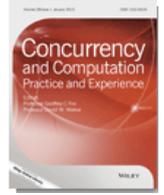


Concurrency and Computation: Practice and Experience



**Special Issue on
Algorithms and Applications towards the convergence of
High-End Data-Intensive and Computing Systems.
(HEDICS2016)**

Guest Editors:

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“Concurrency and Computation: Practice and Experience”, a forum for the publication of peer-reviewed, high-quality original papers in the computer and information sciences, focusing specifically on programming aspects of parallel and distributed computing systems, is seeking original manuscripts for a Special Issue on **Algorithms and applications towards the convergence of High-End Data-Intensive and Computing systems** scheduled to appear in the **first half of 2017**.

With the increasing availability of data generated by scientific instruments and simulations, today, solving many of our most important scientific and engineering problems requires high-end computers (HECS) that may be able to process and storage a huge amount of data. With this landscape, many synergies between extreme-scale computing and data intensive applications might arise. However, the high-performance computing and data analysis platforms, paradigms and tools have evolved in many cases in different fields, having their own methodologies, tools and techniques. We need to evolve systems and paradigms to create High-End Data-Intensive Computing Systems (HEDICS) to create high-end resources that must be powerful in a broad sense (computation, storage, I/O capacity, communications, ...), but at the same time have to provide utilities from the big data computing (BDC) space to satisfy the data management and analytics need of near future applications.

The special issue will provide a forum for presenting research works promoting the convergence of High-End Data and Computing Systems, including new platforms, system software enhancements, algorithm design and optimization, programming paradigms and techniques, data processing support in homogeneous and heterogeneous computing systems, tools and environment for HE data and computing systems, runtime support for HEDICS and performance simulations, measurement, and evaluations. The special issue will also be open to any author, but it will also invite extended versions of the "Best papers of ICA3PP 2016 conference" which topics fitting the special issue. Each submission will be reviewed by at least three reviewers to ensure a very high quality of papers selected for the Special Issue.

AREAS OF INTEREST

This special issue of Concurrency and Computation: Practice and Experience will feature articles that discuss the following areas of interest:

- Parallel and distributed algorithms for High-end-computing systems.
- Algorithms for aggressive management of information and knowledge from massive data.
- Resource management and Scheduling in high-end data and computing systems.
- Tools/environments for parallel/distributed high-end software development.
- New programming models as well as machine and application abstractions.
- Resilience issues High-end computing and data systems
- Adaptive software for high-end computing and data systems
- Extreme-scale and Big Data: architectures, networks and systems.
- Big Data Applications, Algorithms and Data Structures.
- Massive distributed and parallel data analytics and feature extraction.
- I/O and storage systems valid for high-end data and computing systems.
- High-end scientific and engineering computing.
- High-end data and computing applications: bioinformatics, cosmology and astrophysics, high energy physics, ...

SUBMISSION GUIDELINES

Submitted papers must be written in English and must describe original research which has not been published, and is not currently under review by other journals or for conferences. The author instructions for preparation of manuscripts can be found at the Wiley Online Library [Author Guidelines web page](#). All manuscripts and any supplementary material should be submitted through the [Wiley Manuscript Submission System](#). The authors must select Special Issue “**Algorithms and applications towards the convergence of High-End Data-Intensive and Computing systems**” upon uploading their paper. Manuscripts should be no longer than 15 one-column pages.

IMPORTANT DATES

Submission deadline January 15th 2017
Acceptance/Rejection notification March 15th, 2017
Final version of the paper April 15th, 2017