Authors

Arthur Appel

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Mr. Appel joined IBM in 1962 as a research associate in the special techniques group of central scientific services in the Thomas J. Watson Research Center. In 1963 he became an apparatus designer specializing in vacuum equipment and computer graphics programming. Mr. Appel's present interests include three-dimensional and interactive programming and is currently the graphics applications consultant in the consulting and education groups of the computing systems department. Mr. Appel received the B.M.E. degree in 1960 and the M.M.E. degree in 1963 from the City College of New York. Prior to joining IBM he worked as a design engineer for Materials Research Corporation, Orangeburg, New York, and a lecturer in the Department of Engineering Graphics and Architecture at the City College of New York.

Morton M. Astrahan

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In 1949 Dr. Astrahan joined IBM at Endicott, N. Y. and in 1950 he participated in the design of the IBM 701 computer in Poughkeepsie. From 1952 to 1956 he managed system planning and part of the development work for the SAGE air defense system. In 1956 he joined the Advanced Systems Development Division in San Jose and worked on communications and terminals. He spent 1962-1964 in France as senior technical advisor to the manager of the European laboratories and from 1964 to 1969 he was at the Los Gatos laboratory. He has been a Research staff member since 1970 and is engaged in development of relational data base systems. He received the B.S.E.E. degree in 1945 from Northwestern University; the M.S.E.E. degree in 1946 from the California Institute of Technology; and the Ph.D. degree in 1949 from Northwestern University. He is a member of the Association for Computing Machinery and a Fellow of the Institute of Electrical and Electronics Engineers. Dr. Astrahan organized and served as first chairman of the IRE Professional Group on Electronic Computers, now the IEEE Computer Society. He has received two IBM Outstanding Invention Awards.

Donald D. Chamberlin

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Dr. Chamberlin joined IBM in 1971 at the Thomas J. Watson Research Center in Yorktown Heights, New York, where he worked on scheduler design for time-sharing operating systems. He is presently working on System R, an experimental relational data base system under development at the San Jose Research Laboratory. His interests include design and implementation of high level languages for data base management. Dr. Chamberlin received the B.S. degree in engineering from Harvey Mudd College in 1966 and the M.S. and Ph.D. degrees in electrical engineering from Stanford University in 1967 and 1971, respectively. He is a member of the Association for Computing Machinery.

Kapali P. Eswaran

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Dr. Eswaran joined IBM in 1973 at the San Jose laboratory working on data base systems. His current technical interests include query language specification, translation, and optimization techniques in the translation process. Dr. Eswaran received the Ph. D. degree in electrical engineering and computer science from the University of California at Berkeley in 1973.

Eduardo B. Fernández

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Dr. Fernández joined IBM in 1973 and is a staff member at the Los Angles Scientific Center, where he is currently working on the design of a secure data base. Previously he was an associate professor at the University of Chile, Santiago, from 1963 to 1972. He received the degree of Ingeniero Electricista from Universidad Technica F. Santa Maria, Valparaiso, Chile, in 1960, an M.S. degree in electrical engineering from Purdue University in 1963, and a Ph.D. degree in computer science from the University of California at Los Angeles in 1972. Dr. Fernandez has been a lecturer at the Catholic University, Santiago, Chile, and in the Computer Science Department at the University of California at Los Angeles. He is a member of the Association for Computing Machinery and of the IEEE Computer Society.

Patricia Priest Griffiths

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Dr. Griffiths joined IBM in 1975 at the San Jose laboratory working on relational data base systems. Her current technical interests include authorization, access control, and optimal access path selection in relational data bases. She has also done work in synchronization among communicating processes. Dr. Griffiths received the A.B. degree in applied mathematics from Radcliffe College in 1971 and the M.S. and Ph.D. degrees in applied mathematics from Harvard University in 1972 and 1975, respectively. She is a member of the Association for Computing Machinery and Phi Beta Kappa.

