

FRIDAY, JULY 20, 14.30, room 407



International Desktop Grid Federation Tutorial

<http://desktopgridfederation.org>

**Zaikin O. (ISDCT SB RAS),
Ivashko E. (KRC RAS),
Terstyansky G. (University of Westminster),
Posypkin M. (ISA RAS),
Khrapov N. (ISA RAS)**



Recently, we notice the wide spreading of grid system of personal computers, so called Desktop Grids. Such systems use free resources of personal home and office computers to compute various scientific projects. Modern Desktop Grids enable consolidation of the huge computational capacity: projects SETI@HOME, FOLDING@HOME demonstrate real performance measured by hundreds of TeraFlops. It worth noting that these projects utilize existing resources, thereby reducing the cost of a distributed environment. Desktop Grids lead in terms of price/performance and environmental issues (“Green Technologies”).

Tutorial attendees will learn about Desktop Grids, existing implementations of this technology. Leading experts from Russian and foreign scientific centers, will talk about Desktop Grid technologies, share their experiences on using Desktop Grids in their work.

Attention will also be paid to the rapid creation of applications using the wrappers technology (GenWrapper, BoincWrapper, GBAC) and the integration of service-grid systems and Desktop Grids.

The practical (“hands-on”) part of the tutorial will be based on BOINC platform. During the master class each participant will first connect the test machine to an existing specially created volunteer computing project, in order to see how BOINC works.

In the next stage of the training, the participant will have the opportunity to try herself as an administrator of BOINC-server, will deploy and run a distributed application within a small, locally organized BOINC computing infrastructure.

SCHEDULE

I. Theory

1. Posypkin M. General Introduction (20 min)
2. Terstyansky G. Volunteer Computing Supports Individual Researchers and Research Teams (30 min)
3. Ivashko E. Introduction to BOINC (30 min)
4. Zaikin O. BOINC Projects Promotion – SAT@home Experience (20 min)

Coffee break (20 min)

II. Hands-on training (2 h.) Tutors – Khrapov, Posypkin.