Authors

Dharam V. Ahuja

Data Processing Division, White Plains, New York.

Chemical engineering (B.E., University of Delhi, India, 1964). Worked with General Motors as a chemical engineer before joining IBM in 1967. Assisted in the design and implementation of geometry subroutines for an interactive system. Currently, engaged in work on the PLAN Graphics Support, an interactive graphics system.

Arthur Appel

Research Division, Thomas J. Watson Research Center, Yorktown Heights, New York.

Mechanical engineering (M.M.E., City College of New York, 1963). Design engineer for Materials Research Corporation (1960–1961) followed by a year as lecturer in the Department of Architecture and Graphics at the City College of New York. Joined IBM in 1962 as a scientific apparatus designer and since 1964 has worked on developing computer-aided techniques for the design, analysis, and operation of scientific instruments.

Herbert B. Baskin

Research Division, Thomas J. Watson Research Center, Yorktown Heights, New York.

Electrical engineering (M.S.E.E., Syracuse University, 1959). Joined IBM in 1956 and worked on circuit design of logic circuits and logic design of special-purpose computers. Since 1959, he has worked in N-value logic techniques, system design of multifont page readers, character recognition, and computer-assisted instruction. Presently responsible for I/O system research, including computer graphics I/O architecture.

Shellman H. Brown

Systems Development Division, Kingston, New York

English (A.B., Yale University, 1950). With the Bethlehem Steel Corporation before joining IBM in 1960. Participated in such projects as the IBM 7080 FORTRAN compiler, the IBM 1410/7010 Operating System, emulator maintenance, a time sharing system control program, and the Graphic Job Processor. Currently working in the supervisor area of the SYSTEM/360 Operating System.

Frank C. Chen

Data Processing Division, White Plains, New York.

Electrical engineering (M.S., University of Illinois, 1962). Before joining IBM in 1963, he had worked on circuit design and analysis at the computer division of the Philco Company. Participated in file organization, simulation, and in a hospital information system. Since 1965, he has been engaged in the development of on-line graphics systems.

Paul G. Comba

Data Processing Division, Scientific Center, New York, New York.

Mathematics (Ph.D., California Institute of Technology, 1952). Prior to joining IBM in 1960, he was associate professor of mathematics at the University of Hawaii. His present activity includes development of programs for advanced engineering applications.

Steven A. Coons

Massachusetts Institute of Technology, Cambridge, Massachusetts.

Associate Professor of Mechanical Engineering at Massachusetts Institute of Technology where he has been on the staff since 1948. In addition to his academic duties, he was supervisor of a computer-aided design project for several years. Previously, a design engineer for Chance Vought Aircraft Division of United Aircraft for eight years where he devised mathematical methods for airplane fuselage lofting by computer. Author of a number of papers and articles on design, shape description, and geometry with special emphasis on computers. Co-author of a textbook on graphics.

Richard E. Cornish

Data Processing Division, Washington Development Center, Wheaton, Maryland.

Mathematics (B.S., Seton Hall University, 1953). Joined IBM in 1955 in programming and, during the development of DISPLAYTRAN, engaged in a remote computing and time-sharing study conducted jointly with the Naval Weapons Laboratory. Currently, he is in charge of data acquisition multiprogramming systems (DAMPS) development.

Robert J. Creasy

Data Processing Division, Scientific Center, Palo Alto, California.

Physics (B.S., Massachusetts Institute of Technology, 1961). Developed early time-sharing and remote-access systems at the Massachusetts Institute of Technology and Project MAC prior to joining IBM in 1964. He has managed systems projects, including development of the virtual machine concept and its implementation. Presently concentrating in areas of interactive computing, data management, and graphics.

Thaddeus P. Dankowski

Data Processing Division, White Plains, New York.

Industrial engineering (M.S., Columbia University, 1967). Systems engineer with the System Development Corporation, working on the SAGE system and other command-control systems. With the Service Bureau Corporation from 1961 to 1964, he initiated the numerical control programming service. Presently engaged in graphic systems application development.

Chapin W. Day, Jr.

Systems Development Division, Kingston, New York.

Naval science (B.S., U.S. Naval Academy, 1958). Joined IBM systems engineering in 1962 in the field of graphics data processing and is now working in graphics market planning.

Richard L. Dougherty

Data Processing Division, White Plains, New York.

Electrical engineering (M.S.E.E., Stevens Institute of Technology, 1952). With Bell Telephone Laboratories in telephone switching and digital computer design before joining IBM in 1957. Has worked on the SAGE system, satellite data reduction, and vehicle traffic control. More recently he was concerned with development of IBM 2250 support, and is now a senior industry development analyst in the area of computer-aided design.

