

Authors

Vijay Ahuja

System Communications Division, Research Triangle Park, North Carolina

Dr. Ahuja is an advisory scientist in a communication systems architecture group. His current interests are in the area of network routing and flow control. He received his B.S. in electrical engineering from Panjab Engineering College, India, in 1963. He joined IBM in 1970 after receiving an M.S. in computer science from the University of North Carolina. In 1976, he received his Ph.D. in computer science, also from the University of North Carolina. Dr. Ahuja is a member of the Association for Computing Machinery and Sigma Xi.

Bruce F. Blumentritt

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Dr. Blumentritt is manager of a disk coating and substrate development group. He is currently working on polymer technology related to disk magnetic storage products. He received B.S. and M.S. degrees in chemistry from Winona State University, Minnesota, in 1962 and 1966. He received M.S. and Ph.D. degrees in polymer science from the University of Wisconsin, Madison, in 1971 and 1973. Prior to joining IBM in 1966, he was an instructor of chemistry at Winona State University and a research chemist for the Fiberite Corporation, Winona, Minnesota. He is a member of the American Chemical Society, the Society of Plastics Engineers, and Sigma Xi.

David B. Bogy

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Dr. Bogy is an Associate Professor of Applied Mechanics at Berkeley and since 1972 has been a consultant to the applied technology group at the IBM Research laboratory in San Jose. His current technical interests include work in anisotropic elastic composites, and various types of contact problems on elastic media. He received a B.A. in geology and mechanical engineering and an M.S. in mechanical engineering in 1959 and 1961, both from Rice University, Houston, Texas, and a Ph.D. in applied mathematics in 1966 from Brown University, Providence, Rhode Island. After postdoctoral work in elasticity at the California Institute of Technology, he joined the faculty at the University of California at Berkeley in 1967. Dr. Bogy is a member of the American Society of Mechanical Engineers and Sigma Xi.

John W. Coburn

Research Division, San Jose, California

Dr. Coburn is currently involved in the chemistry and physics of glow discharges and their surface interactions. He first joined the San Jose research laboratory in 1968, a year after receiving his Ph.D. in electrical engineering from the University of Minnesota. His B.A.S. in engineering physics and M.A.S. in physics were obtained from the University of British Columbia in 1956 and 1958. Dr. Coburn's research projects have included mass spectrometric studies of glow discharge sputtering processes, the analysis of solids, compositional profiling, plasma polymerization, and plasma etching. In 1972, he received an IBM Outstanding Contribution Award for his work on the construction and implementation of a plasma diagnostic system. Dr. Coburn is a member of the American Vacuum Society.

Peter A. Franaszek

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Dr. Franaszek is a member of a computer sciences department at the Thomas J. Watson Research Center. His interests include analytical problems associated with storage hierarchies, magnetic recording, and digital communications. He received the B.Sc. degree from Brown University, Providence, Rhode Island, in 1962, and the M.A. and Ph.D. degrees from Princeton University in 1964 and 1965. During the academic year 1973 to 1974, he was on sabbatical leave at Stanford University as a Consulting Associate Professor of Electrical Engineering and Computer Science. Prior to joining IBM in 1968, he was a member of the technical staff at Bell Telephone Laboratories. Dr. Franaszek is a member of Sigma Xi, Tau Beta Pi, and the Institute for Electrical and Electronics Engineers.

Eric Kay

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Dr. Kay is a manager of a surface, thin film, and plasma science department. He has been with IBM since 1958, during which time he has studied plasma-surface interactions and thin film science. From 1969 to 1970, Dr. Kay was a visiting scientist at the University of California at Berkeley, and has since served as an IBM consultant to the University's Lawrence Berkeley Laboratory. He received a B.S. in physical mathematics from the University of London in 1945, a B.S. in chemistry from the University of California at Berkeley in 1953, and a Ph.D. in inorganic physical chemistry from the University of Washington in 1958. He has served on the board of directors and is currently a trustee of the American Vacuum Society. He is also a member of the American Physical Society and a fellow of the American Institute of Chemists, and serves on the editorial board of the *Journal of Vacuum Science and Technology*. Dr. Kay is the editor and a contributing author of *Topics in Surface Chemistry*.

John H. Keller

Data Systems Division, East Fishkill, New York

Dr. Keller is currently an advisory engineer in ion beam technology at the East Fishkill laboratory. He received a B.S. in physics from Rensselaer Polytechnic Institute, Troy, New York, in 1962 and a Ph.D. in electrical engineering from the University of Utah in 1969. He also studied plasma physics at Princeton University's Plasma Physics Institute. In 1968 he joined IBM and worked for three years on sputter deposition of thin films. Thereafter he worked on gas panel development and the design of IBM's high current ion implantation systems.

James R. Lyerla

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Dr. Lyerla is manager of a polymer characterization group in an organic and polymer materials department at San Jose. He is currently involved in basic research in the application of nuclear magnetic and resonance spectroscopy to the study of polymer structure and polymer chain dynamics in the bulk state. Dr. Lyerla joined IBM at the San Jose laboratory in 1975 after completing a National Research Council/National Academy of Sciences Research Associateship at the National Bureau of Standards. He received a B.A. in chemistry in 1966 from Southern Illinois University, Carbondale, and a Ph.D. in physical chemistry in 1971 from the University of Utah. Dr. Lyerla is a member of the American Chemical Society and the American Physical Society.

Jacob Pacansky

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Dr. Pacansky is the manager of a radiation chemistry group at the San Jose Research laboratory. He joined IBM in 1973 at San Jose, where he worked on research in radiation chemistry of organic molecules. He obtained a B.S. degree in 1965 and an M.S. degree in 1967 in chemistry from San Jose State University, California, and a Ph.D. in physical chemistry from Iowa State University, Ames, in 1971. He has received an IBM Outstanding Innovation Award for his work on isolation and infrared characterization of free radicals.

William B. Pennebaker

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Dr. Pennebaker is at the Thomas J. Watson Research Center. For the past year he has been managing a group working on various aspects of facsimile technology. He joined the Research Division of IBM in 1962 and has worked in areas related to low temperature physics, thin films, display technology, and printing technology. He received both an IBM Outstanding Contribution Award and an IBM Outstanding Invention Award for his work with thin films. He obtained his B.S. in engineering physics from Lehigh University, Bethlehem, Pennsylvania, in 1957, and his Ph.D. in physics from Rutgers University, New Brunswick, New Jersey, in 1962. Dr. Pennebaker is a member of the American Association for the Advancement of Science, the American Institute of Physics, the Institute of Electrical and Electronics Engineers, and the Society for Information Display.

Royce G. Simmons

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Mr. Simmons is presently working on applications of large scale integrated circuits in computer systems. He joined IBM at Poughkeepsie, New York, in 1956, working on cryogenics. From 1960 to 1976, he was assigned to the Components Division with interests in dc and rf sputtering and laboratory automation.