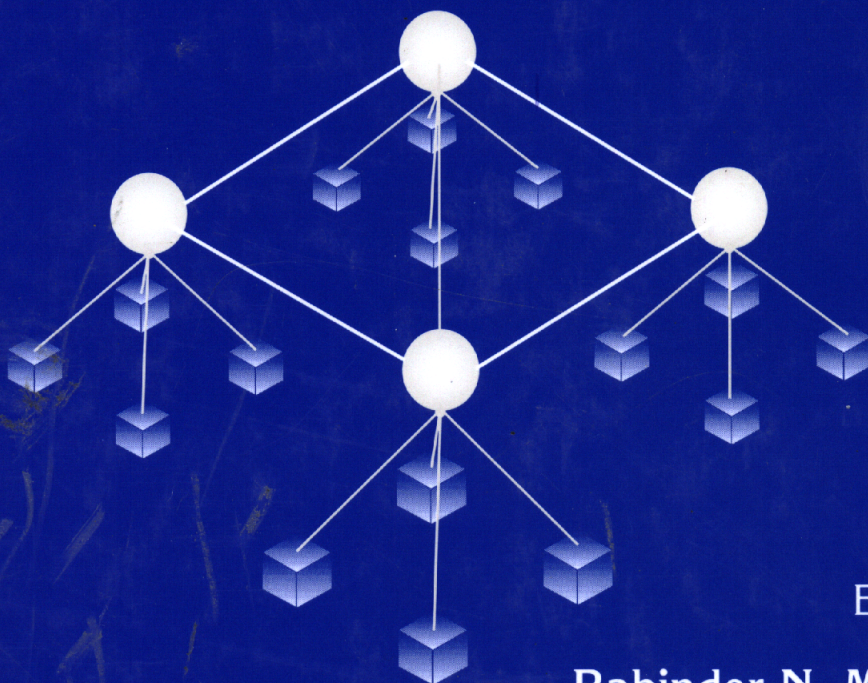


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Parallel and Distributed Signal and Image Integration Problems



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Parallel and Distributed Signal and Image Integration Problems



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Foreword

The next generation of engineering and computing systems will be significantly complex and distributed both in functionality and operation. The complexity arises, at least in part, due to a variety of information sources needed for the operation of complex systems. Successful development and deployment of such systems critically depends on the effective mechanisms for acquisition, coordination, communication and integration of information from various components. These mechanisms pose significant challenges in ways unprecedented in centralized single-source systems. Nevertheless, the methods of centralized single-source systems need to be fully developed, for they constitute fundamental components of the larger and more complex systems.

The Indo-US Workshop on Parallel and Distributed Signal and Image Integration Problems took place at Center for Development of Advanced Computing, Pune, India during December 16-18, 1993. The papers presented at the workshop have been edited for this volume.

This collection of papers addresses various aspects in the area of Signal and Image Integration with a specific emphasis on Parallel and Distributed solutions. A wide spectrum of issues including image and signal processing, parallel architectures/algorithms, sensor integration/fusion, and neural networks/fuzzy systems, are addressed in various papers. The treatment of the papers ranges from analytical studies to description of user tools, from single computing systems to parallel and distributed computing systems, from single sensor systems to multiple and distributed sensor systems, and from deterministic systems to stochastic/fuzzy systems. This wide spectrum of papers speaks for the richness of the problems that arise in this area, and the breadth and/or depth of the solutions of the various investigators.

I forward this volume with congratulations to the authors, organizers of the workshop, and the editors.

S. Sitharama Iyengar

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We thank Oscar Manley of the Basic Energy Sciences Program at the U. S. Department of Energy for providing support for the production of this volume. Additionally, we thank William Grimmell and Reinhold Mann of Oak Ridge National Laboratory (ORNL) for their comments and support, and also for making available the computational facilities of the Center for Engineering Systems Advanced Research, ORNL for the preparation of camera-ready version.

Nageswara S. V. Rao

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