PROCEEDINGS OF THE FIFTH SIAM CONFERENCE ON

PARALLEL PROCESSING FOR SCIENTIFIC COMPUTING

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PREFACE

The Fifth SIAM Conference on Parallel Processing for Scientific Computing was held in Houston, Texas, on March 25-27, 1991 More than 400 people attended the meeting, which was sponsored by the SIAM Activity Group on Supercomputing. The conference was organized by Danny Sorensen, Jack Dongarra, Ken Kennedy, Paul Messina, and Robert Voigt.

In planning the program, the conference organizers tried to emphasize the growth that had taken place in the eight years since the first conference In the series. The Houston meeting reflected a maturing of parallel processing. Although significant problems remain, a number of software packages have developed for parallel computers. In addition, a number of speakers described applications now benefiting from parallel processing, and many talks featured parallel methods for partial differential equations. Finally, there were a number of talks on performance evaluation and on tools to aid in development efficient programs to utilize the potential performance offered by parallel computing.

In addition to the papers and abstracts appearing in this proceedings, there were a large number of excellent poster presentations. On March 24, the day before the conference, Ken Kennedy conducted a tutorial entitled "Programming Support Environments for Parallel Computer Systems. " Finally, on the afternoon of March 27, a special session on large-scale modeling in petroleum reservoir engineering and seismic processing was held. The speakers at the session, which had been organized by Mary Wheeler (Rice Unrversity), were John Killough (University of Houston), Alvis McDonald (Mobil Research and Development), Jeffrey Rutledge (Chevron Oil Field Research), John Wallis (Western Integrated Technologies), Irshad Mufti (Mobil Research and Development), Kamy Sephrnoori (Unrversity of Texas at Austin), and Gary Li (BP Exploration).

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