Authors

Arthur W. Aldridge

B.S.E.E., 1960, University of Illinois; presently working toward M.S. in Electrical Engineering. Joined IBM in 1960 at the IBM Product Development Laboratory, Poughkeepsie, where he worked in the Scientific Computation Department. He is presently engaged in transistor circuit simulation in the Components Division.

Kanu G. Ashar

B.E.(E.E.), 1954, University of Baroda (India); M.S.E.E., 1958, University of Michigan. In 1954-1957 was engaged in design and construction of a power supply system at Bombay, India. Joined IBM at Poughkeepsie Product Development Laboratory in 1958. Worked until 1961 on system and circuit reliability analysis. Is presently engaged in high speed circuit development at Components Division, Poughkeepsie. Member of IEEE.

Jay Manton Berger

B.S., University of Michigan, 1947; A.M., Columbia University, 1948; Ph.D., Case Institute of Technology, 1952. Was instructor of Physics at Fenn College, Cleveland, Ohio, 1948-1951. Research associate, Princeton University, 1952-1956. Joined IBM in 1956, worked on problems in applied mathematics and mathematical physics, and is currently engaged in noise problems, physical information theory and systems development at the Yorktown Advanced Systems Development Laboratory. Is member of American Physical Society.

Sidney A. Bernhard

B.S., 1948, Brooklyn College; M.S., 1949, Pennsylvania State College. Fellow, 1950-1951, and Ph.D. in Physical Chemistry, 1951, Columbia. Assistant in physical and organic chemistry, Columbia, 1949-1950; research associate, 1951. Fellow, American Cancer Society, 1951-1953, California Institute of Technology; Cambridge, 1953-1954. Dr. Bernhard is presently pursuing the study of the function of protein at the Institute of Molecular Biology, University of Oregon, Eugene, Oregon. Member, American Chemical Society and Faraday Society.

George F. Bland

Sc.B. in Engineering, 1948, Brown University; M.S. in Electrical Engineering, 1950, University of Illinois; Professional Degree in Electrical Engineering, 1957, Columbia University. Joined the IBM Engineering Laboratories in Poughkeepsie in 1950 and was active in electrostatic memory development. Is currently at the IBM Thomas J. Watson Research Center, Yorktown, where he is engaged in the investigation of transmission line phenomena pertinent to high speed memory and logic systems. Member of IEEE, Sigma Xi and Eta Kappa Nu.

Dan F. Bradley

B.A. cum laude in Chemistry, 1951, Oberlin College; Ph.D. in Chemistry, 1953, University of California at Berkeley. Was Instructor in Chemistry, University of California, 1953-1955; staff member, National Institute of Health, 1955-1961, and Chief, Physical Chemistry Section, 1961 to present; Visiting Professor, Florida State University, 1961; Research Associate, University of California, 1961; Visiting Professor, Weizmann Institute, Rehovot, Israel, 1962-1963; Associate Philosopher, University of Paris, 1963. Dr. Bradley's research has been in mathematical methods for determining the sequences of units in biopolymers, the physical nature of the metachromatic effect, and the application of exciton theory in expanding the optical and physical properties of polymers. Is on Editorial Advisory Board, *Biopolymers*. Member, American Chemical Society, AAAS, New York Academy of Sciences, Biophysical Society, Phi Beta Kappa, and Sigma Xi.

Fred K. Buelow

B.E.E., 1956, City College of New York. Joined IBM in 1956 and worked in the packaging area in Product Development Laboratory, Poughkeepsie. Is presently engaged in the high speed circuit development area of the Components Division.

David H. Chung

B.S.E.E., 1955; M.S.E.E., 1956; and Ph.D., 1961, Purdue University. From 1956 to 1959 served as an Instructor in Electrical Engineering and a programmer in the Computing Laboratory at Purdue. Employed as a logical designer at the EDP division of Minneapolis-Honeywell in 1959. Since 1961, he has been working in the development of high speed logic circuits in the IBM Components Division, Poughkeepsie.

David J. Crawford

S.B. in E.E., 1943; S.M. in E.E., 1947, Massachusetts Institute of Technology. Digital computer development at the Army Security Agency, 1944-46. Member of engineering staff for MIT Project Whirlwind computer, 1947. Designer of radar circuits at Norden Laboratories Corporation, 1948-50. Mr. Crawford joined IBM Development Laboratory in Poughkeepsie in 1950. He was in charge of the standard circuits group for the IBM 701 and manager of the standard circuits and the component groups for the AN/FSQ-7 SAGE computer. He headed the magnetic memory group that developed the core memories for the IBM 704, 705 and 608, and the advanced development of the 2-microsecond memory (IBM 7302). He was Manager of External Research, 1956-57. Mr. Crawford is now supervising a group engaged in advanced memory development in the Components Division, Poughkeepsie. Member of IEEE and Sigma Xi.

