

## Contributors to This Issue

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**Fan R. K. Chung**, B.S., 1970, National Taiwan University; Ph.D., 1974, University of Pennsylvania; Bell Laboratories, 1974—. Mrs. Chung's current interests include combinatorics, graph theory, and the analysis of algorithms. She is presently investigating various problems in the theory of switching networks.

**Peter S. Cross**, B.S.E.E., 1968, California Institute of Technology; M.S., 1969, Ph.D., 1974, acting assistant professor, 1974, University of California, Berkeley; member of technical staff, Institut für Angewandte Festkörperphysik der Fraunhofer—Gesellschaft, Freiburg, W. Germany, 1974–1975; Bell Laboratories, 1975—. At the University of California, Mr. Cross engaged in studies of the optical properties of semiconductors with emphasis on the 6 to 12  $\mu\text{m}$  region. At the Institut in Freiburg, he studied the basic properties of surface acoustic wave resonators. He is currently in the Coherent Optics Research Department working on optical and acoustical guided-wave devices.

**B. R. Eichenbaum**, B. S. 1963, City College of New York; M. S. 1965, Ph.D. 1969, New York University; Bell Laboratories, 1972—. Mr. Eichenbaum has worked on a variety of optical fiber development problems in the areas of coating materials, coating application techniques, ribbon fabrication, and fiber mechanics. He is currently developing field stripping procedures. Member, OSA.

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**Paul F. Goldsmith**, B.A. (physics), University of California, Berkeley 1969; Ph.D. (physics), University of California, Berkeley, 1975; Bell Laboratories, 1975—. His graduate work was concerned primarily with building a receiver system to study the spectral line emission from the  $J = 2 \rightarrow 1$  transition of CO ( $\nu = 230$  GHz) and using it to analyze the structure of interstellar molecular clouds. He also worked on analyzing the excitation of rotational transitions of molecules such as CO under interstellar conditions. At Bell Laboratories, he has worked on the radioastronomical feed system for the Crawford Hill millimeter-wave antenna and also on several astrophysical subjects including isotopic abundance variations, and the excitation of molecules by electrons in interstellar clouds. Member, American Astronomical Society, IEEE, and Sigma Xi.

**Frank K. Hwang**, B.A., 1960, National Taiwan University; M.B.A., City University of New York; Ph.D. (Statistics), 1968, North Carolina State University; Bell Laboratories, 1967—. Mr. Hwang spent the fall of 1970 visiting the Department of Mathematics of National Tsing-Hua University. He has been engaged in research in statistics, computing science, discrete mathematics, and switching networks.

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**Lawrence R. Rabiner**, S.B., S.M., 1964, Ph.D., 1976, Massachusetts Institute of Technology. Bell Laboratories, 1962—. He worked on digital circuitry, military communications problems, and problems in binaural hearing. Presently he is engaged in research on speech communications and digital signal processing techniques. Member, Eta Kappa Nu, Sigma Xi, Tau Beta Pi; fellow, Acoustical Society of America, IEEE.

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**M. R. Santana**, B.S.E.E., 1970, University of Hartford; M.S.E.E., 1971, Georgia Institute of Technology; Bell Laboratories, 1970—. Mr. Santana has been continuously involved in cable design and development in the Loop Transmission Division. At present he is involved in optical fiber cable design, analysis, and testing. Member, IEEE, Kappa Mu.

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Schweitzer, a member of the Billing and Local Switching Systems Department, is engaged in the formulation of a system philosophy for mechanizing the message accounting billing process in the 1980s. Previously he worked on developing techniques for improving revenue recovery through the use of computerized support systems.

**Fred D. Waldhauer**, B.E.E., 1948, Cornell; M.S.E.E., 1960, Columbia; RCA, 1948–1955; Bell Laboratories, 1956—. At Bell Laboratories, Mr. Waldhauer has worked on the T1 digital transmission system and analog/digital converters for television signals. He later supervised the development of high-speed PCM repeaters for digital coaxial transmission, including final development of repeaters for the T4M 274-Mb/s system. He is currently engaged in applications of fiber optics to telecommunications. Fellow, IEEE; registered professional engineer.

**Lynn O. Wilson**, A.B. (physics), 1965, Oberlin College; Ph.D. (applied mathematics), 1970, University of Wisconsin; Bell Laboratories, 1970—. Ms. Wilson has pursued research in various areas of applied mathematics. She has worked on problems concerning *PICTUREPHONE*® service demand, electromagnetic theory, dielectric waveguides, elastic waves, crystalline vibrations, and the growth of semiconductor crystals. Member, Sigma Xi, American Physical Society, SIAM.

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