

Grid Computing: Adaptive Software, Tools, and Applications

Call For Papers

Software Technology Mini-Track, HICSS-41

<http://wcl.cs.rpi.edu/hicss-grid/>

Grid computing environments are highly heterogeneous and dynamic. Software for grid computing must be able to adapt dynamically to changes in the underlying execution environments, in order to provide high performance, throughput, and quality of service to end users. As the scale of these environments grows Internet-wide, new models, tools and frameworks are necessary to ease programmability. Middleware layers can be used to tackle the complexity of non-functional properties such as load balancing, fault tolerance, data replication, and interoperability.

Adaptive software for dynamic grid computing is an important research area, as we move into Internet-wide (large scale) distributed computing environments. The focus of the mini-track is three-fold:

- adaptive software, including programming models, languages and frameworks to facilitate developing dynamically reconfigurable applications,
- tools that facilitate grid computing, including middleware for message passing systems such as actors and MPI, grid computing frameworks such as Globus and Condor, and volunteer computing frameworks such as BOINC, and
- applications in science and engineering, including astro-informatics, bio-informatics, chem-informatics, phys-informatics and others that illustrate how different communities are taking advantage of grid computing to solve their domain-specific problems.

Papers are sought in the following non-exhaustive list of topics:

- Adaptive middleware for grid computing
- Programming technology for developing grid applications
- Dynamically reconfigurable distributed systems
- Large-scale distributed computing technology
- Internet computing frameworks
- Volunteer computing
- Web portals for scientific communities
- Computational science and engineering applications

Chair:

Carlos Varela, Rensselaer Polytechnic Inst., USA

Program Committee:

TBA

Key Dates:

June 15, 2007	Full paper deadline
August 15, 2007	Notification of accepted papers
September 15, 2007	Final (revised) paper submission
January 7-10, 2008	HICSS-41 Conference, Hawaii