

## The Contributors

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**B. Chandrasekaran** directs the Laboratory for AI Research and is professor of Computer and Information Science at Ohio State University, Columbus, Ohio, USA. His research interests include knowledge-based systems, using images in problem solving, and the foundations of cognitive science and AI. He received the B.E. (Hons) degree from A.C. College of Engineering and Technology, Karaikudi, Tamil Nadu, in 1963, and the PhD degree in electrical engineering from University of Pennsylvania in 1967. He is editor-in-chief of *IEEE Expert*, a Fellow of both IEEE and American Association for Artificial Intelligence.

**Susan Josephson** is an associate professor of philosophy at the Columbus College of Art and Design, Columbus, Ohio, where she has been teaching since 1972. She has been a Research Associate to the Ohio State University Department of Computer and Information Science Laboratory for Artificial Intelligence Research since 1987, where she most recently has been the co-editor of the book *Abductive Inference* to be published by Cambridge University Press in 1993. She received her PhD in philosophy from the Ohio State University in 1981.

**Aravind K. Joshi** is the Henry Salvatori Professor of Computer and Cognitive Science at the University of Pennsylvania. He received his BE (Electrical and Mechanical

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**Géraldine Legendre** received her PhD in Linguistics from the University of California at San Diego in 1987 and has been a professor in the Department of Linguistics at the University of Colorado since 1988. Her research area is formal syntax, especially the syntax of French. She is particularly interested in phenomena sensitive to grammatical relations, and how adequate accounts of the full range of French facts bear on putative linguistic universals. In 1990 she began collaborative work with Paul Smolensky and Yoshiro Miyata in order to develop formal accounts of complex phenomena that have resisted complete analysis using traditional rule-based formalisms, and to better encompass more cognitive and computational aspects of these issues.

**Yoshiro Miyata** received his PhD in Psychology from the University of California at San Diego in 1988 and then became a member of the Cognitive Science Research Group at Bellcore. In 1989 he started working with Paul Smolensky and Géraldine Legendre at the Computer Science Department and Institute for Cognitive Science at the University of Colorado at Boulder. Since 1991 he has been a professor in the School of Computer and Cognitive Sciences at Chukyo University in Japan. His research area is modelling of cognitive systems in various domains: especially language, planning, action control, and music. He is also interested in the design of computer interfaces.

**R. Narasimhan** has been closely associated with the development of computer science education and research in India. After obtaining a degree in Telecommunication Engineering from Madras University, in 1947, he went to the USA for post graduate work receiving an MS in Electrical Engineering from California Institute of Technology, and subsequently, a PhD in Mathematics from Indiana University. He joined the Tata Institute of Fundamental Research (TIFR), Bombay, in 1954 and worked there till 1990 when he retired as a Professor of Eminence. During this period, he spent three years (1961–1964) as a visiting scientist at the Digital Computer Laboratory of the University of Illinois at Urbana. From 1975–1985, he was the director of the National Centre for Software Development and Computing Techniques at TIFR. Currently, he is a CMC National Fellow in Information Technology. His research interests include the computational modelling of behaviour, especially language behaviour; the methodology of social sciences; and more

specifically the role of technology in cognitive and social change.

**Paul Smolensky** received his BA in physics from Harvard University in 1976 and his PhD in mathematical physics from Indiana University in 1981. He then became one of the founding members of the Parallel Distributed Processing Research Group at the University of California at San Diego. In 1985 he assumed his present position as a professor in the Computer Science Department and Institute for Cognitive Science at the University of Colorado at Boulder. His current research focusses on the mathematical analysis of computation in connectionist networks, primarily with application to two areas of cognitive science: linguistics, and philosophical foundations.

**Steven W. Zucker** is Professor of Electrical Engineering at McGill University, Director of the Program in Artificial Intelligence and Robotics of the Canadian Institute for Advanced Research, and the Co-Director of the Computer Vision and Robotics Laboratory in the McGill Research Center for Intelligent Machines. He was elected a Fellow of the Canadian Institute for Advanced Research, and a Fellow of the IEEE. Dr. Zucker obtained his education at Carnegie-Mellon University in Pittsburgh and at Drexel University in Philadelphia, and was a post-doctoral Research Fellow in Computer Science at the University of Maryland, College Park. He was Professor Invitée at Institut National de Recherche en Informatique et en Automatique, Sophia-Antipolis, France, in 1989, and was a Visiting Professor at Tel Aviv University in January, 1993.

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