Eleventh International Conference on Domain Decomposition Methods

## Eleventh International Conference on Domain Decomposition Methods

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## Preface

This volume represents the Proceedings of the Eleventh International Conference on Domain Decomposition Methods for Science and Engineering held at the University of Greenwich - Avery Hill Campus, July 20th - 24th, 1998.

This almost annual conference series has now become a major event in Applied Mathematics and Computational Science. At this 11th Conference, there were two to three parallel sessions being run daily and a total of six mini-symposia addressing various aspects of this subject involving both theory and applications. There were also sixteen invited presentations delivered by internationally well known scientists. Some of these invited presentations are included in this volume.

A new feature at this Conference was a Graduate Student Paper Competition. There were thirteen graudate student papers at the final competition being heard by the entire conference and examined by the Judging Committee which consisted of M Cross, I G Graham, J E Roberts, O Widlund and J Xu. Prizes were offered covering international return flights to attend the Conference.

In addition to the invited and student presentations, there were a total 102 minisymposium and contributed talks. Many presentations represented an interdiciplinary view of the subject with papers ranging from the use of advanced computer architectures to the development of related software tools, from the theoretical formulation to the design of robust algorithms and from engineering to medical science applications.

The participants who have their papers presented at the Conference were invited to submit their manuscripts for the Proceedings. All submitted manuscripts have gone through a reviewing process. Keynote speakers were invited to submit manuscripts of 12 pages for each article. Speakers for contributed sessions and minisymposia were invited to submit manuscripts of 8 pages for each article. We believe that the traditional partitioning of the Proceedings into Theory, Algorithms, and Applications still works well for the present volume. We have also included a new section with Student Papers. Papers in each section are alphabetically ordered as according to the first author in the author list of each paper.

The Conference was organised by M Cross (Greenwich), K Chen (Liverpool), A Craig (Durham), M G Everett (Greenwich), I G Graham (Bath), C - H Lai (Greenwich), and K A Pericleous (Greenwich) with the help from the three European Affair Advisors, P Deuflhard (ZIB - Berlin), J Periaux (Dassault), and J E Roberts (INRIA). The technical direction of the Conference was provided by the Scientific Committee which consisting of P E Bjørstad, J H Bramble, T F Chan, P Deuflhard,

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R Glowinski, R Hoppe, H Kawarada, D E Keyes, Yu Kuznetsov, J Periaux, O Pirronneau, Z - C Shi, O Widlund, and J Xu. The Conference received support from the Engineering and Physical Sciences Research Council (UK), the American Pacific Technology Group (Hong Kong), and the University of Greenwich.

We wish to thank the Conference Secretary, Mrs F Barkshire, for her enomous hard work towards the success of the Conference. We are also grateful to the organisers of the mini-symposia for attracting high quality presentations. Timely production of these Proceedings has only been possible through the cooperation of the authors and numerous referees. The editors wish to thank the effort of all referees and the quick response from the contributors to the editors regarding comments and modifications of their manuscripts.

The web page http://dd11.gre.ac.uk contains the complete programme of the Conference and an electronic version of these Proceedings. The Official Domain Decomposition Web site is http://www.ddm.org, from which further details for future conferences, previous conference proceedings, and the present proceedings may be obtained.

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