

## CONTRIBUTORS TO THIS ISSUE

**Andres Albanese**, Ingeniero Electricista, 1970, Universidad Central de Venezuela; M.Sc., 1972, University of Texas at Austin; Ph.D., 1976, Stanford University. Instituto Venezolano de Investigaciones Cientificas, 1969-1970; Bell Laboratories, 1975-1982; American Bell, 1983—. At Bell Laboratories, Mr. Albanese did research in systems and components for lightwave communications and local-area networks. His current research interest is architectures and applications for local-area networks. He is Supervisor, Local Networks Application Group.

**T. C. Chu**, B.S., 1964, Cheng Kung University (Taiwan); M.S., 1967, Syracuse University; Ph.D., 1971 (Aerospace Engineering), Cornell University; Bell Laboratories, 1972—. Mr. Chu has worked on the physical design of T4M digital transmission system and the development of an optical fiber connector. Since 1981 he has been working on the design of undersea lightguide cable.

**Patrick J. Fitzgerald**, B.S. (Electronic Engineering Technology), Capitol Institute of Technology, 1973; Bell Laboratories, 1973—. Mr. Fitzgerald has been involved in various research studies including atmospheric microwave and optical propagation and digital modulation techniques. He has also been responsible for several computer-controlled, real-time, data-acquisition systems.

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**P. Leland Key**, B.A., B.S. (Mechanical Engineering), 1960, Rice University; United States Navy, 1960-1964; M.S. (Engineering Science), 1964, George Washington University; Ph.D. (Materials Science), 1969, University of California, Berkeley; Bell Laboratories, 1969—. Mr. Key spent his naval service working on materials for nuclear reactors for naval ship propulsion. Since joining the Metallurgy and Engineering Science Department of Bell Laboratories, Mr. Key has been

involved in a broad range of materials activities from whisker growth on electrodeposited films to steels for pressure vessels. Currently, Mr. Key is studying reliability aspects of optical fibers. Member, American Society for Metals, Tau Beta Pi, Sigma Xi, Sigma Tau.

**Bernard George King**, B.S. (Electrical Engineering), 1944, USC; Ph.D., 1955, University of Wisconsin; Bell Laboratories, 1955—. Mr. King taught electrical engineering at USC from 1944 through 1948, and at the University of Wisconsin from 1948 through 1955. He is presently a Supervisor in the Communications Methods Research department, and since 1981 he has been the Editor of *The Bell System Technical Journal*.

**Ernest D. Kolb** graduated from Curtiss-Wright Technical Institute in 1939 and worked for the Wright Aeronautical Corporation in the Flight Research Section in Caldwell, New Jersey, until 1944. Mr. Kolb then joined the National Advisory Committee for Aeronautics in their Flight Research Section and was concerned with research on aircraft engines until entering the Air Force in 1945. He joined Bell Laboratories in 1951 and was initially involved in the Czochralski growth of single crystals of germanium and silicon from the melt. This work led to J. A. Burton, R. C. Prim, and W. P. Slichter's theory of the effective distribution coefficients of donor and acceptors in the growth of semiconductor materials. He then became involved in the hydrothermal synthesis of inorganic compounds and the growth of single crystals of compounds such as zinc oxide, zinc sulphide, yttrium iron garnet, lithium gallate, and alpha quartz. More recently, he has resumed work with semiconducting compounds with the growth of single crystals from the melt.

**Robert A. Laudise**, B.S. (Chemistry), 1952, Union College, Schenectady, New York; Ph.D. (Inorganic Chemistry), MIT, 1956; Bell Laboratories, 1956—. Mr. Laudise has done research on crystal growth and the preparation and properties of electronic materials. He is particularly interested in the physical chemistry of high-pressure synthesis and in pizeoelectric, semiconductor, and optical materials. He is presently Director of the Physical and Inorganic Chemistry Research Laboratory. He was a recipient of the Sawyer Award for Pizeoelectric Materials and of the International Crystal Growth Award in 1981. President, International Organization for Crystal Growth; member, National Academy of Engineering.

**S. Lawrence Marple, Jr.**, B.A. and M.E.E., 1970 (Electrical Engineering), Rice University, Houston, TX; Engr. Deg., 1976 (Electrical

Engineering), Stanford University, Stanford, CA. From 1971 to 1977, Mr. Marple was employed by ArgoSystems, Inc., Sunnyvale, CA, where he was involved in hardware design for and digital processing of radar and communication signal analysis. From 1978 to 1979, he was a senior member of the technical staff of both Signal Science, Inc. and Advent Systems, Inc., of Mountain View, CA. From 1980 to 1982 he was with the McLean Operations of The Analytic Sciences Corporation (TASC), McLean, VA. He is presently with Schlumberger Well Services in Houston, Texas. His research interests include applications of fast, digital signal processing techniques to spectrum analysis, communications, radar, and well logging problems. Member, Tau Beta Pi.

**Lawrence R. Rabiner**, S.B. and S.M., 1964, Ph.D. (Electrical Engineering), The Massachusetts Institute of Technology; Bell Laboratories, 1962—. From 1962 through 1964, Mr. Rabiner participated in the cooperative plan in electrical engineering at Bell Laboratories. 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. He is coauthor of *Theory and Application of Digital Signal Processing* (Prentice-Hall, 1975) and *Digital Processing of Speech Signals* (Prentice-Hall, 1978). Former President, IEEE, ASSP Society; former Associate Editor, ASSP Transactions; former member, Technical Committee on Speech Communication of the Acoustical Society, ASSP Technical Committee on Speech Communication; Member, IEEE Proceedings Editorial Board, Eta Kappa Nu, Sigma Xi, Tau Beta Pi. Fellow, Acoustical Society of America, IEEE.

**R. A. Semplak**, B.S. (Physics), 1961, Monmouth College; Bell Laboratories, 1955—. Mr. Semplak's main research interest is in studies of atmospheric effects on micro- and millimeter-wave propagation. Currently, he is involved in experimental studies of astigmatic feeds. Member, Sigma Xi and Commission F of the International Union of Radio Science (URSI/USNC).

**Earle E. Simpson**, B.S. (Electronic Engineering), 1957, University of Maine; Western Electric, 1957—. Mr. Simpson was involved in engineering quartz crystal units, crystal filters, and crystal oscillators from 1963 to 1973. Since 1973, he has been responsible for the quartz-growing operation at the Merrimack Valley Works. He is a member of the American Association for Crystal Growth, and is a registered Professional Engineer in Massachusetts.

**Man Mohan Sondhi**, B.Sc. (Physics), Honours degree, 1950, Delhi University, Delhi, India; D.I.I.Sc. (Communications Engineering), 1953, Indian Institute of Science, Bangalore, India; M.S., 1955, Ph.D., 1957 (Electrical Engineering), University of Wisconsin, Madison, Wisconsin; Bell Laboratories, 1962—. Before joining Bell Laboratories, Mr. Sondhi worked for a year at the Central Electronics Engineering Research Institute, Pilani, India and taught for a year at the University of Toronto. At Bell Laboratories his research has included work on speech signal processing, echo cancellation, adaptive filtering, modeling of auditory and visual processes, and acoustical inverse problems. From 1971 to 1972 Mr. Sondhi was a guest scientist at the Royal Institute of Technology, Stockholm, Sweden.