



## CALL FOR PAPERS

**International Conference on Computing in High Energy and Nuclear Physics 2010  
(CHEP 2010)**

**Taipei, Taiwan / 18-22 October 2010**

**[The Link: http://indico2.twgrid.org](http://indico2.twgrid.org)**

**Submission Deadline: 30 April 2010**

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The International Conferences on Computing in High Energy and Nuclear Physics (CHEP) is a major series of international conferences for physicists and computing professionals from the high energy and nuclear physics community, computer science, and information technology. CHEP provides an international forum to exchange the experience and needs of the community, and to review recent, ongoing, and future activities. Organized by Academia Sinica Grid Computing Centre, CHEP 2010 will be held at Academia Sinica in Taipei, Taiwan on 18-22 October 2010.

Papers are solicited for but not limited to the following areas:

### **Online Computing**

- CPU farms for high-level triggering
- Farm configuration and run control
- Describing and managing configuration data
- Online software frameworks and tools
- Online calibration procedures
- Remote access to and control of data acquisition systems and experiment facilities

### **Event Processing**

- Event generation, simulation, and reconstruction
- Detector geometries
- Physics analysis
- Tools and Techniques for data classification and parameter fitting
- Event visualization and data presentation
- Frameworks for event processing
- Toolkits for simulation, reconstruction, and analysis
- Event data models

## **Software Engineering, Data Stores, and Databases**

- Programming techniques and tools
- Software testing and quality assurance
- Configuration management
- Software build, release, and distribution tools
- Documentation
- Foundation and utility libraries
- Mathematical libraries
- Component models
- Object dictionaries
- Scripting
- Event stores
- Metadata and supporting infrastructure
- Databases

## **Distributed Processing and Analysis**

- Distributed data processing
- Data management
- Distributed analysis
- Distributed processing experience including experience with Grids and Clouds
- Experience with real productions and data challenges
- Experience with real analysis using distributed resources
- Interactive analysis using distributed resources
- Solutions for coping with a heterogeneous environment
- Experience with virtualization
- Mobile computing
- Monitoring of user jobs and data

## **Computing Fabrics and Networking Technologies**

- Basic hardware, benchmarks and experience
- Hardware trends and issues such as multi-core, GPU, FPGA...
- Fabric virtualization
- Fabric management and administration
- Local site I/O and data access
- Mass storage systems
- Local and wide area networking

## **Grid and Cloud Middleware**

- Grid/Cloud middleware and monitoring tools
- Grid/Cloud middleware interoperability
- Grid/Cloud reliability
- Grid /Cloud security
- Evolution of Grids and Clouds
- Global usage and management of resources
- Experiment-specific middleware applications

## Collaborative Tools

- Collaborative systems, progress in technologies and applications
- Advanced teleconferencing systems
- Experience in the use of teleconferencing tools

## Important Dates:

**Abstract submission deadline:** 30 April 2010

**Notification of acceptance:** 17 June 2010

Conference information is available at <http://event.twgrid.org/chep2010/index.html>

Should you have any questions, please feel free to contact the Secretariat ([angelina.shen@twgrid.org](mailto:angelina.shen@twgrid.org)).

Sincerely yours,

CHEP 2010 Secretariat