Authors

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Mr. Davies is an advisory programmer in the advanced technology project on integrity, recovery and audit at the IBM Santa Teresa Laboratory in San Jose, California. He joined the company in 1966 in Poughkeepsie, New York, in the systems architecture department where he participated in the development of the architecture of System/370. He was also involved in some of the early work on relational data bases. In 1971, Mr. Davies transferred to the San Jose laboratory where he became active in the study of the recovery and integrity aspects of data base management systems. Born and raised in England, Mr. Davies received his B.S. and M.S. in electrical engineering from the University of South Africa at Durban.

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Mr. Ehrsam is an advisory engineer in the data security technology group at IBM's Kingston Development Laboratory. He joined the company in 1965 as an associate engineer in Kingston, working on analysis of digital signals emanating from data processing equipment. He has been involved in cryptography since 1972, participating in the development of the Data Encryption Standard (DES) and in the design and implementation of cipher key management in cryptographic facilities. Mr. Ehrsam studied at the Technical Institute of the Canton of Zurich, Switzerland, and received his M.S. in electrical engineering from the University of Pennsylvania in 1966.

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Dr. Gladney is manager of the molecular dynamics department at IBM's San Jose Research Laboratory. He joined the Laboratory's physics department in 1963 and worked in spectroscopy, crystal growth, and laboratory automation. From mid-1968 until early 1970 he was assigned to the technical staff of the IBM Vice President and Chief Scientist. At the San Jose laboratory he managed the computing facility and the large scale scientific computation department before accepting his present position. Much of the work reported in his paper in this issue was done during a sabbatical assignment in the information systems area of IBM's General Products Division. Dr. Gladney is a member of the American Chemical Society and is a Fellow of the American Physical Society. He received his Ph.D. in chemistry from Princeton University in 1963.

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Mr. Lennon is a staff programmer in the data security program office of the power and data security products group at IBM's Kingston development laboratory. He joined the Kingston Programming Center in 1968 as a junior associate programmer and spent several years working on the OS/360 supervisor, specializing in system reliability. More recently, he has worked with Systems Network Architecture. Currently he is a programming architect with responsibility for system design of the IBM Cryptographic Subsystem. Mr. Lennon received his B.S. in commerce and economics from the University of Vermont, Burlington, in 1963.

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Dr. Matyas is an advisory engineer in the Crypto Competency Center at IBM's Kingston development laboratory. He joined IBM in 1967 after serving five years as a U.S. naval aviator. In 1974, on leave from IBM, he received his Ph.D. in computer science from the University of Iowa, where his thesis dealt with cryptanalysis. Returning to IBM, Dr. Matyas worked in the area of data security and privacy, and later participated in the design and development of IBM's cryptographic subsystem.

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Dr. Meyer is an advisory engineer at IBM's Kingston development laboratory. He joined IBM in 1965, working in electromagnetic compatibility at Kingston. His involvement with data security started with an investigation of criteria for strong cryptographic systems. A member of the design team working on the IBM Cryptographic Subsystem, he coordinated the threat analysis work being done in IBM Research and in Kingston, and thus was instrumental in the design of the Data Encryption Standard (DES). In subsequent work he investigated methods of incorporating the DES into data processing systems. Dr. Meyer received his B.S. in electrical engineering from the Ingenieur Schule, Hamburg, West Germany, and his M.S. and Ph.D. from the University of Pennsylvania.

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Dr. Tuchman is a program manager with responsibility for advanced power technology and data security products at IBM's Kingston development laboratory. He began his career with IBM in 1955 as a junior engineer in the Poughkeepsie plant. He transferred to Kingston in 1957 and worked in such areas as air traffic control, analog circuitry, and electromagnetic compatibility before joining the power products group, his current assignment. He has received outstanding contribution, invention achievement, and outstanding innovation awards from IBM. He is a member of the Institute of Electrical and Electronics Engineers, Sigma Xi, Eta Kappa Nu, and Tau Beta Pi, and has a New York State Professional Engineer's license. Dr. Tuchman received his bachelor's degree in electrical engineering from City College of New York, and his M.S. and Ph.D. degrees from Syracuse University.