

Authors

Paul E. Boudreau

B.S. in Education, 1953, University of Vermont; M.S. in Mathematics, 1958, University of Rochester. Teaching Fellow at University of Rochester, 1956-58. Joined IBM as a mathematician programmer in 1958 at the Product Development Laboratory in Endicott. Is currently a senior associate mathematician working on Advanced Systems Planning, Processing Systems, General Products Division. Is member of American Mathematical Association, Phi Beta Kappa, and Kappa Delta Pi.

Emil Hopner

University of Paris (Sorbonne), 1939; University of Zagreb, Yugoslavia, 1940-1941; University of Lausanne, Switzerland, 1943; Degree in E.E. (equivalent to an M.S.) 1945, Swiss Institute of Technology, Zurich. Post-graduate studies at McGill University, Montreal, 1951, and Stanford University. Worked on telephone carrier systems at Yugoslav Telephone Services, 1946-1947; telephone carrier systems at Philips Laboratory, Zurich, 1948-1951; microwave relays, telegraph and telephone carrier systems, Federal Telephone and Radio Corp., Montreal, 1951-1952; microwave radio systems, Lenkurt Electric Co., San Carlos, California, 1952-1955. Joined IBM San Jose Research Laboratory in 1955. He is presently manager of the Data Transmission department of the Advanced Systems Development Division in San Jose.

Mark Kac

Ph.D. 1937, John Casimir University, Lwów, Poland. Joined the Cornell Faculty in 1939, becoming Professor of Mathematics in 1947. Has been a consultant to IBM, General Products Division, Endicott, since September, 1959.

Gilbert W. King

Ph.D. in Chemistry, Massachusetts Institute of Technology, 1935; National Research Fellow, California Institute of Technology, Harvard and Princeton; Invited Lecturer, Harvard and UCLA. Served on visiting committees for MIT Corporation and on the United States Air Force Beacon Hill Intelligence Study; has been con-

sultant to the U. S. Navy at China Lake, California and to the Institute for Defense Analysis. During World War II he served as Operations Analyst with the Office of Scientific Research and Development and received the Army-Navy Certificate of Appreciation. Industrial affiliations were with Arthur D. Little, Inc. and the International Telemeter Corporation. Joined IBM in 1958 as consultant to Director of Research; later became manager of the Lexical Processing Research Department at Yorktown Research Center. Dr. King is now IBM Director of Research. Is Fellow of the American Academy of Arts and Sciences, New York Academy of Sciences, and the American Physical Society. Member, American Chemical Society, Association for Computing Machinery, Society of Industrial and Applied Mathematics, American Optical Society and the Netherlands Physical Society. Dr. King's professional activities have been largely directed to the application of computing machines to physics, chemistry, operations research, and the processing of languages.

James R. Kiseda

B.S.E.E., 1956; M.S.E.E., 1957, University of Pittsburgh. From 1956-1957, was Instructor in Electrical Engineering at University of Pittsburgh. During 1956, worked for Westinghouse in East Pittsburgh on development of NORDIC Computer. Joined IBM in 1957 and is presently working in Memory Group at the Yorktown Research Center. Is a member of Eta Kappa Nu, Sigma Tau, Phi Eta Sigma, IRE, and IRE Professional Group on Electronic Computers.

Gordon J. Lasher

B.S. in Physics, 1949, Rensselaer Polytechnic Institute; Ph.D. in Theoretical Physics, 1953, Cornell University. Was a staff member of the University of California Radiation Laboratory at Livermore, California, 1953-54. Joined IBM Research Computing Center at Poughkeepsie in 1954 and worked on computing methods on physical problems. Is now with the Solid State Science Department of IBM Research and at Yorktown and is engaged in research in irreversible statistical mechanics and its application to fundamental limitations of computers. Member of American Physical Society and Sigma Xi.

Harold E. Petersen

B.S.E.E. 1946; M.S.E.E. 1951, University of Wisconsin; Ph.D. 1957, Stanford University. Had been employed as an electrical engineer by Zenith Radio Corporation, Commonwealth Edison Company, and the Naval Ordnance Test Station. Joined IBM in 1957 at Poughkeepsie Research and is presently manager of Memory Research, Yorktown Research Center. Member of Eta Kappa Nu and Sigma Xi.

Walter C. Seelbach

B.S.E.E., 1955, Massachusetts Institute of Technology. Joined IBM in 1955 as a Technical Engineer in the Basic Circuits Group working on the SAGE computer. This work included design and development of magnetic core test equipment, the development of functional test specifications for magnetic cores and the optimization of magnetic core logic circuits. Has worked in the design and development of magnetic logic circuits. Is working at present on the implementation of high-speed magnetic core memory systems at Yorktown Research Center. Is a member of the IRE and sub-committee working groups of the IRE and AIEE.

Michael Teig

B.S. in E.E., City College, City of New York, 1958; presently working toward M.S. in Electrical Engineering.

Joined IBM in 1958 at the IBM Research Laboratory, where he worked on thick-film memory devices. Is presently associated with the Memory Group at the Yorktown Research Center and is working on experimental memory systems and devices. Is a member of Tau Beta Pi and Eta Kappa Nu.

Martin S. Tiersten

A.M. in Physics, Columbia University, 1958. Currently engaged in research for the Ph.D. degree at Columbia University, and is teaching at the City College of New York. Member of American Physical Society and American Association of Physics Teachers. Principal fields of interest are solid state physics and statistical mechanics.

Peter D. Welch

Undergraduate study, Universities of Wisconsin and Chicago; M.S. in Mathematics, University of Wisconsin, 1951; M.S. in Physics, New Mexico State University, 1956; Graduate study, Columbia University, 1957 to present. Was Associate Mathematician with the Physical Science Laboratory of New Mexico State University from 1951 to 1956, where he supervised a project working on the reduction and analysis of radar terrain return data. Joined IBM in 1956 at Yorktown Heights Research Center and has worked in the areas of speech recognition, information theory and statistics. Is a member of the Institute of Mathematical Statistics.

IBM

The IBM Journal of Research and Development is regularly indexed and abstracted by Science Abstracts (I.E.E.—Britain), Chemical Abstracts, The Engineering Index, Physikalische Berichte, ASM Review of Metal Literature, Mathematical Reviews, Computing Reviews, Computer Abstracts (Technical Information Co. Ltd.—Britain), Bulletin Signalétique (C.N.R.S.—France), Electronic Industries & Tele-Tech, Electronic & Radio Engineer, Semiconductor Electronics, Instrument Abstracts (British Scientific Instrument Research Association), Psychological Abstracts, Aviation Research & Dev. and the Library of U. S. Naval Research Laboratory.