P. David Dodd

B.S., 1958, U.C.L.A.; M.S.E.E., 1960, Stanford University. Joined IBM in 1958 and has since worked at the Advanced Systems Development Division Laboratory, San Jose. Main interests are signal processing theory and applications. Member of Tau Beta Pi and IEEE.

William L. Duda

Ph.D., Yale University, 1956. Joined IBM, 1955, at the Poughkeepsie Research Laboratory working in the area of logic, machine intelligence, biochemistry and medicine. Is presently engaged in a program of applying logic to biochemistry and medicine at the Thomas J. Watson Research Center, Yorktown. Is member of Phi Beta Kappa and the Association for Symbolic Logic.

Hitendra Nath Ghosh

B. Tech. (with honors) in E. E., 1958, Indian Institute of Technology, Kharagpur, India. M.S., 1959; Ph.D., 1962, University of Illinois. Has been Graduate Fellow and Teaching Fellow in Electrical Engineering Department, University of Illinois. Was Research Assistant, Co-ordinated Science Laboratory, University of Illinois. Student Associate, Argonne National Laboratory, Argonne, Illinois. Joined IBM in 1962 at Poughkeepsie, working on models for semiconductor devices and analysis of switching circuits, transmission lines and device measurements in the Components Division. Dr. Ghosh is now teaching a course in network synthesis as a Lecturer in Electrical Engineering, Syracuse University, in the IBM-Syracuse Program. Member IEEE, Pi Mu Epsilon.

Frank B. Hartman

B.E. in Electrical Engineering, 1952, and M.E. in Electrical Engineering, 1954, Yale University. Joined IBM in 1954 at Poughkeepsie and worked in logic design for the IBM Type 705 Electronic Data Processing Machine. Is now working in design of logic circuits in the Components Division, Poughkeepsie. Member of Tau Beta Pi and IEEE.

Benoit Mandelbrot

Graduate, 1947, École Polytechnique, Paris; M.S., 1948, California Institute of Technology; 1952, Docteur es Sciences (Mathématiques), Université de Paris (Sorbonne). Was Associate Professor of Mathematics, École Polytechnique, to 1958. Joined IBM in 1958 and is Research Staff Member in the Mathematical Sciences Department, Thomas J. Watson Research Center, Yorktown. Dr. Mandelbrot's principal interest is in the construction of statistical models for the macroscopic behavior of various kinds of systems. He has contributed in the study of such models in the classical context of physics, but his main concern has been first with communications theory (models of linguistic messages and the present model of error clustering on transmission lines), and then with economic time-series (models of the variation of the prices of speculative commodities and securities, of the speculators' incomes, and of the size distribution of firms in relation with the problem of oligopoly). Is currently Visiting Lecturer at Harvard University. Dr. Mandelbrot is a member of IEEE, of the Institute of Mathematical Statistics and of a number of other scientific societies.

John E. Meggitt

B.A., 1953; Ph.D., 1958, Cambridge. Read mathematics and did research in the quantum theory of fields. Was awarded the First Smith Prize at Cambridge in 1955 and elected into a Research Fellowship at Emmanuel College. Worked for A. V. Roe and Company on numerical machine tool control from 1956 to 1958. Joined IBM British Laboratory in 1958 and invented some error correcting codes. Was transferred in 1962 to the Thomas J. Watson Research Center, Yorktown. General interests are in microprogram control of computers and in improving problem solving ability of computers for a given amount of hardware.

John A. Palmieri

B.E.E., 1961, Polytechnic Institute of Brooklyn. Joined IBM in 1961 and was assigned to Logic Circuits Department. Now works in the high speed circuit development area in the Components Division, Poughkeepsie.

Lawrence J. Patterson

B.S.E.E., 1961, University of Michigan. Joined IBM in 1961 at Components Division Laboratory, Poughkeepsie.

W. David Pricer

B.A. in Physics, Middlebury College; S.B. and S.M. in E.E., Massachusetts Institute of Technology, 1959. As an MIT cooperative course student, he worked at the General Electric Company, Brush Electric Company (England) and as a laboratory instructor at MIT. In 1959 he joined the IBM Product Development Laboratories in Poughkeepsie. He is now working on various aspects of advanced high-speed memory system development in the Components Division. He is a member of the IEEE.

E. Leon Willette

B.S.E.E., 1958, University of Denver; M.S.E.E., 1960, University of Pennsylvania. In 1958-1960 worked at RCA Princeton Laboratories in high speed circuit development. Joined IBM in 1960 at Poughkeepsie and has been working in logic circuit design since that date. Is now at Components Division, Poughkeepsie. Member of IEEE, Tau Beta Pi, Eta Kappa Nu and Pi Mu Epsilon.

John J. Zasio

B.S.E.E., 1961, University of Cincinnati. Joined IBM in 1961 and worked in the Logic Circuits Department. Is presently engaged in high speed circuit development at Components Division Laboratory, Poughkeepsie. Member of IEEE.