

## Contributors to This Issue

GEORGE H. BEBBINGTON, B.A., 1960, Rutgers University; currently working towards an M.A. at Newark State College; Bell Laboratories, 1952—. Mr. Bebbington is presently a member of the Rubber and Crosslinked Plastics Group. He has worked on the development of wire and cable insulation and jacketing compounds and also on public health, ozonization, and deterioration problems. Member, New York Rubber Group of the Rubber Division of the American Chemical Society.

RICHARD A. CONNOLLY, B.S. (Forestry), 1952, University of Maine; Master of Forestry, 1954, Yale School of Forestry; Bell Laboratories, 1956—. Mr. Connolly's work is concerned with the performance of materials used in buried, marine, and atmospheric environments of interest to the Bell System. Member, Society of Industrial Microbiology, Society of American Foresters, ASTM D20 Committee concerned with the resistance of plastics to microorganisms.

DONALD W. DAHRINGER, B.S.Ch.E., 1955, Newark College of Engineering; M.S.Ch.E., 1959, Polytechnic Institute of Brooklyn; Bell Laboratories, 1961—. Mr. Dahringer has worked in the area of organic materials development. He is currently a Bell System consultant on adhesives and bonding technology. Member, ACS, A.I.Ch.E., NJSPE, Omicron Delta Kappa, Phi Lambda Upsilon, Iota Tau.

JOHN B. DECOSTE, B.S.Ch.E., Cooper Union; Bell Laboratories, 1928—. Mr. DeCoste's career has been in chemical research directed toward the adoption of organic polymeric material for use in the telephone plant. He holds two patents and has published a number of papers on the properties of polyethylene and poly(vinyl chloride) as well as on standardization in plastics. Member, ACS, Society of Plastics Engineers, ASTM.

DONALD L. DUTTWEILER, B.E.E., 1966, Rensselaer Polytechnic Institute; M.S., 1967, and Ph.D., 1970, Stanford University; Bell Laboratories, 1970—. Since joining Bell Laboratories, Mr. Duttweiler has been concerned with various analytical problems in the area of digital communications. Member, IEEE, Eta Kappa Nu, Tau Beta Pi, Sigma Xi.

MICHAEL R. GAREY, B.S., 1967, M.S., 1969, and Ph.D., 1970, University of Wisconsin; Bell Laboratories, 1970—. Mr. Garey's recent interests have been in the fields of graph theory, combinatorial analysis, and discrete optimization, with particular emphasis on the design of efficient computational algorithms. Member, Association for Computing Machinery, Mathematical Association of America.

BARRY G. HASKELL, B.S., 1964, M.S., 1965, and Ph.D. (Electrical Engineering), 1968, University of California; Research Assistant, University of California, 1965–68; Bell Laboratories, 1968—. Mr. Haskell is engaged in TV picture processing studies. Member, IEEE, Phi Beta Kappa, Sigma Xi.

THEODORE H. KLEIN, B.S. (Chemistry), 1953, Upsala College; Bell Laboratories, 1967—. Mr. Klein's major interests at Bell Laboratories have been reinforced plastics and substrates for flexible circuitry. Member, American Society For Testing and Materials; Bell Laboratories Representative to Society of Plastic Industries.

T. K. KWEI, B.S. (Chemistry), 1949, National Chiao-Tung University, China; M.S. (Chemical Engineering), 1954, University of Toronto; Ph.D. (Chemistry), 1958, Polytechnic Institute of Brooklyn; Standard Oil Company of Indiana; Interchemical Corporation; Bell Laboratories, 1965—. Mr. Kwei is interested in the mechanical properties of polymers and diffusion in polymers. He has published some forty-five papers on chemical subjects.

JOHN O. LIMB, B.E.E., 1963, and Ph.D., 1967, University of Western Australia; Research Laboratories, Australian Post Office, 1966–1967; Bell Laboratories, 1967—. Mr. Limb has worked on the coding of picture signals to reduce channel capacity requirements. More recently this has included the coding of color pictures. He is now working on methods of reducing redundancy in moving pictures for *Picturephone*® visual telephone applications.

ERNST LUEDER, Dipl. Ing., 1958, Dr.-Ing., 1962, Habilitation, 1967, University of Stuttgart (Germany); Bell Laboratories, 1968–1971. At Stuttgart Mr. Lueder was engaged in network synthesis, theory of nonlinear and electromechanical circuits, and system theory. While at Bell Laboratories he specialized in design of *RC*-active filters. Mr.

Lueder is presently professor of network theory and system theory at the University of Stuttgart. Member, German Associations of Engineers VDE and NTG.

DIETRICH MARCUSE, Diplom Vorpruefung, 1952, Dipl. Phys., 1954, Berlin Free University; D.E.E., 1962, Technische Hochschule, Karlsruhe, Germany; Siemens and Halske (Germany), 1954-57; Bell Laboratories, 1957—. At Siemens and Halske, Mr. Marcuse was engaged in transmission research, studying coaxial cable and circular waveguide transmission. At Bell Laboratories, he has been engaged in studies of circular electric waveguides and work on gaseous masers. He spent one year (1966-1967) on leave of absence from Bell Laboratories at the University of Utah where he wrote a book on quantum electronics. He is presently working on the transmission aspect of a light communications system. Member, IEEE, Optical Society of America.

JAMES MCKENNA, B.Sc. (Mathematics), 1951, Massachusetts Institute of Technology; Ph.D. (Mathematics), 1961, Princeton University; Bell Laboratories, 1960—. Mr. McKenna has done research in quantum mechanics, electromagnetic theory, and statistical mechanics. He has recently been engaged in the study of nonlinear partial differential equations that arise in solid state device work, and in the theory of stochastic differential equations.

RUSSELL J. MINER, Bell Laboratories, 1961—. Since joining the Plastics Research and Development Department, Mr. Miner has been involved in the study of the effects of soil burial, electron irradiation, and outdoors aging on plastic materials used in the Bell System as well as the flame and fire retardance properties of these materials.

J. A. MORRISON, B.Sc., 1952, King's College, University of London; Sc.M., 1954, and Ph.D., 1956, Brown University; Bell Laboratories, 1956—. Mr. Morrison has been doing research in a variety of problems in mathematical physics and applied mathematics. His recent interests have included perturbation techniques for nonlinear oscillations and propagation in random media. He was a Visiting Professor of Mechanics at Lehigh University during the Fall semester 1968. Member, American Mathematical Society, SIAM, Sigma Xi.

FRANK X. VENTRICE, B.S. (Chemistry) and graduate work, 1960, Brooklyn College; Bell Laboratories, 1961—. Prior to joining Bell Laboratories, Mr. Ventrice did research on soil suspending agents at Colgate-Palmolive. At Bell Laboratories, as a member of the Casting Resins and Organic Finishes Group, he is doing research and development on epoxies, polyurethanes, silicone, styrene-polyesters, and waxes. Mr. Ventrice is currently a Bell System consultant on casting and encapsulating materials. Member, ACS.