Contributors to This Issue

CYRUS F. AULT, B.E. in E.E., 1950, University of Southern California; M.S., 1955, Stevens Institute of Technology; Bell Telephone Laboratories, 1955—. Mr. Ault is a member of the group working on the development of the barrier grid store for electronic switching. Member I.R.E.

WILLARD S. BOYLE, B.S., 1947, M.S., 1948 and Ph.D., 1950, McGill University; Royal Military College (Kingston, Ont.), 1951–53; Bell Telephone Laboratories, 1953—. He was first engaged in studies of electrical discharge phenomena in low voltage contacts. Since 1956 he has concentrated on research in optical and magnetic effects in solids in the infra-red and at very low temperatures. Member American Physical Society.

KENNETH BULLINGTON, B.S., 1936, University of New Mexico; M.S., 1937, Massachusetts Institute of Technology; Bell Telephone Laboratories, 1937—. Mr. Bullington first worked on systems engineering on wire transmission circuits. Since 1942 he has been concerned with transmission engineering on radio systems, particularly over-the-horizon radio propagation. He took part in engineering planning on the DEW and White Alice projects. He is now in charge of a group concerned with systems engineering problems related to TASI and submarine cable systems. In 1956 he received the Morris Liebmann Memorial Prize and the Franklin Institute's Stuart Ballantine Metal for contributions in tropospheric transmission and its application to practical communications systems. Fellow I.R.E.; member Phi Kappa Phi, Sigma Tau, Kappa Mu Epsilon.

R. W. DEGRASSE, B.S., 1951, California Institute of Technology; M.S., 1954 and Ph.D., 1958, Stanford University; California Institute of Technology Jet Propulsion Laboratory, 1951–1953; Stanford Electronics Laboratory, 1953–1957; Bell Telephone Laboratories, 1957—. At the Jet Propulsion Laboratory Mr. DeGrasse was engaged in missile radar development, and at Stanford Electronics Laboratory he did research work on microwave frequency memory devices, low-noise travel-

ing-wave tubes and traveling-wave frequency converters. Since joining Bell Laboratories he has been engaged in development work on solid state masers. Member I.R.E., Sigma Xi.

G. V. DEVERALL, B.S., 1948, Purdue University; M.S., 1951, University of Chicago; Ph.D., 1954, Purdue University; Bell Telephone Laboratories, 1957—. He has been engaged in optical and photographic studies with application to electronic switching. Member American Physical Society, Optical Society of America, Sigma Xi.

JOHN M. FRASER, B.E.E., 1945, Polytechnic Institute of Brooklyn; Bell Telephone Laboratories, 1934—. He first worked on problems of transmission systems performance and the design of equipment for simulating transmission systems in the laboratory. During World War II he was concerned with design and evaluation of military communications systems. He took part in systems engineering of the transatlantic telephone cable and at present is engaged in systems engineering on TASI. Senior member I.R.E.; member Sigma Xi, Tau Beta Pi, Eta Kappa Nu.

L. E. GALLAHER, B.S., 1951 and M.S., 1956, Case Institute of Technology; Bell Telephone Laboratories, 1955—. He has been engaged in development work on a beam-positioning servo system for the flying spot store. Member Sigma Xi, Tau Beta Pi, Eta Kappa Nu.

GEORGE HAUGK, B.S., in E.E., 1952, Newark College of Engineering; New York University; Western Electric Company, 1947–48; Bell Telephone Laboratories, 1952—. After completing the Communications Development Training Program course, Mr. Haugk worked on design of circuits for electronic switching systems for three years. Since then he has headed a group responsible for field trial and testing of electronic switching. Member I.R.E.

DONALD R. HERRIOTT, University of Richmond; Duke University; Bausch and Lomb, 1949–56; Bell Telephone Laboratories, 1956—. Mr. Herriott has been engaged in research in visual transmission systems. Member Optical Society of America.

C. W. HOOVER, JR., B.E. in M.E., 1946; M.S., 1951 and Ph.D. in physics, 1954, Yale University; B.S. in E.E., 1947, M.I.T.; Bell Telephone Laboratories, 1954—. Mr. Hoover has been engaged in design

of memory systems for use in electronic switching systems. He held the Yale University Sterling Fellowship and the National Research Council-Radio Corporation of America Fellowship in electronics. Member American Physical Society, Tau Beta Pi, Sigma Xi.

JAMES C. KING, B.A., 1949, Amherst College; M.S., 1951 and Ph.D., 1953, Yale University; Bell Telephone Laboratories, 1953—. He has been engaged primarily in the study of defects which occur in natural and synthetic quartz. This has led to investigations of the anelasticity of quartz at low temperatures and the effects of ionizing radiation. Member American Physical Society, Phi Beta Kappa, Sigma Xi.

