

Topic 13

Routing and Communication in Interconnection Networks

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Topic Chairs

Parallel and distributed computing has expanded its scope and application areas during the last decade. In addition to the traditional parallel computers, the availability of new set of services through Internet together with continuous improvement in communication bandwidth has led to new programming paradigms, deployment of high-speed communication infrastructure, and installation of very large server, usually based on cluster of processors interconnected by means of some interconnection network.

Communication networks, protocols, routing and communication policies are crucial factors for the performance of parallel and distributed computations.

This topic of Euro-Par 2005 is devoted to all aspect of communication in on-chip interconnects, parallel computers, networks of workstations and more widely distributed systems such as grids. Power-efficient interconnects, I/O architectures and storage area networks, switch architectures, as well as multimedia and QoS aware communication are new topics introduced in the last years and now included in this topic.

Papers were solicited that examine the design and implementation of interconnection networks and communication protocols, advances in system area and storage area network, routing and communication algorithms, and the cost of parallel and distributed algorithms.

The Call for Papers attracted 32 submissions for this topic, of which 8 (25%) were selected for publication and presentation at the conference. The selected papers cover a wide scope, ranging from performance evaluation and simulation of interconnection networks to optical multistage interconnection networks also covering topics like routing and scheduling policies, QoS on clusters and congestion management strategies.

We would like to thank all the authors for their submissions to this Euro-Par 2005 topic. We owe special thanks to the 76 external referees who provided competent and timely review reports. Their effort ensured the high quality of this track of Euro-Par 2005. We expect you will find this topic to be highly stimulating and quite informative.