



## Special Issue on Concurrent Software Quality

### Overview:

Today, multi-core hardware and cloud platform have become ubiquitous, which puts us at a fundamental turning point in software development. In order for software applications to benefit from the continued exponential throughput advances in hardware systems, the applications will need to be well-written concurrent programs. Although for the past decade we have witnessed incrementally more programmers writing concurrent programs, the vast majority of applications today are still sequential due to the lack of effective tools that support the development of concurrent programs. This trend necessitates the use of advanced methods to redesign the existing tools that remain optimized for sequential program development. We are interested in research that advances the state of the art in different phases of concurrent software development, with the goal to help developers write high quality concurrent programs.

Specific topics of interest include, but are not limited to the following:

- Specification, modeling and profiling techniques
- Static, dynamic and symbolic analysis
- Formal analysis and verification
- Performance tuning and auto-tuning
- Testing and debugging
- Concurrent data structures
- Requirement engineering
- Tools and environments for concurrent software development
- Case studies and experience reports

### Guest Editors:

Zijiang Yang, Western Michigan University, USA  
Ting Liu, Xi'an Jiaotong University, China  
Daniel Xiapu Luo, Hong Kong Polytechnic University, Hongkong  
Chao Wang, University of Southern California, USA

### Requirements for Submission:

Original, high quality contributions that are not yet published or that are not currently under review by other journals or peer-reviewed conferences are sought. Exceptions that may be accepted are invited high-quality papers from the workshop on Specification, Comprehension, Testing and Debugging of Concurrent Programs and which are very significantly updated and extended. These must have at least 30% difference from the original conference papers.

All submissions must be in PDF format and conform, at time of submission, to the Springer formatting guidelines. Authors should prepare their manuscript according to the Guide for Authors available from the online submission page of the Software Quality at <http://link.springer.com/journal/11219>. Authors should select "SI: WORKS" when they reach the "Article Type" step in the submission process.

### Reviewing details:

Papers will be peer reviewed by independent reviewers and selected based on originality, scientific quality and relevance to this Special Issue. The journal editors will make final decisions on the acceptance of the papers.

Paper submission due: December 1<sup>st</sup>, 2016



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