



Sophisticated research equipment, broad international cooperation and top-level expertise are required in many problems in science, industry and commerce. The development and dissemination of techniques and technologies that allow virtualized, remote and shared access to industrial or scientific instruments are essential for the progress of society. The possibility of using scientific or industrial equipment independently of their physical location helps towards equality of opportunity for and unification of communities, and subsequently provides new momentum for industry, science, and business.

The current edition of the Workshop focuses on post-processing of experimental data in Grand Challenges e-Infrastructure systems. Handling of instrument output data is one of the major tasks (just after remote control of equipment) of remote instrumentation systems. Due to complexity of this process, which can operate on huge amounts of data and consists of many stages, there is a need for sophisticated approaches. These cover many aspects of data processing and storage at different functional layers, from physical to application. Moreover, INGRID 2011 encompasses other Remote Instrumentation (RI) aspects related to: middleware architecture, high-speed networking, wireless Grid for acquisition devices and sensor networks, QoS provisioning for real-time control, measurement instrumentation and methodology. We do not forget about future trends concerning RI systems' development and actions related to standardization of remote instrumentation mechanisms.

The Workshop will be structured in technical sessions, some of which will be organized by leading researchers in the field, and will accommodate both invited and regular papers, selected on an open-call basis. INGRID 2011 allows also additional possibilities to be actively engaged in the conference program:

- 1) **Special sessions** – proposals for special sessions are welcome. Please provide the session description (1-1.5 page) including a draft session program. All submissions will be peer-reviewed by at least three members of the International Program Committee.
- 2) **Extended abstracts** – in alternative to full paper submission authors can provide an extended abstract (1-2 pages). The abstracts positively approved give a chance to make a presentation at the conference. A subsequent full paper will be reviewed independently, with a chance to add the paper to the post-workshop proceedings (or to a special issue of an international journal).

Contributions are solicited on all advanced research issues concerning the theme of the Workshop, and particularly in (but not limited to) the following topics:

Remote instrumentation:

- Remote instrumentation services (RIS)
- Virtualization technologies in remote instrumentation
- Standards and standardization processes for RIS systems

Grand challenges e-Science applications:

- Infrastructure for e-Science applications
- Customization of work environment for e-Science requirements
- Optimization of e-Science applications

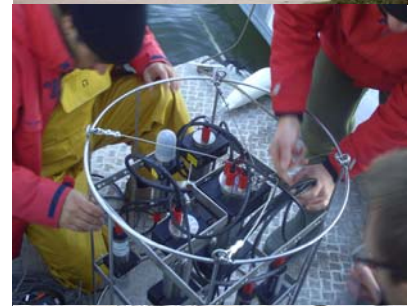
Grids, Clouds & HPC for e-Science:

- Workflow management for large-scale experiments
- Visualization techniques
- Grid integration of experimental and computational processes
- Deployment of large scale applications for online engineering
- Supporting interactive applications in the grid environment

Distributed data management:

- Management of large scientific data sets
- Networking solutions in support of scientific data transport
- Distributed data acquisition in sensor networks
- Data management in Wireless Sensor Networks
- Metadata and advanced information systems for instruments and sensors

Any other e-Science and e-Infrastructure related topics will be carefully analyzed.



## IMPORTANT DATES

- *Paper submission:* **February 15, 2011**
- *Special session proposals:* **February 15, 2011**
- *Acceptance notification:* **April 1, 2011**
- *Camera ready copy due:* **May 1, 2011**

## PAPER SUBMISSION GUIDELINES

- Manuscripts to be considered as regular papers should be original work limited to **20 double-spaced pages**.
- Extended Abstracts should be limited to 2 double-spaced pages.
- Any paper submitted to the Workshop must not have been published in or submitted to other technical conferences/journals.
- Only electronic submissions will be accepted. The preferred format for electronic submission is PDF suitable for Acrobat Reader, or Postscript. All submissions must be done through the Web site (<http://www.ingrid.cnit.it>).
- Electronic versions of the papers will be available at the Workshop.
- The proceedings will be published in book form after the Workshop (contacts with **Springer**, which published the previous Workshops' books, are currently undertaken).

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