About the Authors

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Lynn Conway earned the B.S. ('62) and M.S.E.E. ('63) at Columbia University, and then joined IBM Research, working on the architecture and design of ultra-high performance computers. In 1969 Lynn joined Memorex, where she was architect of the central processor of a small business computer system. Lynn joined Xerox in 1973 as a Member of the Research Staff at the Palo Alto Research Center (PARC), initially conducting research in system architecture for image processing.

Lynn then founded and is now Manager of the LSI Systems Area at PARC, a department responsible for Xerox's research program in VLSI system architecture and design methodology. During '78-'79, Lynn also served as a Visiting Associate Professor of Electrical Engineering and Computer Science at M.I.T., organizing and teaching the first VLSI system design course offered there. Lynn is a Senior Member of the IEEE, and is co-author of the textbook *Introduction to VLSI Systems*.

Alan Bell earned the B.S. in Computer Science from the University of California at Irvine in 1972. He then joined the Artifical Intelligence department of Bolt, Beranek, and Newman (BBN), in Cambridge, Mass. There he worked on system software, hardware, and artifical intelligence. This work included augmentation of the Tenex operating system, and creation of the hypothesis generation subsystem of *Sophie*, a system to teach electronic troubleshooting. In 1978, Alan joined the Xerox Palo Alto Research Center as a Member of the Research Staff in the LSI Systems Area. His initial activities at PARC included being the primary architect and designer of the MPC VLSI implementation system. His current activities center around VLSI design, and the creation of an integrated wafer-scale framework in which many diverse, independently designed VLSI systems can communicate and interact with each other.

Martin E. Newell received his B.S. degree from London University ('66), and M.S. from Pennsylvania State University ('68). After spending 4 years as leader of the Graphics Group at the Computer Aided Design Center, at Cambridge, UK, he went to the University of Utah, where he conducted research in computer graphics, and received his Ph.D. ('75). After serving as an Assistant Professor at the University of Utah for 2 years, he joined Xerox PARC as a Member of the Research Staff, initially doing research on languages for representing office procedures. Martin then joined the LSI Systems Area at PARC, and played a major role in the architecture and design of the MPC VLSI implementation system. His current research activities at PARC are in the areas of VLSI implementation systems, VLSI design and analysis aids, and system architectures for realization of computer graphics functions in VLSI.

Carlo H. Sequin is a professor of Computer Science at the University of California, Berkeley. He received his Ph.D degree in experimental physics from the University of Basel, Switzerland in 1969. From 1970 until 1976 he worked at Bell Telephone Laboratories, Murray Hill, N.J. on the design and investigation of charge-coupled devices for imaging and signal processing applications. He has written many papers in that field and is an author of the first book on charge-transfer devices.

In 1977 he joined the faculty in the Department of Electrical Engineering and Computer Sciences. His research interests now lie in the field of computer architecture and design tools for very large scale integrated systems. In particular his research concerns multi-microprocessor computer networks, the mutual influence of advanced computer architecture and modern VLSI technology, and the implementation of special functions in silicon. Since 1977 he has been teaching courses in structured MOS-LSI design. Dr. Sequin is a member of ACM, IEEE and the Swiss Physical Society.

James H. Clark received B.S.(1970) and M.S.(1971) degrees in Physics from Lousiana State University and Ph.D.(1974) in Computer Science from the University of Utah. He was an Assistant Professor of Information Sciences at the University of California at Santa Cruz from 1974 to 1977 and a consultant from 1977-1979. In 1979 he joined the Computer Systems Laboratory of the Department of Electrical Engineering of Stanford University as an Associate Professor.

His research interests are the design of computer systems, computer graphics, VLSI design aids and VLSI systems architecture.

Sally A. Browning received a BS in Mathematics and Computer Science from the University of Oregon in 1974. After a two year hiatus as a systems programmer, she returned to school, this time as a graduate student at the California Institute of Technology. She received a MS in Engineering Science in 1977 and completed her PhD in Computer Science in January of this year. She is presently a Research Fellow and Lecturer at Caltech. Her research interests include the design and analysis of algorithms for highly concurrent machines, a programmer's approach to computer architecture, and notations and operating systems that support multi-processing.