



Mini-symposium on Frontier in Computer Systems Research

2012.12.13 星期四 下午2:00-5:30 英杰交流中心 - 星光厅



主办方: 北京大学高能效计算与应用中心

Sponsor: *Center for Energy-efficient Computing and Applications
(CECA)*

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Keynote: Extreme Scale Computer Architecture Energy Efficiency from the Ground Up

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As we move to higher levels of integration, it is clear that power and energy efficiency are the most formidable barriers. A chip built out of 1000 cores requires fundamentally rethinking the whole compute stack from the ground up for energy efficiency. Often, energy efficiency is in direct conflict with resilience. In this talk, I will describe some of the architecture technologies that we are exploring, based on low voltage operation and streamlined architectures.

Bios

Josep Torrellas is a Professor of Computer Science and (by courtesy) Electrical and Computer Engineering at the University of Illinois at Urbana-Champaign (UIUC). He is a Fellow of IEEE and ACM. He is the Director of the Center for Programmable Extreme-Scale Computing, a center funded by DARPA, DOE, and NSF that focuses on architectures for extreme energy and power efficiency. He also directs the Intel-Illinois Parallelism Center (I2PC), a center created by Intel to advance parallel computing in clients. He has made contributions to parallel computer architecture in the areas of shared-memory multiprocessor organizations, cache hierarchies and coherence protocols, thread-level speculation, and hardware and software reliability. He received a Ph.D. from Stanford University.