Authors

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Dr. Fernandez joined IBM in 1973 and is a staff member of the Los Angeles 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, where he worked from 1963 to 1972. He received 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 is presently a lecturer in the Computer Science Department at UCLA. He is a member of the Association for Computing Machinery.

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Dr. Chang is a senior engineer in the system design aids development group located in White Plains and Poughkeepsie and is currently working on new system design techniques. Since joining IBM in 1959 he has developed a performance simulation program to assist the design of the airline reservation system in 1961 and has designed and managed the development of a communications network design program and a teleprocessing systems design program in 1964. He has also worked on performance analysis of data based systems, reliable computer system design, and advanced communications systems. He received a B.S.E.E. from the National Taiwan University in 1957, a Professional Electrical Engineering degree from Columbia University in 1962, and a Ph.D. in systems science (electrical engineering) from the Polytechnic Institute of Brooklyn in 1969. Dr. Chang received an IBM Outstanding Contribution Award for his work on the network design program in 1965. He is a Fellow of the American Association for the Advancement of Science and a member of the Institute of Electrical and Electronics Engineers, the Association for Computing Machinery, and the Operations Research Society of America.

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Dr. Ghanem is a member of the computer sciences department at the Thomas J. Watson Research Center, where he joined IBM in 1972. His research interests include the modeling and statistical performance evaluation of computer systems, computer resource allocation, storage management, and program behavior, as well as optimization theory and statistical estimation and identification. Previously he worked at Stanford University in the electrical engineering department and at Bell Telephone Laboratories, Homdel, New Jersey, on problems related to network planning. Dr. Ghanem received the B.Sc. degree from Alexandria University, Egypt, in electrical engineering in 1965 and the M.Sc. and Ph.D. degrees in engineering economic systems from Stanford University in 1969 and 1971, respectively. He was awarded a Ford Foundation Fellowship for 1968 to 1970. Dr. Ghanem is a member of the Institute of Electrical and Electronics Engineers, the Institute of Management Sciences, and the Association for Computing Machinery.

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Dr. Chen is a staff engineer in the aids development department and is currently engaged in the development of models for the performance evaluation of central processing units. Since joining IBM at Kingston in 1968, he has been involved in the general area of performance analysis of computer communication systems. Previously, he worked for General Dynamics Corp. on high speed logic design. Dr. Chen has been a lecturer at Manhattan College and an instructor at Stevens Institute of Technology. He received a B.S. degree in electrical engineering from the National Taiwan University in 1957, an M.S. in electrical engineering from the University of Kansas in 1961, and a Ph.D. in system science from the Polytechnic Institute of Brooklyn in 1970.

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Dr. Herzog has spent a year at the IBM Thomas J. Watson Research Center on an IBM World Trade Postdoctoral Fellowship as a member of the teleprocessing system optimization group, where he was concerned with problems of traffic flow in complex data networks. He had been on leave from the Institute for Switching Techniques and Data Processing at the University of Stuttgart since March 1973. Dr. Herzog received all his degrees in electrical engineering. From 1964 to 1970 he held positions as research associate, assistant professor, and chief engineer at the Institute. From 1970 to 1973 he headed the informatic research group there, "stochastic service and transportation processes in computers and computer networks." He has also been Privatdozent at the University of Stuttgart since 1973. Dr. Herzog is a member of VDE (Society for Electrical Engineers in Germany) and NTG (Telecommunications Society).

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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, Berkeley, in 1965, and a Ph.D. 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 computations.

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Dr. Lavenberg joined IBM in 1968 and is currently a member of the systems evaluation department at the San Jose Research Laboratory. His current technical interests include stochastic modeling of data base systems, simulation of stochastic systems, and queuing theory. He received a B.E.E. from Rensselaer Polytechnic Institute in 1963 and an M.S. and a Ph.D. in electrical engineering from the California Institute of Technology in 1964 and 1968, respectively. Dr. Lavenberg is a member of the Association for Computing Machinery, the Institute of Electrical and Electronics Engineers, and Sigma Xi.

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Dr. Wu is a staff engineer currently coordinating the performance analysis function in a group developing computer terminals. Since joining IBM at Kingston in 1964, he has worked on an optical storage device, a numerically controlled measuring system, a gas display panel, and performance analysis of computer communication systems. Dr. Wu received B.S. and M.S. degrees in physics from Massachusetts Institute of Technology and the University of Washington (Seattle), respectively, and a D.Sc. in electrical engineering from Washington University (St. Louis). He is a member of Sigma Xi.