David D. Grossman

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Dr. Grossman joined IBM in 1970 in the computer science department in the Research Division, initially doing image processing and data compression, and later working on storage allocation and computer networks. Since 1972 he has been a member of the automation research project, developing programmable automation and geometric modeling techniques. He spent a sabbatical year in 1975 at the Stanford University Artificial Intelligence Laboratory. Dr. Grossman received the B.S., M.A., and Ph.D. degrees, all in physics, from Harvard University in 1961, 1962, and 1967, respectively. From 1967 until 1970 he was an instructor of physics at Princeton University, commuting to particle physics experiments at the Frascati Laboratories in Italy.

John W. Horton

Data Processing Division, Palo Alto, California

Dr. Horton is a staff member of the Palo Alto Scientific Center, where he has been working on problems of interest ot the electric power industry for the past three years. Subsequent to obtaining his Ph.D. in physics from Princeton in 1953, Dr. Horton began his career with IBM as one of the initial staff members of the Watson Laboratory at Columbia University. There he explored the application to computer storage and logic of spin echo, negative resistance, and bombardment-induced conductivity phenomena. From 1960 to 1965, while in the Advanced Systems Development Division, he designed and constructed the first microwave-modulated laser beam for data communications. In 1962 he co-invented the scanistor. At the Houston Scientific Center he began a program of study in medical electronics which led to a new type of ultrasonic sensing system for the non-invasive measurement of blood flow and blood viscosity in the human body. During a year's leave of absence he was a research scientist in the Department of Physiology, University of Texas Medical Branch at Galveston. Dr. Horton is a member of the subsection of the IEEE Power Apparatus and Systems Group.

Simon S. Lam

Research Division, Yorktown Heights, New York

Dr. Lam joined IBM in 1974 as a member of the teleprocessing system studies group in the computer sciences department. His current technical interests are in computer-communication networks, satellite networks for data communication, and packet switching techniques. From 1972 to 1974 he was with the ARPA Network project at the University of California at Los Angeles, where he did research on satellite packet communication. He received the B.S.E.E. degree in electrical engineering from Washington State University, Pullman, and the M.S. and Ph.D. degrees in engineering from the University of California at Los Angeles in 1970 and 1974, respectively. At UCLA he held a Phi Kappa Phi Fellowship from 1969 to 1970 and a Chancellor's Teaching Fellowship from 1969 to 1973. He is a member of the Association for Computing Machinery and the Institute of Electrical and Electronics Engineers. Dr. Lam was awarded the 1975 IEEE Communications Society Leonard G. Abraham Prize Paper Award in the field of communications systems. He is also a member of Tau Beta Pi, Sigma Tau, Phi Kappa Phi, and Pi Mu Epsilon.

Tomas Lang

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Dr. Lang received an electrical engineering degree from the University of Chile in 1963, an M.S. degree from the University of California at Berkeley in 1965, and a Ph.D. degree from Stanford University in 1974. He served as Professor of Electrical Engineering at the University of Chile from 1964 to 1973 and joined the Computer Science Department of the University of California at Los Angeles in 1974. His research and teaching interests are computer architecture, logic design, and parallel computers and computation.

Raymond A. Lorie

Research Division, San Jose, California

Mr. Lorie joined IBM Belgium in 1960 as a member of the applied science department. He is currently a Research staff member in the data base architecture group at the San Jose laboratory. His main interests are in the storage component and data base programming interface. Mr. Lorie graduated as Electrical and Mechanical Engineer from the University of Brussels, Belgium, in 1959. From 1969 until 1973 he worked on the implementation of relational data base systems at the Cambridge Scientific Center.

James W. Mehl

Research Division, San Jose, California

Mr. Mehl is a member of the data base systems group in San Jose. His current interests also include programming languages and artificial intelligence. He joined IBM in 1967, working on the design of compilers and operating systems for small scientific computers. In 1969 he joined the Research Division to work in the area of large scale scientific computation; he has been in data base research since 1972. Prior to joining IBM he was director of programming for the University of Oklahoma. He received a B.S. in chemical engineering and an M.E. in computer science from the University of Oklahoma in 1962 and 1964, respectively. Mr. Mehl is a member of the Association for Computing Machinery, the IEEE Computer Society, and the American Association for the Advancement of Science.

