Jian Yang

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Research Interests

Areas: Storage Systems, Virtualization, Operating Systems.

Current interests: Software design for low latency network, Next-generation non-volatile memory.

Academic Experience

- **UC San Diego** — La Jolla, CA
  Ph.D. Student in Computer Science GPA: 3.76/4 — *Sept. 2013 – Now*
  - Research Assistant at Non-Volatile System Laboratory
  - Advisor: Prof. Steven Swanson
- **Fudan University** — Shanghai, China
  B.E. in Software Engineering GPA: 3.3/4 — *Sept. 2009 – Jun. 2013*
  - Research Assistant at Institution of Parallel and Distributed Systems *(Dec. 2010 – Jun. 2013)*
  - Advisor: Prof. Haibo Chen

Research Experience

- **Remote persistent memory on VMware ESXi** *June. 2015 – Sep. 2015*
  - Allowing guest VMs to access persistent memory on remote VMware ESXi hosts transparently.
- **Reliable and Highly-Available NVMM** *2014*
  - A system that provides reliability and availability to non-volatile main memory (NVMM), while preserving NVMMs good performance.
  - I designed and implemented the network stacks of the system based on Infiniband network.
- **LibRDMA, a low latency RDMA library** *June. 2014 - Sep. 2014*
  - An easy-to-use library prividing low latency access for distributed memory and PCM devices.
  - Based on RDMA protocol on Infiniband network, it provides read/write access latency down to 1.5μs.
- **Storage I/O virtualization architecture on SSDs** *Apr. 2012 – Nov. 2012*
  - Reducing virtualization overhead inside solid state drives based on SR-IOV and parallelism in SSDs.
  - I implemented vFlash interface and two Flash Translation Layer algorithms on our new interface. Evaluation conducted on flashsim simulator.
- **Parallelized operations for VMs** *Sept. 2011 – Apr. 2012*
  - Parallelizing common VM management operations for smaller disruption to services in guest VMs.
  - I studied on live migration in Xen and KVM, helped implementing and evaluating parallel migration system on KVM.

Publications

Yiying Zhang, **Jian Yang**, Amirsaman Memaripour and Steven Swanson. *Mojim: A Reliable and Highly-Available Non-Volatile Memory System.* 20th International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS '15).

Xiang Song, **Jian Yang**, and Haibo Chen. *Architecting flash based solid-state-Architecting Flash-based Solid-State Drive for High-performance I/O Virtualization.* IEEE Computer Architecture Letter 2013.

Xiang Song, Jicheng Shi, Ran Liu, **Jian Yang**, Haibo Chen, and Binyu Zang. *Parallelizing management operations for virtual machines.* Virtual Execution Environments (VEE), 2013.

Industry Experience

- **HGST, Inc.** — San Jose, CA
  Research Intern — *Jun. 2014 - Sep. 2014*
- **VMware, Inc.** — Palo Alto, CA
  Intern, VMKernel Team — *Jun. 2015 - Sep. 2015*

Teaching Experience

- **Operating Systems** — Fudan University
  Teaching Assistant — *Fall 2012*
- **Introduction to Computer Systems II** — Fudan University
  Teaching Assistant — *Spring 2012*

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