

Preface

The Seventh **Cracow Grid Workshop** (CGW'07) was organized jointly by the Academic Computer Centre CYFRONET AGH, the Institute of Nuclear Physics PAN, the Institute of Computer Science AGH, and the Medical College of the Jagiellonian University. CGW'07 was held in Cracow on the premises of IFJ PAN on 15 and 16 October 2007, and on 17 October 2007 in the Medical College Conference Center together with the *EUChinaGrid* meeting.

The main objective of the Cracow Grid Workshops is to create and support a collaborative community of researchers, developers, practitioners and potential users in Poland and in the neighbouring countries who work in the fascinating field of e-Science, Grid systems and their applications.

The CGW'07 covered current research topics in grid systems and grid applications together with advancements in computational science, and gave an overview of research in the main European and national grid projects. Two special sessions were organized in the framework of CGW'07: *ViroLab and its virtual laboratory* and *EUChinaGrid*.

As always, CGW'07 was organized as a Central European Grid Consortium (CEGC) event and comprised: keynote and invited lectures, poster sessions, oral presentations and a tutorial. About 160 participants from 22 countries took part in the Workshop. For ACC CYFRONET AGH, CGW'07 also constituted part of its activity within the framework of the many Grid projects: EGEE II, K-WfGrid, CoreGRID, ViroLab, int.eu.grid, GREDIA, BalticGrid.

The following keynote speakers honoured the event:

- Norbert Attig, John von Neumann Institute for Computing, ZAM, Juelich, Germany,
- Carole Goble, Department of Computer Science, University of Manchester, UK,
- Jacek Kitowski, Institute of Computer Science and ACC CYFRONET AGH, Kraków, Poland,
- Dieter Kranzlmüller, Johannes Kepler University Linz, Austria,
- Paweł Pisarczyk representing ATM. S.A.,
- Peter Sloot, Section Computational Science, University of Amsterdam, The Netherlands,
- Hai Zhuge, Institute of Computing Technology, Chinese Academy of Sciences, China.

The *Chemomomentum* tutorial was delivered by Piotr Bala from the ICM Warsaw University, Poland.

At the *ViroLab and its virtual laboratory* session, the ViroLab team from the Institute of Computer Science and CYFRONET AGH, Gridwise Technologies, Universiteit van Amsterdam, and HLRS Stuttgart, presented a live demo of the virtual laboratory which facilitates molecular dynamics simulations, medical knowledge discovery and decision support for HIV treatment. This laboratory is being developed in the framework of the EU IST-027446 project ViroLab (<http://www.virolab.org>), and it is available at <http://virolab.cyfronet.pl>.

Traditionally, at CGW, the preferable form of presentation is a poster. This time, the Best Poster Jury selected the following posters for awards:

- G. Ertaylan, P.M.A. Sloot: *A Complex Automata Model of HIV-1 Co-receptor Tropism: Mutation Rate Prediction*,
- M. Dwuznik, M. Magryś, M. Pogoda, G. Sułkowski, M. Twardy: *Storage Throughput Performance Tuning in Grid Environment after Migration to Scientific Linux 4*,
- E. Ciepiela, J. Kocot, T. Gubala, M. Malawski, M. Kasztelnik, M. Bubak: *Virtual Laboratory Engine – GridSpace Engine*

About 90 contributed papers accepted for presentation during the Workshop provided a very good overview of the research activity in the area of Grid computing. The contributed papers were reviewed by the Steering Committee upon submission of abstracts, then again during their presentations at the event, and, finally, following submission of full versions. These papers give an overview of research activities in the following areas:

- ViroLab Virtual Laboratory,
- Workflows,
- Semantics,
- Virtual Organizations,
- Middleware,
- Resource management,
- Data management,
- Tools,
- Applications.

We would like to express our gratitude to Prof. Marek Jeżabek, Director of the Institute of Nuclear Physics, Prof. Krzysztof Zieliński, Director of the Institute of Computer Science AGH, and Prof. Irena Roterman-Konieczna from the Collegium Medicum UJ for their help and personal involvement. We owe thanks to the Workshop sponsor ATM S.A. Poland for their generous support.

We are also indebted to all the members of the Workshop Secretariat (Zofia Mosurska, Maria Stawiarska, Milena Zajęc) and other colleagues from ACC CYFRONET AGH (Teresa Ozga, Mieczysław Pilipczuk and Andrzej Oziębło) for organizing the event. Special thanks go to Milena Zajęc for her hard work on preparation of the Proceedings for printing.

We kindly invite you to visit the Web page of the Cracow Grid Workshop (<http://www.cyfronet.krakow.pl/cgw07/>) and, of course, to participate in CGW'08 in October 2008.

Kraków, January 2008

Marian Bubak
Michał Turala
Kazimierz Wiatr