Francis W. Gagliano

Data Processing Division, Washington, D. C.

Mathematics (B.S., St. John's University, 1956). After joining IBM in 1956 as programmer-mathematician, he spent a number of years in the scientific applications area before becoming project manager in design and implementation area of STRETCH system. Presently assigned to Navy Secretariat.

Samuel K. Howry

Computer Group, Research Division, Stanford Linear Accelerator Center.

Mathematics (M.A., University of California, 1955). With Remington Rand Univac and the University of California at Berkeley before joining the Stanford Linear Accelerator Center (SLAC) in 1962. Active in many areas of computational physics including particle beam dynamics, on-line process control, and user-oriented computer systems.

John D. Jacobsen

Federal Systems Division, Gaithersburg, Maryland.

English (B.A., Loyola College, 1953). Joined IBM in 1962 as a systems engineer. He worked on graphics data processing techniques at the National Biomedical Research Foundation from 1964 to 1966. Since then he has been working at IBM on computer graphic display projects as a systems analyst.

Craig I. Johnson

Data Processing Division, Scientific Center, Cambridge, Massachusetts.

Electrical engineering (B.E.E., Rensselaer Polytechnic Institute, 1956). After joining IBM in 1960, he held various systems engineering positions concerned with scientific computing installations and was scientific marketing representative for New England. He has been involved in graphics and time-sharing since 1965. Now responsible for graphics research at the Scientific Center.

Juan M. Lafuente

Systems Development Division, Poughkeepsie, New York.

Applied mathematics (M.S., New York University, 1968) and mechanical engineering (M.S., Louisiana State University, 1962). Research assistant at Louisiana State University. Joined IBM in 1962. Worked in numerical analysis, computer graphics, computer-aided mechanical engineering design. Responsible for developing a computer system for automated mechanical design and drafting.

William C. McGee

Data Processing Division, Scientific Center, Palo Alto, California.

Physics (M.A., Columbia University, 1951). With General Electric Company, Hanford Atomic Products Operation, and the Thompson Ramo Wooldridge Computer Division before joining IBM in 1964. Presently engaged in physics data processing applications.

Stephen P. Morse

Research Division, Thomas J. Watson Research Center, Yorktown Heights, New York.

Electrical engineering (Ph.D., New York University, 1967). Electronic telephone switching at Bell Telephone Laboratories for two years. Joined IBM in 1966 and has since been working in methodology of interactive computer graphics.

Yoshiharu Okaya

Chemistry Department, State University of New York, Stony Brook, New York.

Physical chemistry (Ph.D., University of Osaka, 1956). Associate Professor of Physics, Pennsylvania State University (1958–1961) with research studies in crystal structure analysis. Joined IBM in 1961 and continued his work in crystal structure until 1967 when he became Professor of Chemistry at the State University of New York at Stony Brook where he is establishing a crystallographic and laboratory automation competence.

Hugo R. Penafiel

Data Processing Division, Scientific Center, Palo Alto, California.

Engineering and computing science (M.S., Stanford University, 1968). Worked in the field of structural engineering in Ecuador and Venezuela before joining IBM in 1960. Has since worked in pattern recognition, physics, and graphics areas.

A. Donald Rully

Data Processing Division, Scientific Center, New York, New York.

Mathematics (B.S., Fairfield University, 1960). Systems programmer with United Aircraft Corporation from 1960 to 1964, followed by one year with Computer Control Corporation. After joining IBM in 1965 as systems programmer, he became project leader for the design of the FORTRAN graphics subroutine package (GSP). Presently manager of the advanced systems group which includes responsibility for a SYSTEM/360 Model 50 installation.

Andrew J. Symonds

Data Processing Division, Scientific Center, Cambridge, Massachusetts.

Physics (D.Phil., Sussex, England, 1965). After joining IBM United Kingdom in 1965, he worked until 1967 on telecommunications and graphics projects for the United Kingdom Atomic Energy Authority. Has since been investigating methods for data structures and conversational computer-to-computer communications.

Hermon W. Thombs

U.S. Naval Weapons Laboratory, Dahlgren, Virginia.

Mathematics (B.S., North Carolina College, 1956). With the U. S. Naval Weapons Laboratory since 1956. Areas of work include logical design of computer hardware, computer simulation at logic level, simulation of weapon systems, implementation of compilers, assemblers, translators and operating systems, and the development of software systems for time-shared computer graphics.

Luther L. Zimmerman

Systems Development Division, Kingston, New York.

Mathematics (M.A., University of Oklahoma, 1962). Since joining IBM in 1962, he has been involved in mathematical analyses for air surveillance systems and in programming methodology for graphic displays. Currently, he is engaged in graphics systems planning.