Call For Papers

AOHPS: 1st Workshop on Application-Oriented High-Performance Systems

To be held in conjunction with the 13th International Symposium on High-Performance Computer Architecture (HPCA-13)

Hyatt Regency Phoenix - Phoenix, AZ - February 10-14, 2007

Workshop Chair:
William R. Dieter, *Univ. of Kentucky*

Program Committee:
Pavan Balaji, *Argonne National Lab*
Hank Dietz, *Univ. of Kentucky*
Wu Feng, *Virginia Tech.*
Randy Fisher, A*ggregate.Org*
Others TBD

Important Dates:

Abstracts Due	12/01/06
Full Paper Due	12/08/06
Notification of Acceptance	01/05/06
Camera Ready Copy Due	01/19/06

For more information send email to:
dieter@engr.uky.edu

Application-oriented systems are designed to meet the needs of a single application or a small set of applications. Recently, high-performance computing technologies ranging from cluster computing to FPGAs have made it relatively easy to tune the design of a system for a particular application. When a computer system will be used primarily for a single application or a small set of applications, optimizing it for that workload often yields much shorter execution time, lower purchase price, less power consumption, smaller size, and/or lower operating cost.

Component prices have fallen far enough that application-optimized systems containing hundreds or thousands of components can be purchased with a modest budget. While such a large-scale design may yield the best performance for a given purchase price, component replacement, power consumption, cooling, and system maintenance costs can add up to a large percentage of the purchase price.

This workshop solicits papers in areas related to design, implementation, and experience with high-performance application-oriented computer systems. Topics of interest include, but are not limited to:

- Application-aware design of parallel architectures
- Tools and models for application-oriented cluster design
- System life cycle, reliability, and maintenance
- Tools, performance models, and experiences toward turnkey cluster applications
- Practice and experience with application-specific computer system design
- Cluster-in-context, environmentally-aware design
- Life-cycle issues, TCO & maintenance, packaging and power/cooling issues
- Application-oriented models and tools for design, implementation, and operation of embedded systems