

Topic 11

Distributed and High-Performance Multimedia

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Topic Chairs

It is increasingly common for information - whether it be scientific, industrial, or otherwise - to be composed of multiple media items, e.g., video-based, image-based, linguistic, or auditory items. As digital video may produce over 100 Mbytes of data per second, and image sets routinely require Terabytes of storage space, traditional resource management techniques in both end-systems and networks are rapidly becoming bottlenecks in the handling of such information. Moreover, in emerging multimedia applications, the generation, processing, storage, indexing, querying, retrieval, delivery, shielding, and visualization of multimedia content are fundamentally intertwined processes, all taking place at the same time and - potentially - in different administrative domains.

As a result of these trends, a range of novel and challenging research questions arise, which can be answered only by applying techniques from the parallel, distributed, and Grid computing fields. The scope of this topic therefore embraces issues from high-performance processing, coding, indexing, and retrieval of multimedia data over parallel architectures for multimedia servers, databases and information systems, up to highly distributed architectures in heterogeneous, wired and wireless networks.

This year 7 papers were submitted to this topic area. We thank all the authors for their submissions. All the papers were reviewed by 4 referees, and 4 papers were ultimately selected (although unfortunately one paper was subsequently withdrawn, leaving 3 papers to be presented). The quality of the submissions was extremely high. In the resulting session you will find two particularly distinguished papers each of which was in the best 10 papers conference-wide. These are: "Supporting Reconfigurable Parallel Multimedia Applications", and "Providing VCR in a Distributed Client Collaborative Multicast Video Delivery Scheme". Our third paper, which was also highly rated, is entitled: "Linear Hashtable Predicted Hexagonal Motion Estimation Algorithm for Parallel Video Processing".