

# Call for Papers

## Concurrency and Computation: Practice and Experience

(<http://www.cc-pe.net/>)

Special Issue with the best papers of the  
**“Workshop on Parallel and Distributed Computing for Big Data Applications - WPBA 2014”**  
(<http://wpba2014.dc.ufscar.br>)

### Theme and Scope

Today, the abundance of data is changing from the way companies make business to the way governments take many decisions, from the way science is made in several knowledge areas to the way many individuals take daily decisions such as where to go or how to buy.

During the last decade, tools and techniques emerged to support massive offline analysis of web scale datasets on many thousands of computers working as a single facility. However, the total amount of digital data being produced, stored, and transmitted around the world is growing exponentially. The wide diversity of data sources and formats (data variety) cannot be handled by traditional systems and techniques, raising new data management challenges. In many areas, applications need to collect data and produce answers with high frequency or low latency, e.g. to raise some alarm or take a decision within a few milliseconds. Furthermore, in scalable environments with hundreds or thousands of components, surviving to frequent failures is mandatory. Analytic processing and knowledge discovery in such scenarios demand scalable and efficient algorithms, able to handle the complexity and variety of data even under specific constraints (e.g., energy consumption, available memory, computational power, and networking capacity). Furthermore, sensor networks and the Internet-of-Things open new perspectives in terms of the amount and complexity of data to be managed.

Topics of interests include, but are not limited to novel techniques, algorithms, and tools for collecting, storage, processing, mining and analysis of low latency big data in reliable and scalable computing environments:

- Scalability and elasticity in big data environments
- Fault-tolerance in big data environments
- Security and privacy in big data environments
- Reliability in big data environments
- Data streams processing techniques and systems
- Complex event processing
- Big data applications
- Energy efficiency and big data
- Scientific workflows for big data
- Programming models, including MapReduce, extensions, and new models
- Algorithms for big data analytics and data mining
- Management of big data on the cloud
- Big data tools, services, and infrastructures on clouds
- HPC clouds for big data
- Performance analysis of big data environments and applications
- Big data benchmarks
- Challenges in big data storage and processing
- Scheduling and resource management in big data environments
- Large data stream processing systems and infrastructures
- Data-intensive computing on hybrid infrastructures (e.g., clusters, clouds, grids, P2P)
- Implementation and optimizations for heterogeneous architectures
- Implementation and optimizations for specialized architectures
- Performance evaluation and optimization
- Characterization of big data workloads

### Instructions for Manuscripts

The submitted papers must be original and must not be under consideration in any other venue. This special issue will be based on invitations to be sent for the 2-3 best papers published at WPBA 2014. All submitted papers will be reviewed by at least three reviewers and selected based on their originality, significance, relevance, and clarity of presentation. The submitted papers must have at least 30% difference from the conference original papers. The editors will approve final decisions on accepted papers. Manuscripts should not exceed 16 pages in length and must be prepared for publication according to the following journal's Author guidelines: [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)15320634/homepage/ForAuthors.html](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)15320634/homepage/ForAuthors.html). Wiley has Latex

#### Important dates

Submission deadline:	January 31, 2015 to <a href="#">Manuscript Central</a>
First round review:	April 30, 2015
Submission deadline for revised versions of the manuscripts:	May 15, 2015
Final decision:	June 1, 2015
Tentative Electronic Publication:	four months after all final papers submitted

#### Guest Editors

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