ACM Journal on Experimental Algorithms Special Issue on Multicore Algorithms

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The recent switch to multicore processors brought a dramatic change that affects a large spectrum of systems from embedded and general-purpose to high-end computing systems. Parallelism is forcing major changes in software development. The aim of this issue is to discuss the challenges that parallelism brings to the design and implementation of algorithms and data structures. This special issue arose out of discussions held at the Dagstuhl Seminar 10261, on *Algorithm Engineering* held June 27–July 2, 2010, in Germany, and organized by Giuseppe F. Italiano (Università di Roma "Tor Vergata," Italy), David S. Johnson (AT&T Research, Florham Park, NJ), Petra Mutzel (Technical University of Dortmund, Germany), and Peter Sanders (Karlsruhe Institute of Technology, Germany). We conceived a special issue of the ACM *Journal on Experimental Algorithms* with a call for original submissions that address implementation and performance issues of multicore algorithms and data structures for any multicore processor, for example, Intel Nehalem, Single-Chip Cloud, NVIDIA and AMD GPUs. An experimental study typically includes an implementation, a series of experiments designed to understand the behavior of the algorithm(s) under study, and a critical discussion of the experiments and their results. We welcomed experimental submissions and encouraged authors to include test data from previously published studies to enable critical comparisons. A total of nine submissions were received, and four were accepted for this special issue. All manuscripts had at least three extensive reviews, and most received five to six reviews. We thank all of the authors for their submissions, and especially the 16 reviewers of these manuscripts.

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