



2nd Workshop on Workflows in Support of Large-Scale Science (WORKS07)

In conjunction with HPDC 2007, Monterey Bay, CA
June 25 2007

www.isi.edu/works07

Keynote Speaker: Carole Goble, University of Manchester, UK

In recent years workflows have emerged as a key technology that enables large-scale computations on distributed resources. Workflows enable scientists to design complex analysis that are composed of individual application components or services. Often times these components and services are designed, developed, and tested collaboratively. Because of the size of the data and the complexity of the analysis, large amounts of shared resources such as clusters and storage systems are being used to store the data sets and execute the workflows. The process of workflow design and execution in a distributed environment can be very complex and involve mapping high-level workflow descriptions onto the available resources, as well as monitoring and debugging of the subsequent execution. Because computations and data access operations are performed on shared resources, there is an increased interest in managing the fair allocation and management of those resources at the workflow level.

Adequate workflow descriptions are needed to support the complex workflow management process which includes workflow creation, workflow reuse, and modifications made to the workflow over time—for example modifications to the individual workflow components. Additional workflow annotations may provide guidelines and requirements for resource mapping and execution.

Large-scale scientific applications pose several requirements on the workflow systems. Besides the magnitude of data processed by the workflow components, the resulting and intermediate data need to be annotated with provenance information and any other information needed to evaluate the quality of the data and support the repeatability of the analysis.

The Second Workshop on Workflows in Support of Large-Scale Science focuses on the entire workflow lifecycle including the workflow composition, mapping, and robust execution. The workshop also welcomes contributions in the applications area, where the requirements on the workflow management systems can be derived. The topics of the workshop include but are not limited to:

- Workflow applications and their requirements
- Workflow representations, including semantic workflow descriptions
- Applying business workflows to the scientific domain
- Workflow composition, tools and languages
- Workflow user environments, including portals
- Workflow refinement tools that can manage the workflow mapping process
- Workflow execution in distributed environments
- Workflow fault-tolerance and recovery techniques
- Interleaving workflow creation and execution
- Data-driven workflow processing
- Adaptive workflows
- Workflow monitoring
- Workflow optimizations
- Performance analysis of Workflows

- Workflow debugging
- Workflow provenance
- Interactive Workflows
- Relevance of Business Workflow Standards

Important dates:

Paper submission: February 10, 2007

Acceptance notification: March 17, 2007

Final papers due: April 6, 2007

Papers submitted to this workshop should be in IEEE format (<ftp://pubftp.computer.org/Press/Outgoing/proceedings/>) and no longer than 10 pages. Short papers of up to 6 pages can also be submitted. The papers should be original and not previously published. Papers will be refereed and accepted on the basis of their scientific merit and relevance to the workshop topics. Papers presented at the workshop will be included in the IEEE HPDC 2007 workshop proceedings.

To submit the papers, please check the website www.isi.edu/works07. The workshop will use the same submission system as HPDC.

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