Xingbo Wu

☎ (312) 996 2664
✉ wuxb@uic.edu
https://www.cs.uic.edu/~wuxb

Appointments

August 2018 to present — **Assistant Professor**, *Department of Computer Science, University of Illinois at Chicago.*
851 S Morgan St, Room 1120 SEO, Chicago, IL, 60607

Education

June 2018 — **Ph.D., Computer Engineering**, *University of Texas at Arlington*, Advisor: **Song Jiang**.
Dissertation: "Supporting Efficient Large-scale Key-value Systems with an Optimized Storage Hierarchy"

July 2009 — **B.S., Computer Science and Engineering**, *Beihang University*.

Publications

EuroSys'19 — **Xingbo Wu**, Fan Ni, Song Jiang. *Wormhole: A Fast Ordered Index for In-memory Data Management.* In Proceedings of the Fourteenth European Conference on Computer Systems. Dresden, Germany, March 2019.

ICS'19 — Fan Ni, Song Jiang, Hong Jiang, Jian Huang, **Xingbo Wu**. *SDC: A Software Defined Cache for Efficient Data Indexing.* In Proceedings of the 2019 International Conference on Supercomputing. Phoenix, Arizona, June 2019.

HPCC'19 — Fan Ni, **Xingbo Wu**, Song Jiang. *Copyless Copy: An FTL Primitive Leveraging SSD's Flexible Address Mapping.* In 21st IEEE International Conference on High Performance Computing and Communications. Zhangjiajie, China, August 2019.

IFIP Performance'18 — Fan Ni, **Xingbo Wu**, Weijun Li, Lei Wang, Song Jiang. *WOJ: Enabling Write-Once Full-data Journaling in SSDs by Using Weak-Hashing-based Deduplication.* In Proceedings of the 36th International Symposium on Computer Performance, Modeling, Measurements and Evaluation. Toulouse, France. December 2018.

IPCCC'18 — Fan Ni, **Xingbo Wu**, Weijun Li, Song Jiang. *ThinDedup: An I/O Deduplication Scheme that Minimizes Efficiency Loss due to Metadata Writes.* In Proceedings of the 37th IEEE International Performance Computing and Communications Conference. Orlando, Florida, November 2018.

PhD Dissertation — **Xingbo Wu**. *Supporting Efficient Large-scale Key-value Systems with an Optimized Storage Hierarchy. June 2018.*

ACM SoCC'17 — **Xingbo Wu**, Fan Ni, Song Jiang. *Search Lookaside Buffer: Efficient Caching for Index Data Structures.* In Proceedings of the 2017 ACM Symposium on Cloud Computing. Santa Clara, California. September 2017.

SYSTOR'17 — Chunyi Liu, Fan Ni, **Xingbo Wu**, Xiao Zhang, Song Jiang. *Freewrite: Creating (Almost) Zero-Cost Writes to SSD in Applications.* In Proceedings of the 10th ACM International Systems and Storage Conference. Haifa, Israel. May 2017.

HPCC'17 — Yufei Ren, **Xingbo Wu**, Li Zhang, Yandong Wang, Wei Zhang, Zijun Wang, Michel Hack, Song Jiang. *iRDMA: Efficient Use of RDMA in Distributed Deep Learning Systems.* In 19th IEEE International Conference on High Performance Computing and Communications. Bangkok, Thailand. December 2017.

EuroSys'16 — **Xingbo Wu**, Li Zhang, Yandong Wang, Yufei Ren, Michel Hack, Song Jiang. *zExpander: a Key-Value Cache with both High Performance and Fewer Misses.* In Proceedings of the Eleventh European Conference on Computer Systems. London, UK. April 2016.

APSys'16 — **Xingbo Wu**, Fan Ni, Li Zhang, Yandong Wang, Yufei Ren, Michel Hack, Zili Shao, Song Jiang. *NVMcached: An NVM-based Key-Value Cache.* In Proceedings of the 7th ACM SIGOPS Asia-Pacific Workshop on Systems. Hong Kong, China. August 2016.

USENIX ATC'15 — **Xingbo Wu**, Yuehai Xu, Zili Shao, Song Jiang. *LSM-trie: An LSM-tree-based Ultra-Large Key-Value Store for Small Data.* In Proceedings of the 2015 USENIX Conference on Usenix Annual Technical Conference. Santa Clara, California. July 2015.

SYSTOR'15 **Xingbo Wu**, Zili Shao, Song Jiang. *Selfie: Co-locating Metadata and Data to Enable Fast Virtual Block Devices.* In Proceedings of the 8th ACM International Systems and Storage Conference. Haifa, Israel. May 2015.

APSys'15 **Xingbo Wu**, Wenguang Wang, Song Jiang. *TotalCOW: Unleash the Power of Copy-On-Write for Thin-provisioned Containers.* In Proceedings of the 6th ACM SIGOPS Asia-Pacific Workshop on Systems. Tokyo, Japan. July 2015.

Invited Talks

- **LSM-trie: An LSM-tree-based Ultra-Large Key-Value Store for Small Data**.

2015 IBM T.J. Watson Research Center, USENIX ATC'15, Intel Labs

- **Search Lookaside Buffer: Efficient Caching for Index Data Structures**.

2017 ACM SoCC'17

Academic Service

PC member APSys'19

PC member EuroSys'18 Shadow PC

Reviewer IEEE Transactions on Computers

Reviewer ACM Transactions on Storage

Reviewer IEEE Transactions on Parallel and Distributed Systems

Reviewer IEEE Transactions on Very Large Scale Integration

Professional Experience

Fall 2018–present **Assistant Professor**, *Department of Computer Science, University of Illinois at Chicago*, Chicago, IL.

2015–2017 **Summer Research Intern**, *IBM T. J. Watson Research Center*, Yorktown Heights, NY.

2017–Spring 2018 **Graduate Research Assistant**, *University of Texas at Arlington*, Arlington, TX.

Fall 2016 **Graduate Teaching Assistant**, *University of Texas at Arlington*, Arlington, TX.
CSE 3320, Operating Systems

2014–Spring 2016 **Graduate Research Assistant**, *Wayne State University*, Detroit, MI.

2013 **Software Developer Intern**, *Oracle*, Beijing, China.

2011 **Software Developer Intern**, *Taobao*, Beijing, China.

2010 **Software Developer Intern**, *C2 Microsystem*, Beijing, China.

2009–2013 **Graduate Research Assistant**, *Beihang University*, Beijing, China.

Teaching

CS 594 **Special Topics: High-performance NoSQL Databases**, *University of Illinois at Chicago.*
Spring 2019

CS 461 **Operating Systems Design and Implementation**, *University of Illinois at Chicago.*
Fall 2018

Patents

US 14/945,031 System, method, and recording medium for reducing memory consumption for in-memory data stores. Michel H. T. Hack, Yufei Ren, Yandong Wang, **Xingbo Wu**, Li Zhang.

US 15/447,262 Computational storage for distributed computing. Michel H. T. Hack, Yufei Ren, Wei Tan, Yandong Wang, **Xingbo Wu**, Li Zhang, Wei Zhang.

Awards

2018 ACSIC Travel Grant, SOFC'18

2018 Doctoral Dissertation Fellowship, University of Texas at Arlington

2017 ACM SIGOPS Student Grant, ACM SoCC'17

2015 USENIX Student Grant, USENIX ATC'15

2009 Outstanding Undergraduate Thesis Award, Beihang University

2006 Kwang-Hua Scholarship, Beihang University