Introduction

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Workshop Chairs

Grids today still need investigation in several areas to provide models and tools for developing high-level scalable applications. Grid middleware is an active research area that is bringing several results to Grid developers and users. The goal of this workshop is to provide a bridge between the application community and the developers of middleware services, especially in terms of parallel and distributed computing, with the following major issues:

- To gather current state of the art and new approaches in the areas of knowledge and data management, resource management and information systems
- To include work-in-progress contributions
- To provide a forum for exchanging the ideas between the users' community and grid middleware developers
- To disseminate existing results and provide input to the CoreGRID Network of Excellence

The CoreGRID Workshop on Grid Middleware was held in conjunction with Euro-Par 2006 in Dresden, August 28-29, 2006 and was organized by the three CoreGRID Institutes: the Institute on Knowledge and Data Management, the Institute on Grid Information, Resource and Workflow Monitoring Services and the Institute on Resource Management and Scheduling.

In the call for papers, the list of the suggested topics included the following specific subjects:

- Distributed data storage on Grids
- Information and knowledge management in Grids
- Distributed data mining and knowledge
- Monitoring and information systems
- Fault tolerance, reliability and sustainability
- Application and kernel level checkpointing
- Accounting and user account management in and across Virtual Organizations
- Workflow frameworks
- Grid scheduling architectures
- Multi-level scheduling strategies
- Evaluation and benchmarking of Grid scheduling systems
- Scheduling of high-performance parallel applications
- Performance prediction

The workshop was chaired by the leaders of the three CoreGRID Institutes: Domenico Talia, Norbert Meyer and Ramin Yahyapour. The Program Committee involved many researchers both from CoreGRID and external research teams.

A total of 24 papers were submitted to the workshop. After the review process, 16 papers were selected by the Program Committee and were presented at the meeting in Dresden in five sessions focused on the following major topics:

– Knowledge and Data Management on Grids
– Grid Resource Management and Scheduling
– Grid Information, Resource and Workflow Monitoring Services

An additional invited talk was given by Graeme Kerr from Oracle (member of the CoreGRID IAB) on distributed data management in Grids. The Grid Middleware workshop was attended by about 40 participants coming from several countries. The atmosphere was very active and several interesting discussions arose during the paper presentations.