RUTH A. KING, B.A., 1941, Brooklyn College; New York Telephone Co., 1927–29; Bell Telephone Laboratories, 1929—. Mrs. King joined the Bell System as a telephone operator and two years later transferred to the drafting department. In 1937 she turned to mathematical problems in circuit research. During the war years she took part in the development of pulse transmission systems and later worked on research studies of transmission lines and on repeaters for the transatlantic cable. Mrs. King is presently engaged in work on television transmission. Member I.R.E., Pi Mu Epsilon.

DOLORES C. LEAGUS, A.B., 1951, Wilkes College; M.A., 1953, Bucknell University; Bell Telephone Laboratories, 1953—. Miss Leagus is engaged in computer programming for mathematical research projects.

C. Y. LEE, B.E.E., 1947, Cornell University; M.S.E.E., 1949 and Ph.D., 1954, University of Washington; John McMullen Regional Scholar at Cornell, 1944–47; instructor, electrical engineering, University of Washington, 1948–51; Bell Telephone Laboratories, 1952—. Mr. Lee has been engaged in mathematical research in switching systems development. He was a visiting member of the Institute for Advanced Study in the School of Mathematics during the academic year 1957–58. Member Sigma Xi, Eta Kappa Nu.

GEORGE H. MEALY, A.B., 1951, Harvard College; Bell Telephone Laboratories, 1951—. After completing the C.D.T.P. course, Mr. Mealy was engaged in military work for a year. He then turned to work as a consultant in switching theory and programming research. He later headed mathematical studies in the switching training group and is now a consultant in logical design and computer programming. Mr.

Mealy teaches a course in switching theory and computer design at Columbia University. Member I.R.E., Association for Computing Machinery, Association for Symbolic Logic, Society for Industrial and Applied Mathematics.

D. B. Owen, B.S., 1945, M.S., 1946 and Ph.D., 1951, University of Washington; associate and acting instructor, University of Washington, 1946–52; assistant professor and research associate, Purdue University, 1952–54; Sandia Corporation, 1954—. A member of the systems analysis department and supervisor of the statistical research division of the Sandia Corp., he specializes in research on statistical procedures and consultation on statistical problems. Member Institute of Mathematical Statistics, American Statistical Association, American Mathematical Society, Phi Beta Kappa, Sigma Xi.

Merton B. Purvis, B.S., 1944 and M.S., 1949, Iowa State College; Ph.D., 1954, Pennsylvania State University; Bell Telephone Laboratories, 1955—. He has been engaged in mechanical development work on an electronic switching system central office. This has included studies of problems in optics, photography, heat transfer and air conditioning. Associate member American Society of Mechanical Engineers; member Sigma Xi, Pi Tau Sigma.

Gordon Raisbeck, B.A., 1944, Stanford University; Ph.D., 1949, Massachusetts Institute of Technology; Bell Telephone Laboratories, 1949—. Mr. Raisbeck's early work at Bell Laboratories was in research in acoustics and underwater sound. From 1950 to 1953 he concentrated in research in transistor circuits and then took his present post in charge of a group engaged in research on transmission lines and pulse transmission systems. Throughout his Laboratories career, Mr. Raisbeck has done additional work on information theory. He was a Rhodes Scholar at Oxford University in 1947. Senior member I.R.E.; member American Mathematical Society, Mathematical Association of America, American Management Association, Sigma Xi.

E. O. Schulz-DuBois, Dipl. phys., 1950, and Dr. phil. nat., 1954, Johann Wolfgang Goethe University (Germany); Purdue University, 1954–55; Raytheon Manufacturing Co., 1956–57; Bell Telephone Laboratories, 1957—. At Purdue Mr. Schulz-DuBois was engaged in solid state research, particularly on paramagnetic resonance in irradiated semiconductors. At Raytheon he was concerned with the development

of ferrite materials and devices. After joining Bell Laboratories he worked for a short time on low-frequency ferrite isolators. His present work is with paramagnetic materials and slow-wave structures for application to solid state maser devices.

H. E. D. Scovil, B.A., 1948 and M.A., 1949, University of British Columbia; Ph.D., 1951, Oxford University; Nuffield research fellow, Oxford, 1951–52; assistant professor, University of British Columbia, 1952–55; Bell Telephone Laboratories, 1955—. Mr. Scovil has taken part in investigations of low temperature properties of magnetic materials and ferromagnetic materials at high microwave power levels. He has recently concentrated on development of solid state masers.

James L. Smith, B.S.E.E., 1956, Newark College of Engineering; Bell Telephone Laboratories, 1941—. Mr. Smith first worked on problems concerned with relay contact erosion. More recently he has been engaged in development work on solid state switching networks. His present work is on the twistor memory device. Member Tau Beta Pi.

John M. Wiesen, B.S., 1949 and M.S., 1951, Iowa State College; graduate assistant, Iowa State College, 1949–51; Sandia Corporation, 1951—. A member of the reliability department and supervisor of the statistics and evaluation division of the Sandia Corp., he is involved in the application of statistical methods to atomic weapon reliability. Member American Society for Quality Control, Institute of Mathematical Statistics, American Statistical Association.