Phyllis Reisner

Research Division, San Jose, California

Dr. Reisner is a Research staff member, currently located in San Jose. She joined IBM in 1960 at the Thomas J. Watson Research Center at Yorktown Heights, New York, where her research was primarily on language problems in information retrieval. Her technical interests include human-factors testing and development of programming languages. Dr. Reisner received the A.B. degree in English in 1955 from Hunter College, New York City, and subsequently studied at the Sorbonne, Paris, under a French Government Grant and a Fulbright Travel Grant. In 1971 and 1972, respectively, she received M.S. and Ph.D. degrees from Lehigh University, Bethlehem, Pa. Her dissertation was in psycholinguistics. Dr. Reisner is a member of the Association for Computing Machinery and the American Psychological Association.

Paul J. Schweitzer

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Dr. Schweitzer is a staff member in the computer science department at the Thomas J. Watson Research Center, where he works in the teleprocessing systems studies group. He joined IBM in 1972 and currently is investigating the synthesis and evaluation of data communications systems. He received a Sc.D. degree in physics and operations research from the Massachusetts Institute of Technology in 1965. He worked during 1965-1970 at the Institute for Defense Analysis on operational evaluations for the Office of the Secretary of Defense. During 1970-1972 he was a visiting associate professor at the Technion, Israel Institute of Technology. He is a member of the Operations Research Society of America, the Technical Institute of Management Sciences, and Sigma Xi.

Bradford Warren Wade

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Dr. Wade joined IBM in 1974 as a Research staff member working on relational data base systems. His current technical interests include privacy and security in data base systems. Mr. Wade received his B.A. degree in mathematics from Pomona College in 1969, and his M.S. and Ph.D. degree in computer science from Purdue University in 1970 and 1976, respectively. He is a member of the Association for Computing Machinery and Phi Beta Kappa.

Peter M. Will

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Dr. Will joined the Research Division in 1965 and has worked largely on image processing for recognition, scene analysis, Earth Resources Satellite data processing, data compression, and FET chip and wafer inspection. He also worked on the design of an office automation system that utilized minicomputers. He received the B.S. degree in electrical engineering with first class honors in 1958 and the Ph.D. degree in 1960, both from the University of Aberdeen, Scotland. He was a Lecturer in Control at the University of Connecticut Graduate School in 1966-70. He worked on adaptive control at Associated Electrical Industries Ltd., Manchester, England, in 1960-1961 and at AMF British Research Laboratories in 1962-1964. Dr. Will's present assignment is managing a research project on automatic assembly of mechanical objects.

Chak-Kuen Wong

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Dr. Wong joined IBM in 1969 as a member of the computer science department at Thomas J. Watson Research Center, His current interests include abstract and concrete computational complexity theory, optimization problems related to data allocation, magnetic bubble memory structures, and theory of fuzzy sets. Dr. Wong received the B.A. degree in mathematics from the University of Hong Kong in 1965 and the M.A. and Ph.D. degrees in mathematics from Columbia University in 1966 and 1970, respectively. For the academic year 1972-1973 he was a visiting associate professor of computer science at the University of Illinois, Urbana. He received an IBM Outstanding Invention Award in 1971.

Po Cheung Yue

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Dr. Yue is a member of the storage systems analysis and algorithms group at the Thomas J. Watson Research Center, which he joined in 1970. He has worked primarily in systems modeling, workload characterization, data base design, and algorithmic studies. His education includes a B.S. degree with distinction from McGill University in 1964, an M.S. degree from Stanford University in 1965, both in electrical engineering, and a Ph.D. degree in system science from the University of California at Los Angeles in 1970. He is a member of the Association for Computing Machinery, the Institute of Electrical and Electronics Engineers, and the Society for Industrial and Applied Mathematics.