

Call For Papers

Fourth International Workshop on Data Management on New Hardware (DaMoN 2008)

Colocated with

ACM SIGMOD/PODS 2008

Vancouver, Canada

June 13, 2008



Objective

The aim of this one-day workshop is to bring together researchers who are interested in optimizing database performance on modern computing infrastructure by designing new data management techniques and tools.

Motivation

The continued evolution of computing hardware and infrastructure imposes new challenges and bottlenecks to program performance. As a result, traditional database architectures that focus solely on I/O optimization increasingly fail to utilize hardware resources efficiently. CPUs with superscalar out-of-order execution, simultaneous multi-threading, multi-level memory hierarchies, and future storage hardware (such as MEMS) impose a great challenge to optimizing database performance. Consequently, exploiting the characteristics of modern hardware has become an important topic of database systems research.

The goal is to make database systems adapt automatically to the sophisticated hardware characteristics, thus maximizing performance transparently to applications. To achieve this goal, the data management community needs interdisciplinary collaboration with computer architecture, compiler and operating systems researchers. This involves rethinking traditional data structures, query processing algorithms, and database software architectures to adapt to the advances in the underlying hardware infrastructure.

Important Dates (*tentative*)

Paper submission: **April 11**
Notification of acceptance: **May 2**
Camera-ready copies due: **May 16**

Topics Of Interest

We seek submissions bridging the area of database systems to computer architecture, compilers, and operating systems. In particular, submissions covering topics from the following non-exclusive list are encouraged:

- database algorithms and data structures on modern hardware
- cost models and query optimization for novel hierarchical memory systems
- hardware systems for query processing
- data management using co-processors
- query processing using computing power in storage systems
- database architectures for low-power computing and embedded devices
- database architectures on multi-threaded and chip multiprocessors
- performance analysis of database workloads on modern hardware
- compiler and operating systems advances to improve database performance
- new benchmarks for microarchitectural evaluation of database workloads

Organization

Workshop Co-Chairs

Kenneth Ross, Columbia University
Qiong Luo, HKUST

Program Committee

Anastasia Ailamaki, Carnegie Mellon University
Bishwaranjan Bhattacharjee, IBM Research
Peter Boncz, CWI Amsterdam
Shimin Chen, Intel Research
Goetz Graefe, HP Labs
Stavros Harizopoulos, HP Labs
Martin Kersten, CWI Amsterdam
Bongki Moon, University of Arizona
Jun Rao, IBM Research
Jingren Zhou, Microsoft Research



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