



International Symposium on Grids & Clouds 2011

19 ~ 25 March 2011, Academia Sinica, Taipei, Taiwan

CALL FOR PAPER

ISGC 2011 & OGF 31

<http://event.twgrid.org/isgc2011/index.html>

Academia Sinica, Taipei, Taiwan

Important Dates

Submission Deadline: 22 December, 2010

Acceptance Announcement: 12 January, 2011

Invitation to Participate

It is our great pleasure to announce that the International Symposium on Grids and Clouds (ISGC 2011) in conjunction with the Open Grid Forum (OGF 31) will be held at Academia Sinica in Taipei from 22 to 25 March 2011, with co-locate events (19-21 March) as IGTF All-Hands Meeting, IDGF Tutorial, Asia@home Hackfest, iRODS Workshop. The conference is hosted by the Academia Sinica Grid Computing Centre (ASGC).

Over the past decade, with the continuous support from local and overseas delegates, ISGC has become the primary international grid forum in Asia Pacific. It aims to promote the awareness of grid computing activities and advance e-Science application in Asia-Pacific. We believe the extraordinary contributions and enthusiastic participation from all ISGC 2011 delegates will stimulate the dialogue and provide the grid community valuable insights for future development and international collaboration.

ISGC has successfully identified the most current and important issues in the grid computing field and demonstrated the joint effort from industry and academic sector. The discussions at the ISGC have identified important trends in research as well as applications of grid technology. We sincerely invite and encourage anyone that is interested in grid to submit abstracts on the topics mentioned below.

Submission

Online Submission at: <http://indico2.twgrid.org/conferenceDisplay.py?confId=6>

Abstract Word Limit: 500 words

Topics of Interest

1. HEP Applications

Submissions should report on experience with High Energy Physics (HEP) applications that already exploit grid and cloud computing services, applications that are planned or under development, or application tools and methodologies. Topics of interest include:

- end-user data analysis

- management of distributed data
- applications level monitoring
- performance analysis and system tuning
- workload scheduling
- management of a HEP collaboration as a virtual organization
- comparison between grid and other distributed computing paradigms as enablers of physics data handling and analysis

2. Biomedicine & Life Sciences Applications

Submissions should concentrate on practical applications in the fields of Biomedicine and Life Sciences, for example:

- medical imaging
- drug discovery
- high throughput biological data processing/analysis
- integration of semantically diverse data sets and applications
- combining grid with distributed data and services
- data management issues
- applications for non-technical end users

3. Earth Sciences Applications

Earth science explores dynamic processes among the atmosphere, hydrosphere, lithosphere, biosphere, natural hazards, ecological systems, and human habitation. Many of these applications involve international as well as national collaborations of scientists and technologists. Submissions to this session cover results, technologies, methods and systems for distribution collaboration and computing in support of the Earth Science application area. Earth science has increasing needs for vast amounts of data with which to model, analyze and measure the history and evolution of the earth. This session should in particular address how these challenges are being addressed.

4. Humanities & Social Sciences Applications

Researchers working in the social sciences and the humanities have started to explore the use of advanced computing infrastructures such as grids to address the grand challenges of their disciplines. For example, social scientists working on issues such as globalization, international migration, uneven development and deprivation are interested in linking complementary datasets and models at local, national, regional and global scales.

Similarly, in the humanities, researchers from a wide range of disciplines are interested in managing, linking and analyzing distributed datasets and corpora. There has been a significant increase in the digital material available to researchers, through digitization programmes but also because more and more data is now “born digital”.

As more and more applications demonstrate the successful application of e-Research approaches and technologies in the humanities and social sciences, questions arise as to whether common models of usage

exist that could be underpinned by a generic e-Infrastructure. The session will focus on experiences made in developing e-Research approaches and tools that go beyond single application demonstrators. Their wider applicability may be based on a set of common concerns, common approaches or reusable tools and services.

5. Environmental Monitoring & Disaster Mitigation

Environmental Monitoring and Disaster Mitigation is a globally important application area. Collaborative scientific research makes use of distributed systems of several types. The submissions for this session should describe results, technologies and methods applied to geological hazards and disaster mitigation distributed system software. Relevant areas of research include earthquake, volcano, landslide, tsunami, flood, subsidence, etc as well as environmental monitoring using data from a range of sensors (including satellites, urban environmental monitoring stations and oceanic or coastal buoys). Research developments, description of working systems, and novel ideas for future developments are appropriate for submission to this session.

6. Operation & Management

This session will cover the current state of the art and recent advances in managing the operation of large scale grid infrastructures. The scope of the session will include advances in monitoring tools and metrics, service management, the implementation and management of Service Level Agreements, improving service and site reliability, interoperability between grids, user and operational support procedures, and other topics relevant to general grid and cloud operations.

7. Middleware & Interoperability

The track will highlight the major grid middleware developments intended for deployment on production infrastructures supporting research and business applications. The interoperability of these infrastructures and the middleware stacks to enable applications to migrate between and/or aggregate the combined resources of these infrastructures is of particular importance to facilitate a grid with global reach. The relevance of current and emerging standards for such interoperability will also be addressed.

8. Security & Networking

Security and networking are at the forefront of the challenges in Grids and Clouds. Research communities require access to petascale networking infrastructures and federated identity services. The distributed computing sites need to be operationally secure and performant.

Opportunities for innovation exist in the areas of operational security, incident response, identity management, connecting grid services over untrusted networks, network monitoring, and coping with IPv4 address shortages by use of gateways, NAT, or IPv6. Submissions should address solutions to these and related security and networking issues.

9. Data Infrastructure

Data infrastructure supports the management, distribution, organization, access, and use of digital assets. Examples range from databases to data grids to digital libraries to preservation environments. Papers are sought that illustrate the development of data infrastructure that supports the

multiple phases of the scientific data life cycle, from creation to re-use.

10. Grids & Clouds

This track will highlight the use of cloud computing virtualization technologies and how they can be used in the large-scale distributed computing environments in science and technology computing. Cloud computing dynamically instantiates virtual machine environments to support computation on demand. Grid computing shares dedicated resources using standard protocols. Papers on integration of the two approaches are desired. Also of interest are papers on integration of Cloud storage with data grids to support caching of data near cloud compute resources. Applications that use both approaches are sought.

11. Desktop Distributed System

This track will highlight the latest research achievements and experiences related to Desktop Grids. The topics will cover new technologies of Desktop Grid frameworks, recent application developments, as well as infrastructure operation and user support techniques. Special focus will be on the following areas:

- interoperability with other e-infrastructures;
- virtualization techniques;
- quality of service;
- applications for virtual research communities;
- energy efficiency;
- best practices and impact of Desktop Grids.

Remarks

All abstracts will be reviewed by ISGC program committee and track conveners. Notification of acceptance will be sent by the Secretariat by 12 January, 2011.

The symposium proceedings will be published afterwards. Information about the preparation of a final proceedings version will be announced on the symposium website. For more information, please visit event website at <http://event.twgrid.org/isgc2011/index.html>, or contact:

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Sincerely,

ISGC 2011 & OGF31 Secretariat Team