

5th International Workshop on Grid Computing for Complex Problems
GCCP 2009
 Bratislava, Slovak Republic
 October 26-28, 2009

Preliminary program

Monday	26.10.2009	13:00 – 13:30	Registration
		13:30 – 14:00	Opening session
		14:00 – 14:45	Invited lecture 1
		14:45 – 15:30	Invited lecture 2
		15:30 – 15:45	Coffee break
		15:45 – 16:30	Invited lecture 3
		16:30 – 17:15	Invited lecture 4
		17:15 – 18:15	Vendor session
		18:15 – 18:45	Panel discussion
		18:45	Reception
Tuesday	27.10.2009	9:00 – 9:40	Invited lecture 5
		9:40 – 11:40	Session 1
		11:40 – 11:55	Coffee break
		11:55 – 12:35	Session 2
		12:35 – 13:30	Lunch
		13:30 – 14:10	Invited lecture 6
		14:10 – 15:10	Session 3
		15:10 – 15:25	Coffee break
		15:25 – 16:45	Session 4
Wednesday	28.10.2009	9:00 – 9:40	Invited lecture 7
		9:40 – 10:40	Session 5
		10:40 – 11:20	Session 6
		11:20 – 11:35	Coffee break
		11:35 – 12:00	Consortium "SlovakGrid"
		12:00 – 12:30	Program committee meeting
		12:30	Closing ceremony
Wednesday	28.10.2009	11:30 – 12:40	Grid Tutorials
		12:40 – 13:30	Lunch
		13:30 – 16:00	Grid Tutorials

Monday October 26, 2009

13:30

Opening ceremony

Ladislav Hluchý

14:00

Invited lecture

Grid computing for Astronomy & Astrophysics

Claudio Vuerli

14:45

Invited lecture

e-Infrastructures for Science and Industry - Clusters, Grids, and Clouds (the DEISA project)

Wolfgang Gentzsch

15:45

Invited lecture

H₂O-H₂ interaction: An interplay of supercomputers and grids

Jozef Noga

16:30

Invited lecture

EGI: The Present and the Future of the Pan-European Grid Infrastructure

Ladislav Hluchý

17:15

Vendor session

18:15

Panel discussion

Chair person: Ladislav Hluchý

Tuesday October 27, 2009

9:00

Invited lecture

Formal and Heuristic Techniques for Programming Parallel Heterogeneous Platforms

Anatoliy Doroshenko, Mykola Kotyuk, Sergiy Nikolayev, Kostyantyn Zhereb, and Olena Yatsenko

9:40

Session 1

Use of Knowledge and Semantics in Distributed Computing

Chair person: Ladislav Hluchý

Semantic web services based crisis information system exploiting automated workflow composition

Peter Bartaloš and Martin Gažák

Quality of Semantic GRID Services

Peter Bednár and Tomáš Kasanický

Semantic Composition of Web and Grid Services

Peter Bartaloš, Martin Gažák, Marek Paralič, Ondrej Habala

Prediction of Meteorologically Significant Events Using Data Mining

Martin Gažák, Juraj Bartók, Ján Paralič, Peter Bednár, Ladislav Hluchý, Ondrej Habala

Application of Data Integration and Mining to Environmental Scenarios

Ondrej Habala, Martin Šeleng, Viet Tran, Ladislav Hluchý

11:55

Session 2

Computational Chemistry & Material Science

Chair person: Jozef Noga

Material tension stress-strain curve determination via inverse analysis using finite element method in computational Grids

Ladislav Écsi, Pavel Élesztős, Viera Šipková, Miroslav Dobrucký, and Ján Astaloš

The distributed Parameter Model of the Electrostatic-Actuated Gas-Damped MEMS-based Devices for the Simulation on the Parallel Computer Systems

Ivan Plander and Michal Štepanovský

13:30

Invited lecture

Implementation and Testing of Multiple Walkers Approach Based Free Energy Calculations in the Grid Environment

Zora Střelcová, Petr Kulhánek, Jan Kmuníček, Jaroslav Koča and Luděk Matyska

14:10

Session 3

Distributed Computing and Large Scale Applications

Chair person: Jan Kmuníček

Grid-enabled maximum clique algorithm

Karol Grondžák and Peter Kortiš

Parallelization Techniques for the Matrix Test Pre-computation

Matúš Jókay and Pavol Zajac

TSP Models for cluster computing on the base of genetic algorithms

Jarmila Škrinárová and Filip Zelinka

15:25

Session 4

Grid and Service-oriented Computing

Chair person: Branislav Šimo

User-friendly Access to Grid using g-Eclipse

Peter Kurdel, Jolana Sebestyénová

Brief Introduction to Cloud Computing

Minh Binh Nguyen

Distributed GPGPU – new trends

Ján Perháč, Branislav Sobota, Csaba Szabó

The multi-dimensional model of grid computing

Viera Šipková

Wednesday October 28, 2009

9:00

Invited lecture

The dynamics of outer trans-Neptunian objects from its simulation for 2Gyr

Marián Jakubík, Luboš Neslušan, and Giuseppe Leto

9:40

Session 5

Astronomy & Astrophysics and High energy Physics

Chair person: Marián Jakubík

Visualization of Grid based astronomical simulation Flight towards the Sun

Eva Pajorová, Luboš Neslušan

Execution of grid workflows by agent-scheduling tools

Dinh Viet Tran

Using DIANE for parametric applications

Dinh Viet Tran

10:40

Session 6

Environmental applications and Distributed Computing

Chair person: Anatoliy Doroshenko

New Approach in Licensing for Simulation Climate Changes in Grid

Igor Kvasnica, Peter Kvasnica

A Grid Computing Approach to a Depth of Snow Cover Modelling

Vlado Siládi

11:30

Training course (including tutorial) for Grid users and application developers

Participants of the hands-on tutorial are advised to bring their own laptops for this session with having an SSH client installed (e.g. PUTTY on Windows, SSH terminal on Linux).

Lecturers: Miroslav Dobrucký, Viera Šípková, Viet D. Tran

Programme schedule:

- Current state of Grid projects: EGEE and EGI (European Grid Initiative) (20 min / *Dobrucký*)
- Grid security and getting access to the Grid (30 min / *Dobrucký*)
- Overview of Grid middlewares and high-level Grid tools (20 min / *Tran*)
- Development of Grid applications (20 min / *Tran*)
- Demonstration of DIANE (Lightweight Job Execution Framework) (30 min / *Tran*)
- gLite middleware (30 min / *Šípková*)

15:00

Hands-on tutorial

Practicals with the gLite middleware (60 min)

(Proxy generation and basic operations of job and data management using the gLite and LCG CLI on the Grid UI)

Lecturers: Miroslav Dobrucký, Viera Šípková, Viet D. Tran

Presentation equipment

Each talk has a time slot of 20 minutes. Please speak for 15 minutes and leave 5 minutes for questions.

In conference room there will be a Personal Computer available for presentations, with Microsoft Power Point and Adobe Acrobat Reader installed.

You can load your presentation into the PC via

- USB MEMORY KEY
- CD

Please contact your session chair a few minutes before the start of the session with short **biography** written, if not done previously via our conference system.

In case you need to use your personal laptop, please contact your session chair before the session starts.