
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

- FAST'21 Wenshao Zhong, Chen Chen, **Xingbo Wu**, Song Jiang. *REMIX: Efficient Range Query for LSM-trees*. In 19th USENIX Conference on File and Storage Technologies. Virtual event, February 2021.
- ICDE'21 Xingsheng Zhao, Song Jiang, **Xingbo Wu**. *WipDB: A Write-in-place Key-value Store that Mimics Bucket Sort*. in 37th IEEE International Conference on Data Engineering. Virtual event, April 2021.
- 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

- **Wormhole: A Fast Ordered Index for In-memory Data Management.**
2020 DePaul Research Colloquium, DePaul University
- **Efficient Caching for High-performance In-memory Key-Value Systems.**
2018 University of Illinois at Chicago
- **Search Lookaside Buffer: Efficient Caching for Index Data Structures.**
2017 ACM SoCC'17
- **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

Academic Service

- PC member APSys'19
- PC member EuroSys'18 Shadow PC
- PC member SiPS'19
- Reviewer IEEE Transactions on Computers
- Reviewer ACM Transactions on Storage
- Reviewer IEEE/ACM Transactions on Networking
- Reviewer IEEE Transactions on Parallel and Distributed Systems
- Reviewer IEEE Transactions on Very Large Scale Integration
- Reviewer IEEE Transactions on Knowledge and Data Engineering
- Reviewer Frontiers of Computer Science
- Reviewer Concurrency and Computation: Practice and Experience

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 361 **Systems Programming**, *University of Illinois at Chicago.*
Spring 2020

CS 461 **Operating Systems Design and Implementation**, *University of Illinois at Chicago*.
Fall 2018, Fall 2019, Fall 2020, Spring 2021

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

Patents

- US 10909651B2 Graphic processor unit topology-aware all-reduce operation. Li Zhang, **Xingbo Wu**, Wei Zhang, Yufei Ren.
- US 10423575B2 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 10318199B2 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