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Revised Selected Papers

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Preface

This volume of the *Lecture Notes in Computer Science* series comprises the proceedings of the 4th International Conference on Numerical Analysis and Applications, which was held at the hotel Sunset Beach, Lozenetz, Bulgaria, June 15–20, 2008. The conference was organized by the Department of Numerical Analysis and Statistics at the University of Rousse.

This conference continued the tradition of three previous meetings (1996, 2000, 2004 in Rousse) as a forum, where scientists from leading research groups from the "East" and "West" are provided with the opportunity to meet and exchange ideas and establish research cooperation. More than 100 scientists from all over the world participated in the conference.

The key lectures reviewed some of the advanced achievements in the field of numerical methods and their efficient applications. The conference lectures were presented by university researchers and industry engineers including applied mathematicians, numerical analysts and computer experts. Two special sessions were organized:

- Robust Numerical Methods for Multiscale Singular Perturbation Problems - G.I. Shishkin and I. Tselishcheva
- Reliable Numerical Modelling in Science and Engineering - I. Farago and S. Korotov

A wide range of problems concerning recent achievements in numerical analysis and its applications in physics, chemistry, engineering, and economics were discussed. An extensive exchange of ideas between scientists who develop and study numerical methods, and researchers who use them for solving real-life problems, took place during the conference.

We recognize the effort required to prepare these key lectures and to organize the minisymposia. We appreciate the contribution of the authors who shared their knowledge of modern high-performance computing numerical methods with the conference participants. We also thank M. Koleva for the help in putting together the book.

The 5th International Conference on Numerical Analysis and Its Applications will be held in June 2012.

November 2008

Svetozar Margenov
Lubin Vulkov
Jerzy Waśniewski

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