Time & Location: March 25, 2011 at 10:00 AM in HEC 302
Title: Research in high performance and low power computer systems for Data-intensive environment

The evolution of computer science and engineering is always motivated by the requirements for better performance, power efficiency, security, user interface (UI), etc. The first two factors are potential tradeoffs: better performance usually requires better hardware, e.g., the CPUs with larger number of transistors, the disks with higher rotation speed; however, the increasing number of transistors on the single die or chip reveals super-linear growth in CPU power consumption, and the change in disk rotation speed has a quadratic effect on disk power consumption. We propose three new systematic approaches, Transactional RAID, dataaffinity-aware data placement DAFA and Modeless power management, to tackle the performance problem in Database systems, large scale clusters/cloud platforms, and the power management problem in Chip Multi Processors, respectively.

Major: Computer Engineering

Educational Career:
Bachelor's of Computer Science, BS, 2005, Jilin University
Master's of Computer Science, MS, 2007, Huazhong University of Sci.&Tech.

Committee in Charge:
Dr. Jun Wang, Chair, Electrical Engineering & Computer Science
Dr. Kien. A. Hua, Electrical Engineering & Computer Science
Dr. Shaojie Zhang, Electrical Engineering & Computer Science
Dr. Shengli Zou, Computational Chemistry and Nano materials

Approved for distribution by Dr. Jun Wang, Committee Chair, on March 10, 2011.

The public is welcome to attend.