegie Institute of Technology; U. S. Army 1961-1963; Bell Telephone Laboratories, 1963-. Mr. Aiken has engaged in a variety of radar- and communication-theory studies involving the effects of random media. Member, IEEE, Sigma Xi, Tau Beta Pi, Eta Kappa Nu.

W. L. BROWN, B.S., 1945, Duke University; M.A., 1948, Harvard University; Ph.D., 1951, Harvard University; Bell Telephone Laboratories, 1950-. Mr. Brown has been concerned with studies of: semiconductor surface states, radiation produced defects in solids, geomagnetically trapped energetic particles in space and channeling of high-energy ions in crystal lattices. He is currently engaged in studies of temporal variations in the high-energy trapped electrons at synchronous satellite altitudes, and the channeling and implantation of heavy ions in solids. Member, Sigma Xi; Fellow, American Physical Society.

ROBERT W. CHANG, B.S.E.E., 1955, National Taiwan University; M.S.E.E., 1960, North Carolina State College; Ph.D., 1965, Purdue University; Bendix Corporation, 1960-1963; Bell Telephone Laboratories, 1965-. Mr. Chang has been concerned with problems in data transmission and communication theory. Member, Eta Kappa Nu, Sigma Xi, Phi Kappa Phi, IEEE.

D. B. DOVE, B.Sc., 1953, Ph.D., 1956, Imperial College of Science and Technology, London; Scientific Officer, Atomic Energy Research Establishment, England, 1955-1959; Senior Scientific Officer, 1959; Fellow, National Research Council of Canada 1959-1961; Bell Telephone Laboratories, 1961-. Mr. Dove was a member of the Device Research Department and has specialized in structural and magnetic properties of thin metal films. More recently he was a member of the Electronic Materials Laboratory with specialization in thin film problems. Mr. Dove is presently on leave of absence at the Department of Metallurgy and Materials, College of Engineering, University of Florida, Gainesville, Florida.

LOUIS H. ENLOE, B.S.E.E., 1955, M.S.E.E., 1956, Ph.D., (E.E.), 1959, University of Arizona, Tucson; Bell Telephone Laboratories, 1959-. Mr. Enloe served as an Instructor in Electrical Engineering and as a member of the technical staff of the Applied Research Laboratory of the University of Arizona from 1956 to 1959. His work was primarily in transistor circuitry. Since 1959 he has been in the research division of Bell Telephone Laboratories. His early work was in modulation and noise theory in connection with space communications. Later work has been with lasers, coherent light, and holography with emphasis upon communication and display. He is presently Head, Opto-Electronics Research Department. Member, IEEE, Phi Kappa Phi, Sigma Xi, Tau Beta Pi, Pi Mu Epsilon, Sigma Pi Sigma.

JOHN D. GABBE, B.A., 1950, New York University; M.S., 1951, University of Illinois; Ph.D., 1957, New York University; Bell Telephone Laboratories, 1956-. Mr. Gabbe was first associated with the *Picturephone*<sup>®</sup> project, then with studies of the earth's magnetosphere. At present, he is engaged in research concerning the methodology of data analysis. Member, American Physical Society.

KARL R. GARDNER, B.S. (Eng. Physics), 1960, M.S., (Physics), 1962, University of Illinois; Bell Telephone Laboratories 1962-. Mr. Gardner has been engaged in the development of several miniature silicon diodes. He is presently working on silicon integrated circuits. Member, Tau Beta Pi, American Physical Society.

WILLIAM C.-Y. LEE, B.Sc. in Engineering, 1954, Chinese Naval Academy; M.Sc., E.E., 1960, and Ph.D. in E.E., in 1963, The Ohio State University; Bell Telephone Laboratories, 1964-. Mr. Lee has been concerned with the study of wave propagation in anisotropic medium and antenna theory. His present work has included studies of mobile radio antennas and signal fading problems. Member, Sigma Xi, IEEE.

JAMES MCKENNA, B.Sc. (Math), 1951, Massachusetts Institute of Technology; Ph.D., (Math), 1961, Princeton University; Bell Telephone Laboratories, 1960-. Mr. McKenna has done research in quantum mechanics and classical electromagnetic theory. At present he is involved in a study of optical waveguides.

T. R. ROBILLARD, B. Physics, 1949, University of Minnesota; M.S., 1952, University of Illinois; Bell Telephone Laboratories, 1954-. Mr. Robillard has been engaged in the development of a variety of transistors, semiconductor diodes and integrated devices at both the Reading and the Allentown Laboratories. At present, he is supervisor at the Reading Laboratory responsible for the development of silicon integrated circuits. Member, Sigma Xi, Phi Beta Kappa, American Physical Society.

DAN VARON, B.S., 1957, Dipl. Ing. 1961, The Technion—Israel Institute of Technology; M.S. Electrophysics, 1963, Polytechnic Institute of Brooklyn; Eng. Sc.D., 1965, New York University; Israeli Air Force, 1957-1961; Bell Telephone Laboratories, 1965-. Mr. Varon has been engaged in applications of electromagnetic theory to studies of phased array antennas and microwave transmission devices. Member, IEEE, Eta Kappa Nu, Sigma Xi.

M. B. WILK, B. Eng. (Chem.), 1945, McGill University; M.S. (Statistics), 1953, Iowa State University; Ph.D. (Statistics), 1955, Iowa State University; National Research Council of Canada (Atomic Energy Project), 1945-1950; Iowa State University, 1951-1955; Princeton University, 1955-1957; Rutgers University, 1959-1963; Bell Telephone Laboratories, 1956-. Mr. Wilk has been involved in research into statistical methods and theory and applications in a variety of scientific areas. Presently, he is Head, Statistics and Data Analysis Research Department. Member, American Statistical Association (Fellow), Institute of Mathematical Statistics, Royal Statistical Society, Biometric Society, International Association for Statistics in the Physical Sciences.

G. I. ZYSMAN, B.E.E., 1959, Cooper Union; M.S.E.E., 1962, Ph.D. (Electrophysics), 1966, Polytechnic Institute of Brooklyn; Hazeltine Corp., N. Y., 1959-1960; Polytechnic Institute of Brooklyn, 1965-1966; Bell Telephone Laboratories, 1966-. Mr. Zysman has been concerned with the study of microwave circuits and phased array antennas. Member, IEEE.

