Special Issue

Parallel and Distributed Algorithms for Demanding Data Analysis and Applications

Message from the Guest Editor

The emerging digitalization of physical systems and applications brings new requirements for parallel and distributed algorithms, as well as for their data structures. The domains span industrial systems, vehicular networks, electricity grids, health-support systems and more, while applications are numerous, including continuous monitoring, stream processing, continuous optimization, resource management, and matching, distributed, and parallel learning and more. The challenges stem from varying data rates, from application demands for latency, throughput, scalability, robustness and consistency, from needs to exploit data locality in applications that are naturally distributed, as well as from expectations to exploit the possibilities offered by hardware diversity in deployable processing devices, ranging from embedded devices to high-end servers, possibly featuring new primitives. The aim of this Special Issue is to seek new approaches and to collect a set of high-quality novel contributions of relevance to these areas and associated aspects of large-scale data processing and analysis, for demanding problems, systems, and applications.

Guest Editor

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Message from the Editor-in-Chief

Algorithms are the very core of Computer Science. The whole area has been considered from quite different perspectives, having led to the development of many sub-communities: Complexity theory (limitations), approximation or parameterized algorithms (types of problems), geometric algorithms (subject area), metaheuristics, algorithm engineering, medical imaging (applications), indicates the range of perspectives. Our journal welcomes submissions written from any of these perspectives, so that it may become a forum for exchange of ideas between the corresponding scientific subcommunities.

Editor-in-Chief

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