Call for Papers

First Workshop on Emerging Applications and Many-core Architecture
EAMA 2008

Held in conjunction with the 35th Annual International Symposium on Computer Architecture
Saturday, June 21, 2008
Beijing, China

Overview:

Computer architecture is always about target applications. There is a close correlation between the emergence of new usage models and new computer architecture. On one hand, we have seen how applications influence computer architecture. A decade ago, users may care about speeding up their Excel calculation. As a result, computers were designed using SPEC benchmarks. Today, users may care more about the computer’s ability to play media files downloaded from the Internet as well as their experience in the on-line virtual worlds. The new emerging workloads bring about new challenges for developing future computer architectures. On the other hand, break-through in computer design has led us to explore new application domains. Recent development trend has suggested that the industry is moving to the many core architecture to better manage trade-offs among performance, energy efficiency and reliability. The sustained grow of computing capability has opened up many opportunities for new application developments. Many applications, such as real-time ray-tracing, multi-modal data mining, physical simulation, financial analytics, virtual world, etc. that were not possible just a few years ago due to lack of computing power, are now being realized with the new Many Core architecture. In this full day workshop, our goal is to bring together application domain experts and computer architects to discuss emerging applications as well as their implications to Many-Core architecture.

Topic of interests:

To make this workshop an event of high impact, we are soliciting papers / presentation that focus on the following two areas:

1) Emerging application domains such as recognition/mining/synthesis (RMS), medical imaging, business analytics, virtual worlds, etc.
   a. Discussion of application characteristics, programming model, parallelization techniques for many core architectures are examples of interested topics.

2) Architectural implications from the emerging applications.
   a. Discussion of whether the emerging applications would be benefit / hurt by the changes for many core architecture and new architectural features to improve performance / power are examples of interested topics.
Submission Guidelines:
The authors should submit a 200 word or less abstract by 11:59 PM (PDT) April 11, 2008. The full paper should be 22 pages or less (double spaced single column pages using 11pt or larger fonts with 1” margin on both sides, top and bottom.) and be submitted in pdf format by 11:59 PM (PDT) April 18, 2008. Both the abstract and the full paper can be submitted to eama2008@lists.cs.princeton.edu through email. Excessively long papers may be rejected without review.

Important Dates:
Abstract Submission: April 11, 2008
Full Paper Submission: April 18, 2008 Notification Date: May 8, 2008
Final Version Due: May 16, 2008
Workshop Date: June 21, 2008

Workshop Organizers:
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