Contributors To This Issue

Václav E. Beneš, A.B., 1950, Harvard College; M.A. and Ph.D., 1953, Princeton University; Bell Telephone Laboratories, 1953—. Mr. Beneš has been engaged in mathematical research on stochastic processes, traffic theory, and servomechanisms. In 1959–60 he was visiting lecturer in mathematics at Dartmouth College. He is the author of General Stochastic Process in the Theory of Queues (Addison-Wesley, 1963), and of Mathematical Theory of Connecting Networks and Telephone Traffic (Academic Press, 1965). Member, American Mathematical Society, Association for Symbolic Logic, Institute of Mathematical Statistics, SIAM, Mind Association, Phi Beta Kappa.

James L. Flanagan, B.S., 1948, Mississippi State University; S.M., 1950 and Sc.D., 1955, Massachusetts Institute of Technology; faculty, Mississippi State University, 1950–52; Rockefeller Foundation Fellow, 1952–53; Air Force Cambridge Research Center, 1954–57; Bell Telephone Laboratories, 1957—. Mr. Flanagan has specialized in signal coding and speech communication over narrow bandwidths, including studies of acoustical, physiological, and psychophysical phenomena related to speech and hearing. Since 1961, he has headed the Speech and Auditory Research Department. Fellow, Acoustical Society of America; member, IEEE, Sigma Xi, Tau Beta Pi, Committee on Hearing and Bioacoustics of the National Academy of Sciences.

M. Gershenzon, B.S., 1949, City College of New York, A.M., 1953, Ph.D., 1957, Columbia University; Bell Telephone Laboratories, 1957—. Mr. Gershenzon has worked on radiative recombination in semiconductors and on physical and chemical properties of gallium phosphide. Currently, he is on leave of absence at the Department of Electrical Engineering and Materials Science, University of Southern California, Los Angeles, California.

ROGER M. GOLDEN, B.S.E.E., 1954, M.S.E.E., 1955, Ph.D., 1959, California Institute of Technology; Fulbright student Technical Institute at Eindhoven, Netherlands, 1959–60; Bell Telephone Laboratories, 1960–66. While at Bell Laboratories, Mr. Golden has worked on

speech bandwidth compression systems and speech analysis-synthesis systems for telephone communications. He has developed new techniques for the simulation of signal processing systems on digital computers. In November of this year, Mr. Golden will return to California where he will join the research and engineering staff of Autonetics, Division of North American Aviation. Member, Acoustical Society of America, IEEE, Association for Computing Machinery, Sigma Xi, Tau Beta Pi.

Ronald L. Graham, B.S., 1958, University of Alaska; M.A., Ph.D., 1962, University of California (Berkeley); Bell Telephone Laboratories, 1962—. Mr. Graham has been engaged in research into a variety of problems arising in coding theory, graph theory and combinatorial geometry. Member, American Mathematical Society, Mathematical Association of America, Sigma Xi.

MING-LEI LIOU, B.S.E.E., 1956, National Taiwan University; M.S.E.E., 1961, Drexel Institute of Technology; Ph.D., 1964, Stanford University; Bell Telephone Laboratories, 1963—. Mr. Liou has been working on various kinds of system analyses and characterization. His current interests lie in the area of computational analysis of linear and nonlinear systems. He is presently Supervisor, Transmission Studies Group in the Transmission Technology Laboratory. Member, Eta Kappa Nu, Sigma Xi, IEEE.

James E. Mazo, B.S., 1958, Massachusetts Institute of Technology; M.S., 1960, and Ph.D., 1963, Syracuse University; Research Associate, University of Indiana, 1963–64; Bell Telephone Laboratories, 1964—. At Indiana University, Mr. Mazo was engaged in work on quantum scattering theory. At present, he is engaged in theoretical analysis of data systems. Member, American Physical Society, IEEE, Sigma XI.

JOSEPH T. Ruscio, B.S., 1962, Monmouth College; Bell Telephone Laboratories, 1957—. Mr. Ruscio has been engaged in the Echo and *Telstar®* satellite communication projects, light modulation, and other phases of laser technology. He is currently involved in light propagation experiments at the Crawford Hill Laboratory.

J. Salz, B.S.E.E., 1955, M.S.E., 1956, Ph.D., 1961, University of Florida; the Martin Company, 1958–60; Bell Telephone Laboratories, 1961—. Mr. Salz first worked on the remote line concentrators for the

electronic switching system. He has since engaged in theoretical studies of data transmission systems. Member, IEEE; associate member, Sigma Xi.

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, particularly radar systems, with synthesis and analysis of active and time-varying networks, and with studies of the signal-theoretic properties of nonlinear systems. Member, IEEE, SIAM, Eta Kappa Nu, Sigma Xi, Tau Beta Pi.

M. V. Schneider, M.S., 1956, and Ph.D., 1959, Swiss Federal Institute of Technology, Zurich, Switzerland; Bell Telephone Laboratories, 1962—. Mr. Schneider has been engaged in experimental work on microwave solid-state devices and optical detectors. Member, Optical Society of America, IEEE, American Vacuum Society.

Frank W. Sinden, B.S., 1948, University of Chicago; Dr. Sci. Math., Swiss Federal Institute of Technology, 1954; Bell Telephone Laboratories, 1956—. Mr. Sinden has worked mainly in operations research and mathematical programming. Member, AMS, MAA; Editor, SIAM Review.

Jurgen H. W. Unger, Dipl. Eng., 1951, Technische Hochschule (Institute of Technology) Karlsruhe, Germany; Bell Telephone Laboratories, 1962—. Mr. Unger has been engaged in the development of guidance and control systems for spacecraft, and in research on the effects of random errors in control systems. His present work involves atmospheric effects in microwave, radar, and optical systems. Member, IEEE, American Institute of Aeronautics and Astronautics.

