Preface

The International Symposium on Numeric and Symbolic Algorithms for Scientific Computing, SYNASC, is an annual event in Timişoara, Romania. It has been organized by the West University of Timişoara in cooperation with the Research Institute for Symbolic Computation of the Johannes Kepler University of Linz, Austria and with the Institute e-Austria Timisoara. The eleventh occurrence was held at the West University of Timişoara from September 26th to 29th, 2009.

The aim of SYNASC has been to promote the dialogue between the symbolic and the numeric computing communities in order to advance the state of the art of mathematical computing and the range of its applicability.

While the SYNASC series has made its contribution to international scientific exchange in computer science, it has also contributed in a significant way to the promotion of scientific research in Romania. It has offered scientists, especially in the early difficult years, an international forum for presenting their research, as well as by facilitating contacts between scientists from Romania and abroad.

With this meeting, SYNASC now enters its second decade. The focus and spirit of the meeting remain the same, but it has matured. The practical aspects of running the meeting have become well practiced, and hence more systematic and effective, thanks to the hard work of many people. More importantly, the scientific level of the research contributions, while always respectable, has risen steadily and the symposium proceedings are now widely available.

The SYNASC symposia have always had its core set of represented areas. This year the program committee adopted a structure to support increased discussion among area specialists during the review process. The program was organized into six tracks, corresponding to research areas, with each track having its own subcommittee chaired by two area experts.

The symposium invited research submissions of two forms: full papers for formal presentation and extended abstracts for informal presentation. One hundred submissions were received and all were reviewed by the program committee members or by external referees. A total of 296 reports were received and every formal presentation had two to four referee reports. Each track produced its acceptance recommendations. These recommendations were then reviewed for consistency and combined in a meeting of the track chairs. In the end, 56 papers were selected for formal presentation and potential inclusion in these proceedings. An additional 11 papers were accepted for informal presentation at the symposium.

The highlights of the symposium were the plenary talks given by a distinguished set of international researchers: James Davenport, Tetsuo Ida, Lefteris Kirousis, Helmut Veith and Andrei Voronkov. Their thought-provoking talks were particularly appreciated by the symposium participants.

As in previous years, a number of workshops, tutorials, dissemination and training activities complemented the main symposium tracks.

The four workshops covered a range of related areas of interest to the symposium participants. These were:

- ACSys: the *6th Workshop on Agents for Complex Systems*
- GlobalComp: the *2nd Workshop on Global Computing Models and Technologies*
- NCA: *Workshop on Natural Computing and Applications*
- DMC: *Workshop on Data Management and Control*.

Each of these workshops handled its own invitations, submissions and review process.

The tutorials centered on the areas of software verification and theorem proving. The two-day program featured four well-attended tutorials:

- *Automated Methods for Proving Program Termination and Liveness*, Andrey Rybalchenko (Max Planck Institute for Software Systems, Germany)

- *SMT Solvers for Testing, Program Analysis and Verification at Microsoft*, Nikolaj Bjørner (Microsoft Research, USA)

- *Automated Software Analysis*, Helmut Veith (Technical University of Darmstadt, Germany)

- *Satisfiability and Theories*, Andrei Voronkov (University of Manchester, UK).

We express here our warm thanks to all the people who have contributed to this symposium, as authors, reviewers or presenters, either by initiative or by invitation. It is your contributions that give the symposium its life.

Stephen M. Watt
Program Committee Chair

Viorel Negru
General Chair

Tetsuo Ida, Tudor Jebelean, Dana Petcu, Daniela Zaharie
Members of the Steering Committee

THE 11TH INTERNATIONAL SYMPOSIUM ON SYMBOLIC

AND NUMERIC ALGORITHMS FOR SCIENTIFIC COMPUTING

September 26 - 29, 2009, Timişoara, Romania

http://synasc09.info.uvt.ro

Organized by:

Department of Computer Science	Research Institute for Symbolic Computation	Institute e-Austria
West University of Timisoara	Johannes Kepler University	Timişoara, Romania
Romania	Linz, Austria	

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Abdellatif Moudafi, France	

Parallel Computing Track

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Wolfgang Schreiner (co-chair), Research Institute for Symbolic Computation, Linz, Austria

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Florin Fortiş, Romania	Florin Pop, Romania
Dorian Gorgan, Romania	Jan Recker, Australia
Laura Măruşter, The Netherlands	Todor Stoilov, Bulgaria
Jan Mendling, Germany	Elisaveta Trichkova, Bulgaria
John Morrison, Ireland	Marek Tudruj, Poland

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