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### Preface

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## Preface

Peter.M.A. Sloot<sup>a</sup>, G. Dick van Albada<sup>a\*</sup>, Jack Dongarra<sup>b</sup>

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In 2010 ICCS celebrated its 10th anniversary in Amsterdam.

For this great event we invited world leading keynote speakers to give their vision on Computational Science now and in the future.

- Stephen Wolfram, Wolfram Research
- Seth Lloyd, MIT MechE
- Anton Zeilinger, Quantum Optics, Quantum Nanophysics, Quantum Information, Universität Wien
- Peter Hunter, Auckland Bioengineering Institute
- László Barabási, Northeastern University, Center for Complex Network Research
- Ed Seidel, National Science Foundation

The International Conference on Computational Science 2010 (ICCS 2010) aims to bring together researchers and scientists from mathematics and computer science as basic computing disciplines, researchers from various application areas who are pioneering advanced application of computational methods to sciences such as physics, chemistry, life sciences, and engineering, arts and humanitarian fields, along with software developers and vendors, to discuss problems and solutions in the area, to identify new issues, and to shape future directions for research, as well as to help industrial users apply various advanced computational techniques.

Besides our excellent keynote speakers, out of the submitted papers to main track and workshops, we selected about 300 high-quality papers for presentation at the conference and publication in the proceedings, published by Elsevier in their new Procedia Computer Science series.

ICCS 2010 is the tenth in the series of highly successful conferences; for the previous nine very successful meetings see: <http://www.iccs-meeting.org/iccs2010/previous-iccs.html>

Since its beginnings in 2001, ICCS has attracted increasingly higher quality and numbers of attendees and papers. Average attendance each year is about 400 participants. The proceedings series have become a major intellectual resource for computational science researchers and serve to both define and advance the state of the field.

The theme for ICCS 2010 in Amsterdam is "Advancing Computational Thinking", to mark several decades of progress in computational science theory and practice, leading to greatly improved applications in science. This conference was a unique event focusing on recent developments in methods and modeling of complex systems for diverse areas of science, scalable scientific algorithms, advanced software tools, computational grids, advanced numerical methods, and novel application areas where the above novel models, algorithms and tools can be efficiently applied such as physical systems, computational and systems biology, environmental systems, finance, and others.

For ICCS 2010 papers were submitted from over 60 countries; the list of accepted papers includes authors from over 40. ICCS 2010 had 38 % of the submitted papers accepted for its Main Track.

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Workshops rely on direct invitation of topic specific authors, therefore in this case there is already a pre-selection of potential authors, resulting in a much higher acceptance rate. For ICCS 2010 this was: 55%.

We are proud to note that ICCS is an ERA 2010 A-ranked conference series.

ICCS relies strongly on the vital contributions of our workshop organizers to attract high quality papers in many subject areas. The program committees for the main track and the workshops help ensure a high standard for the accepted papers. Financially, the conference is made possible by the support of our sponsors.

May 2010,





The ICCS 2010 Organizers,  
Peter M.A. Sloot  
G. Dick van Albada  
Jack Dongarra

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