MENGXING LIU

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EDUCATION

Tsinghua University September 2015 - Present
PhD student, Computer Science, Tsinghua University, Beijing.
Advisor: Prof. Yongwei Wu

Tsinghua University September 2010 - July 2015
Bachelor, Computer Science, Tsinghua University, Beijing.
GPA: 90/100; RANK: 19/123

INTERNSHIP

Summer Intern at Tencent July 2013 - Auguest 2013
App Developer *Shenzhen, China*

· I implemented an enterprise office assistance based on Wechat public platform, which supports inner contact, calendar and signing in.

Full time Intern at Microsoft Research Asia September 2016 - March 2017
Researcher Intern *Beijing, China*

· In the first three month I investigated how to build durable transactions using locks on non-volatile memory.
· Then I took part in the RAIN project, which is a RAID-like storage system using non-volatile memory. I gave the proof of RAIN theory, and evaluated it with popular OLTP benchmarks such as TPC-C and TATP.

SELECTED PROJECT

DFS-Rsync: Remote Synchronization Between Distributed File Systems
We offered a new interface for distributed file system: remote synchronization (RSync), to synchronize files between file systems. Matched blocks can be read from the local system so that the network transmission is omitted. We implemented it on HDFS and RSync is about 10x faster than copying directly.

DudeTM: Durable Decoupled Transactional Memory
We designed and implemented a transactional memory library on non-volatile memory, providing an easy-to-use interface for programmers to build ACID transactions. The key idea is decoupling a transaction into three totally decoupled components to overcome performance overhead of traditional redo logging and undo logging mechanisms. It obtains 2x to 4x speedup than the state-of-art technique.

PUBLICATION LIST

1. DudeTX: Durable Decoupled Transaction
Mengxing Liu, Mingxing Zhang, Kang Chen, Xuehai Qian, Yongwei Wu, and Jinglei Ren.
Submitted to *ACM Transactions on Storage(TOS)*
2. DudeTM: Building Durable Transactions with Decoupling for Persistent Memory
Mengxing Liu, Mingxing Zhang, Kang Chen, Xuehai Qian, Yongwei Wu, and Jinglei Ren.
Proceedings of the 22nd ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS'17).

SCHOLARSHIPS AND CERTIFICATES

SEP.2010 Tsinghua First Class Scholarship for Freshman (CNY 10,000 for each year)
SEP.2011 National Endeavor Fellowship (CNY 5,000)
OCT.2014 Peer-to-Peer Lending Fellowship (CNY 5,000)
JUN.2015 Excellent Theses Award (6/123)
JUN.2015 Excellent Graduate in Department of Computer Science and Technology.