



## **A WORKSHOP ON VOLUNTEER COMPUTING**

Website: <http://event.twgrid.org/isgc2009/asiaathome/>

**Date and Place:** 16-17 April 2009, Academia Sinica, Taipei, Taiwan

**Background for the workshop:** Volunteer computing is an established technology that enables ordinary citizens around the globe to contribute to important challenges in fundamental science and medicine, by providing idle time on their PCs and even partaking in data analysis via the Internet. For scientists, volunteer computing represents a free and essentially unlimited computing resource. Made popular already a decade ago by the screensaver project SETI@home, volunteer computing now counts over 50 projects running in a wide variety of scientific domains, including climate change, astrophysics earthquake monitoring and epidemiology. Several million volunteers are contributing to such projects, many of which use a common software platform called BOINC (Berkeley Open Interface for Network Computing). However, so far almost all these projects have been launched by scientists in North America and Europe. Therefore, this workshop aims to increase awareness of volunteer computing more widely in Asia.

**Scope of the workshop:** The objective of the two-day Asia@home workshop is to introduce the technologies underlying volunteer computing to scientists in Asia, who are interested to use volunteer computing as a tool in their future research. The workshop takes a hands-on approach, mixing lectures by leading developers of volunteer computing software with case studies by scientists who have been applying it in a number of fields. In addition, topics such as the interfacing of Grid computing and cloud computing with volunteer computing will be addressed, with demos of practical solutions. The participants will be tutored in several aspects of volunteer computing, including how to adapt existing code to run in volunteer mode using BOINC, how to install a server for volunteer computing, and new trends in "volunteer thinking" projects where the volunteer does data analysis via a web interface, using a new software platform called BOSSA. A detailed programme and list of confirmed lecturers is provided below.

**Organized by:** Academia Sinica Grid Computing in conjunction with the International Symposium on Grid Computing (ISGC 2009, 21-23 April 2009, Academia Sinica, Taipei, Taiwan)

**Registration:** Please register for this workshop via the online registration form on the ISGC 2009 web pages <http://event.twgrid.org/isgc2009/> before April 14<sup>th</sup> 2009. Please note that participation in the workshop is free of charge, but the organizers reserve the right to limit numbers of participants, if necessary for practical reasons. So to ensure your participation, please register early.

**Participant Support:** Participants are expected to cover their travel and accommodation costs at Academia Sinica. Depending on external sponsorship opportunities that have not yet been confirmed, the organizers may be able to support a few participants from developing countries in the region. Please indicate if you need such support when applying.

## Programme and Lecturers

### Day 1 Morning

Welcome (Simon Lin)

Introduction to the workshop and its objectives (Francois Grey)

Introduction to volunteer computing and BOINC (David Anderson)

Case study 1: MalariaControl.net (Nicolas Maire)

Case study 2: LHC@home (Ben Segal)

Open session (Participants invited to briefly present their volunteer computing plans and ideas)

Hands-on exercise: Familiarization with the BOINC client

### Day 2 Afternoon

Introduction to the BOINC server (David Anderson)

Case study 3: Africa@home (Christian Pellegrini)

Case study 4: Extremadura@home (Daniel Lombraña González)

Hands on exercise: Installing the BOINC server and porting code to BOINC

### Day 2 Morning

Introduction to BOINC and Grids (Peter Kacsuk, Jozsef Kovacs)

Introduction to BOINC and cloud computing (Derrick Kondo)

Hands on exercise: BOINC interoperation

### Day 2 Afternoon

Introduction to BOSSA and volunteer Thinking (David Anderson)

Case study 4: Africa Map (Ana Gago Da Silva)

Hands on Exercise: Working with BOSSA

Q&A Session and Workshop Evaluation

Lecturer	Organization
David Anderson	University of California at Berkeley, Space Sciences Laboratory
Peter Kacsuk	MTA SZTAKI, Hungarian Academy of Sciences
Jozsef Kovacs	MTA SZTAKI, Hungarian Academy of Sciences
Derrick Kondo	INRIA, Grenoble
Nicolas Maire	Swiss Tropical Institute, Basel
Ben Segal	CERN, Geneva
Daniel Lombraña González	University of Extremadura, Spain
Ana Gago da Silva	UNOSAT, UN Institute for Training and Research, CERN
Christian Pellegrini	University Center for Informatics, University of Geneva