



Weichao Guo

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Education

Ph.D. student in Computer Science, Tsinghua University Sep. 2011 – Present
Advisors: Prof. Weimin Zheng and Prof. Yongwei Wu
B.E. in Software Engineering, Harbin Institute of Technology Sep. 2007 – July 2011

Publications

Weichao Guo, Kang Chen, Yongwei Wu, and Weiming Zheng, "Bidding for Highly Available Services with Low Price in Spot Instance Market," To appear in the 24th ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC '15).

Yongwei Wu, **Weichao Guo**, Jinglei Ren, Xun Zhao, and Weiming Zheng, "NO2: Speeding Up Parallel Processing of Massive Compute-Intensive Tasks," IEEE Transactions on Computers (TC), Vol. 63, No. 10, pp. 2487 - 2499, Oct. 2014.

Research Experience

Mobile System 2014

Designed and implemented MARS, which improves the performance of swap-in reads by reorganizing page slots and reducing concurrent/extra internal writes addressing the characteristic of flash storage on smartphones. MARS is used for fast mobile application relaunching.

Economic and Reliable Cloud Computing 2014

Formalized failure model of spot instances in Amazon EC2 and proposed a bidding framework which reduces cost while still keeping the availability level the same as the on-demand instances.

Parallel Processing Scheduling 2012 - 2013

Designed and implemented NO2, a framework for speeding up parallel processing of massive compute-intensive tasks on ProActive platform. NO2 employs program instrumenting to estimate the execution progress of tasks, then identifies straggler tasks and performs speculative execution.

File System 2011

Participated the design and implementation of a file system with rebase feature like version control systems for enhancing the management of virtual machines.

Programming Tool 2010

Developed an Eclipse plugin which could detect code clones using a suffix tree based pattern matching algorithm.

Industry Experience

Research & Develop Intern, Tencent Inc., Map R&D center, Beijing Summer 2011

Designed and implemented a prototype to remind smartphone users arrivals when taking a bus.

Software Engineering Intern, Tencent Inc., Mobile Browser Group, Shenzhen Summer 2010

Ported Flirt, an open source Linux flash runtime to Windows Mobile Platform.