Call for Papers
Special issue of the Journal of Parallel and Distributed Computing:
Transactional Memory

Background and Scope
Parallel programming in the multicore era is a challenging task, and novel approaches are needed to ease the development of parallel applications. Transactional memory has been proposed as an alternative to the traditional lock-based approach to express and manage concurrency. During the last few years we have seen an increasing interest in programming languages, run-time systems, and hardware to support transactional memory, speculative concurrency, and failure atomicy.

The scope of this JPDC special issue on Transactional Memory is intentionally broad in order to cover a wide range of aspects and capture the state-of-the-art of an emerging area. Further, many aspects, from the hardware level, run-time and operating systems, compilers, and up to the application level, must be addressed for transactional memory to become viable and widely accepted.

Topics
This special issue of the Journal of Parallel and Distributed Computing seeks original and unpublished research articles of high-quality on recent advances of hardware, software, and hybrid transactional memory systems. Specific topics of interest include but are not limited to:

- Runtime and operating system aspects
- Hardware/software trade-offs
- Memory models and semantics
- Conflict detection and contention management
- Formal description and verification
- Speculative concurrency
- Language mechanisms
- Nesting and software composability
- Static analysis and compiler issues
- Interaction with lock-based code
- I/O, interrupts, and exceptions
- Applications, workloads, and test suites

Submission guidelines
Authors are invited to submit papers to this special issue using the Elsevier on-line submission system found at http://ees.elsevier.com/jpdc. The submission must include a cover letter, abstract, manuscript, figures and/or tables, and brief professional biography of approximately 100 words accompanied by a photograph. Please refer to the Guide for Authors link on the journal home page: http://www.elsevier.com/locate/jpdc for complete submission instructions.

Important dates
- Full paper submission: September 30, 2009
- Author notification: December 15, 2009
- Final paper: January 31, 2010

Submissions
Elsevier Editorial System: http://ees.elsevier.com/jpdc
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