Topic 5: Parallel and Distributed Data Management
(Introduction)

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Topic Committee

Nowadays we are facing an exponential growth of new data that is overwhelming the capabilities of companies, institutions and the society in general to manage and use it in a proper way. Ever-increasing investments in Big Data, cutting edge technologies and the latest advances in both application development and underlying storage systems can help dealing with data of such magnitude. Especially parallel and distributed approaches will enable new data management solutions that operate effectively at large scale.

Topic 5 sought papers covering all the aspects of parallel and distributed data management, from the analysis layer (knowledge discovery, data and data stream mining, information retrieval) to the infrastructure layer (storage systems, data-intensive clouds and grids, peer-to-peer systems, multi-core architectures) as well as parallel and distributed solutions (parallel and distributed databases, transactions and query processing, mobile data applications, large data sets, security and privacy in data management).

Each submission in Topic 5 was reviewed by at least four reviewers. Finally two papers have been selected. Both papers propose approaches that try to increase the performance of state-of-the-art solutions. The paper entitled "Multi-level Clustering on Metric Spaces using a multi-GPU platform" by R.J. Barrientos, C. Tenllado, M. Prieto Matias and P. Zezula describes multi-GPU metric space techniques capable to perform similarity search in large datasets. The paper entitled "The Contention-Friendy Tree" by V. Gramoli and M. Raynal proposes a lock-based concurrent binary tree using a methodology for writing concurrent data structures, which limits the high contention of nowadays multicore environments.

We would like to sincerely thank all the authors for their submissions, the Euro-Par 2013 Organizing Committee for their valuable help and the reviewers for their excellent review work. All of them have contributed to make this topic and Euro-Par an excellent forum to discuss parallel and distributed approaches to big data challenges.