Special Issue

Algorithms in Data Reduction

Message from the Guest Editors

To account for the expected order-of-magnitude increases in dataset size over the next few years, new algorithms and analysis techniques must be developed. We invite authors to submit original, high-quality research that advances the field of data reduction. We are interested in all aspects of algorithms that improve data reduction and those that access the quality of lossy reduction methods. Topics of interest include, but are not limited to, the following:

- Novel data sampling algorithms;
- Novel lossy or lossless data compression algorithms;
- AI/ML to improve data reduction;
- Specialized data reduction workflows;
- Lossy compression evaluation tools;
- Accelerated data reduction algorithms;
- Data analysis and visualization on lossy reduced data;
- Region of interest identification;
- Uncertainty quantification for lossy reduction methods;
- Data reduction runtime systems;
- Metrics to evaluate quality of lossy methods;
- Hardware and data reduction co-design.

Guest Editors

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Deadline for manuscript submissions

closed (31 July 2022)

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About the Journal

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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