

## CONTRIBUTORS TO THIS ISSUE

**Sergio M. Brecher**, Diploma Engineer, 1964 (Electrical Engineering), University of Buenos Aires, Argentina, M.S., 1969, Ph.D., 1972 (Electrical Engineering), Columbia University; Bell Laboratories 1972—. Before joining Bell Laboratories, Mr. Brecher worked in Argentina in high-frequency point-to-point communications and in automatic control for nuclear reactors. At Bell Laboratories, he has been working in switching systems engineering problems for No. 1/1A ESS, No. 10A RSS, and, more recently, No. 5 ESS. Member, Sigma Xi, IEEE.

**Corrado Dragone**, Laurea in E.E., 1961, Padua University (Italy); Libera Docenza, 1968, Ministero della Pubblica Istruzione (Italy); Bell Laboratories, 1961—. Mr. Dragone has been engaged in experimental and theoretical work on microwave antennas and solid-state power sources. He is currently concerned with problems involving electromagnetic wave propagation and microwave antennas.

**Kai Y. Eng**, B.S.E.E. (summa cum laude), 1974, Newark College of Engineering; M.S. (Electrical Engineering), 1976, Dr. Engr. Sc. (Electrical Engineering), 1976, Dr. Engr. Sc. (Electrical Engineering), 1979, Columbia University; RCA Astro-Electronics, 1974-1979; Bell Laboratories, 1979—. Mr. Eng has worked on various areas of microwave transmission, spacecraft antenna analysis, and communications satellites. He is presently a member of the Radio Research Laboratory, studying TV transmission through satellites. Member, IEEE, Sigma Xi, Tau Beta Pi, Eta Kappa Nu, Phi Eta Sigma.

**Barry G. Haskell**, B.S. (Electrical Engineering) 1964, M.S., 1965, and Ph.D., 1968, University of California, Berkeley; University of California, 1965-1968; Bell Laboratories, 1968—; Rutgers University, 1977-1979. Mr. Haskell was a Research Assistant at the University of California Electronics Research Laboratory and a part-time faculty member of the Department of Electrical Engineering at Rutgers University. At Bell Laboratories, he is presently head of the Radio Communications Research Department, where his research interests include television picture coding and transmission of digital and analog information via microwave radio. Member, IEEE, Phi Beta Kappa, Sigma Xi.

**Markus S. Mueller**, E.E. Diploma, 1970, Ph.D. (Electronic Engineering), 1976, Swiss Federal Institute of Technology, Zurich, Switz-

erland; Swiss Federal Institute of Technology, Zurich, 1971-1976; GenRad, Zurich, 1976-1978; Bell Laboratories, 1978-1981. Mr. Mueller was teaching and research assistant at the Swiss Federal Institute of Technology, where he worked in various fields, including filter theory, data transmission, and adaptive signal processing. He was a product specialist with GenRad for computer controlled automatic test systems. At Bell Laboratories, he was a member of the Data Theory Group in the Data Systems and Technology Department, and his interests were in data communication, digital signal processing, and adaptive systems.

**Vasant K. Prabhu**, B.E. (Dist.), 1962, Indian Institute of Science, Bangalore, India; S.M., 1963, Sc.D., 1966, Massachusetts Institute of Technology; Bell Laboratories, 1966—. Mr. Prabhu has been concerned with various theoretical problems in solid-state microwave devices and digital and optical communication systems. Member, IEEE, Eta Kappa Nu, Sigma Xi, Tau Beta Pi, Commission 6 of URSI.

**Irwin W. Sandberg**, B.E.E., 1955, M.E.E., 1956, and D.E.E., 1958, Polytechnic Institute of Brooklyn; Bell Laboratories, 1958—. Mr. Sandberg has been concerned with analysis of radar systems for military defense, synthesis and analysis of active and time-varying networks, several fundamental studies of properties of nonlinear systems, and with some problems in communication theory and numerical analysis. His more recent interests include compartmental models, the theory of digital filtering, global implicit-function theorems, and functional expansions for nonlinear systems. Former Vice Chairman IEEE Group on Circuit Theory, and Former Guest Editor IEEE Transactions on Circuit Theory Special Issue on Active and Digital Networks. Fellow and member, IEEE; member, American Association for the Advancement of Science, Eta Kappa Nu, Sigma Xi, Tau Beta Pi, National Academy of Engineering.

**Jack Salz**, B.S.E.E., 1955, M.S.E., 1956, and Ph.D., 1961, University of Florida; Bell Laboratories, 1961—. Mr. Salz first worked on remote line concentrators for the electronic switching system. Since 1968 he has supervised a group engaged in theoretical studies in data communications and is currently a member of the Communications Methods Research Department. During the academic year 1967-68, he was on leave as Professor of Electrical Engineering at the University of Florida. In Spring, 1981, he was a visiting lecturer at Stanford University. Member, Sigma Xi.

**Hans S. Witsenhausen**, Ph.D. (Electrical Engineering), 1966 Massachusetts Institute of Technology; Bell Laboratories, 1966—. Mr. Witsenhausen has been associated with the Université Libre de Bruxelles, with the European Computation Center, Brussels, and with the Princeton Research Division of Electronics Associates. At M.I.T. he was with the Electronic Systems Laboratory as a Lincoln Laboratory Associate and a Hertz Fellow. At Bell Laboratories, he is associated with the Mathematics and Statistics Research Center. He was a Senior Fellow at the Imperial College of Science and Technology, London, in 1972, a Visiting Professor at M.I.T. in 1973, and Vinton Hayes Senior Fellow at Harvard University in 1975-76. He has worked on problems of hybrid computation, control theory, optimization, geometric inequalities, and other applied mathematical fields.

**Aaron D. Wyner**, B.S., 1960, Queens College; B.S.E.E., 1960, M.S., 1961, Ph.D., 1963, Columbia University; Bell Laboratories 1963—. Mr. Wyner has been doing research in various aspects of information and communication theory and related mathematical problems. He is presently Head of the Communications Analysis Research Department. He spent the year 1969-1970 visiting the Department of Applied Mathematics, Weizmann Institute of Science, Rehovot, Israel, and the Faculty of Electrical Engineering, at Technion, Haifa, Israel, on a Guggenheim Foundation Fellowship. He has also been a full- and part-time faculty member at Columbia University and the Polytechnic Institute of Brooklyn. He was chairman of the Metropolitan New York Chapter of the IEEE Information Theory Group, associate editor of the Group's *Transactions*, and co-chairperson of two international symposia. In 1976, he was president of the IEEE Information Theory Group. Fellow, IEEE; member, AAAS, Tau Beta Pi, Eta Kappa Nu, Sigma Xi.

