LSSC-2013 ORGANISATION REPORT

Authors: Svetozar Margenov, Scientific Computing Department, IICT-BAS

Summary: Report about the organisation of the 9th International Conference “Large-Scale Scientific Computations” LSSC’13, 3-7 June 2013, Sozopol, Bulgaria

Status: Final report

Distribution: Public

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Start date of the project: 01/10/2012

Duration: 42 months
Report about the AComIn Supported Event LSSC 2013

Name and type of the event:

9th International Conference
LSSC’13, “Large-Scale Scientific Computations”
Biannual event organised in Bulgaria since 1995
http://parallel.bas.bg/Conferences/SciCom13/
Accompanying event: NSPDE’13, Symposium on “Numerical Solution of Partial Differential Equations”

Place, dates:
Sozopol, Bulgaria
3-7 June 2013, LSSC
7-8 June 2013, NSPDE

Programming and Organising Committees:
The Programme Committee of the event consists of 27 members representing leading universities and research institutes from Austria, Bulgaria, Denmark, Germany, Italy, Poland, Sweden and USA.
The Local Organising Committee consists of the following members all from IICT:
Gergana Bencheva
Petya Boyanova
Ivan Georgiev
Krassimir Georgiev
Silvia Grozdanova – Conference Secretary
Nikola Kosturski
Ivan Lirkov
Maria Lymbery
Svetozar Margenov – Chairman
Stanislav Stoykov
Yavor Vutov

Participants /number, types/:
From IICT: 25, 23 of them researchers
Bulgarian participants outside IICT: 19 researchers
Foreign participants: 110, including 5 Plenary Invited Speakers
Invited participants: 9, 2 of them supported by AComIn
Short description:

A wide range of recent achievements in the field of scalable numerical methods, algorithms and their applications is addressed during the conference. The meeting provides a forum for exchange of ideas between scientists, who develop and study numerical methods and algorithms, and researchers, who apply them for solving real life problems. The following major scientific topics, all related to the AComln project activities are included: Hierarchical, adaptive, domain decomposition and local refinement methods; Robust preconditioning algorithms; Monte Carlo methods and algorithms; Numerical linear algebra; Control systems; Large-scale computations of environmental biomedical and engineering problems; High-performance algorithms for engineering problems; Parallel algorithms and performance analysis.

Scientific Programme:

The Scientific Programme of the conference is available at:


Scientific Programme of the AComln-related activities:

The Scientific Programme of the event includes 5 Plenary Invited talks, 11 Special Sessions and Sessions of Contributed Talks. 6 of the Special Sessions are directly related to the AComln project activities.

The Plenary Invited lecturers gave the following talks:

• Joseph Pasciak, Variational Formulations of Problems Involving Fractional Order Differential Operators
• Gundolf Haase, Multiple-GPU AMG Solver Environment for Biomedical Applications

AComln-related papers presented at the event and published after peer review:

The following ten AComln-related papers will be published in the LSSC’13 proceedings to appear as a special volume of Springer LNCS in 2014:

• P. Schwaha, M. Nedjalkov, S. Selberherr, J.M. Sellier, I. Dimov, R. Georgieva, Stochastic Formulation of Newton’s Acceleration
• J. M. Sellier, M. Nedjalkov, I. Dimov, S. Selberherr, The Role of Annihilation in a Wigner Monte Carlo approach
• P. Koprinkova-Hristova, Adaptive Critic Design and Heuristic Search for Optimization
• O. Roeva, S. Fidanova, V. Atanassova, Hybrid ACO-GA for Parameter Identification of an E. coli Cultivation Process Model
• S. Margenov, S. Stoykov, Y. Vutov, Numerical Homogenization of Heterogeneous Anisotropic Linear Elastic Materials
• S. Stoykov, S. Margenov, Nonlinear Forced Vibration Analysis of Elastic Structures by Using Parallel Solvers for Large-Scale Systems
• E. Atanassov, D. Georgiev, T. Gurov, A. Karaivanova, and Y. Nikolova, Distributed system for query processing with Grid authentication
• R. Hristova, S. Ivanovska, and M. Durchova, Performance Analysis of the Regional Grid Resources for an Environmental Modeling Application
• M. Lymbery, Robust Balanced Semi-Coarsening Multilevel Preconditioning of Bicubic FEM Systems
• T. Tashev, V. Monov, Large-Scale Simulation of Non-Uniform Load Traffic in Studying the Throughput of a Crossbar Packed Switch.

Assessment of the added-value of the event to the AComIn scientific, networking and dissemination objectives:

The support, provided by AComIn to LSSC’13, enabled:
• To cover the local expenses of several worldwide known scientists giving top level plenary and key note invited talks.
• To support a part (10 from 25) of the participants from IICT.

The conference materials included the AComIn flyer informing the participants about the objectives and specific activities of the project. The AComIn support is acknowledged in the LSSC’13 Book of Abstracts as well as at the conference website.

Changes in the financial planning of the AComIn support spending (if any):

There were no changes in the budget plan, approved by the AComIn Executive Board.

Reason for the changes during the actual event implementation: N/A

Event organiser:

15 June 2013

Svetozar Margenov