

Jialin Li

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EMPLOYMENT **National University of Singapore** Singapore
School of Computing
Department of Computer Science
Assistant Professor January 2020 - Present

ETH Zürich Zürich, Switzerland
Department of Computer Science
Systems Group
Visiting Researcher August 2019 - December 2019

EDUCATION **University of Washington** Seattle, WA
Ph.D. in Computer Science and Engineering August 2019
Advisors: Dan R. K. Ports and Arvind Krishnamurthy
Thesis: *Co-Designing Distributed Systems with Programmable Network Hardware*

University of Washington Seattle, WA
M.S. in Computer Science and Engineering June 2014
Advisors: Dan R. K. Ports and Steven D. Gribble
Thesis: *Improving Distributed Systems using Approximate Synchrony in Datacenter Networks*

University of Michigan Ann Arbor, MI
B.S.E in Computer Engineering May 2012
Minor in Mathematics May 2012

CONFERENCE PUBLICATIONS Jialin Li, Jacob Nelson, Ellis Michael, Xin Jin, and Dan R. K. Ports. “Pegasus: Tolerating Skewed Workloads in Distributed Storage with In-Network Coherence Directories”. In *Proceedings of the 14th USENIX Symposium on Operating Systems Design and Implementation (OSDI '20)*. 2020.

Adriana Szekeres, Michael Whittaker, Jialin Li, Naveen Kr. Sharma, Arvind Krishnamurthy, Dan R. K. Ports, and Irene Zhang. “Meerkat: Multicore-Scalable Replicated Transactions Following the Zero-Coordination Principle”. In *Proceedings of the Fifteenth European Conference on Computer Systems (Eurosys '20)*. Heraklion, Greece, 2020.

Hang Zhu, Zhihao Bai, Jialin Li, Ellis Michael, Dan R. K. Ports, Ion Stoica, and Xin Jin. “Harmonia: Near-Linear Scalability for Replicated Storage with in-Network Conflict Detection”. In *Proceedings of the VLDB Endowment* 13.3, Nov. 2019, 376–389.

Jialin Li, Ellis Michael, and Dan R. K. Ports. “Eris: Coordination-Free Consistent Transactions Using In-Network Concurrency Control”. In *Proceedings of the 26th Symposium on Operating Systems Principles (SOSP '17)*. Shanghai, China, 2017.

Jialin Li, Ellis Michael, Naveen Kr. Sharma, Adriana Szekeres, and Dan R. K. Ports. “Just Say NO to Paxos Overhead: Replacing Consensus with Network Ordering”. In *Proceedings of the 12th USENIX Symposium on Operating Systems Design and Implementation (OSDI '16)*. Savannah, GA, USA, Nov. 2016.

James Bornholt, Antoine Kaufmann, Jialin Li, Arvind Krishnamurthy, Emina Torlak, and Xi Wang. “Specifying and Checking File System Crash-Consistency Models”. In *Proceedings of the 21st International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS '16)*. Atlanta, GA, USA, Apr. 2016.

Dan R. K. Ports, Jialin Li, Vincent Liu, Naveen Kr. Sharma, and Arvind Krishnamurthy. “Designing Distributed Systems Using Approximate Synchrony in Data Center Networks”. In *Proceedings of the 12th USENIX Conference on Networked Systems Design and Implementation (NSDI '15)*. Oakland, CA, USA, May 2015. **Best Paper Award.**

Jialin Li, Naveen Kr. Sharma, Dan R. K. Ports, and Steven D. Gribble. “Tales of the Tail: Hardware, OS, and Application-level Sources of Tail Latency”. In *Proceedings of the 5th ACM Symposium on Cloud Computing (SOCC '14)*. Seattle, WA, USA, Nov. 2014.

Simon Peter, Jialin Li, Irene Zhang, Dan R. K. Ports, Doug Woos, Arvind Krishnamurthy, Thomas Anderson, and Timothy Roscoe. “Arrakis: The Operating System is the Control Plane”. In *Proceedings of the 11th USENIX Symposium on Operating Systems Design and Implementation (OSDI '14)*. Broomfield, CO, USA, Oct. 2014. **Best Paper Award.**

Andrew DeOrio, Jialin Li, and Valeria Bertacco. “Bridging Pre- and Post-silicon Debugging with BiPeD”. In *Proceedings of the International Conference on Computer-Aided Design (ICCAD '12)*. San Jose, CA, USA, Nov. 2012.

WORKSHOP
PUBLICATIONS

Simon Peter, Jialin Li, Doug Woos, Irene Zhang, Dan R. K. Ports, Thomas Anderson, Arvind Krishnamurthy, and Mark Zbikowski. “Towards High-performance Application-level Storage Management”. In *Proceedings of the 6th USENIX Conference on Hot Topics in Storage and File Systems (HotStorage '14)*. Philadelphia, PA, USA, June 2014.

JOURNAL
PUBLICATIONS

Simon Peter, Jialin Li, Irene Zhang, Dan R. K. Ports, Doug Woos, Arvind Krishnamurthy, Thomas Anderson, and Timothy Roscoe. “Arrakis: The Operating System Is the Control Plane”. In *ACM Transactions on Computer Systems* 33.4, Nov. 2015.

SERVICE

Conference Program Committees

OSDI 2021
ASPLOS 2021

Journal Reviewer

Transactions on Computer Systems 2021
Transactions on Computers 2020
Transactions on Networking 2020
Transactions on Networking 2019

Other

UW CSE Academic Job Hunting Seminar Coordinator 2016

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|------------------|---|--|
| AWARDS | UW IAP Cloud Workshop Best Poster Award | 2017 |
| | UW CSE Industrial Affiliates Madrona Prize Runner Up | 2016 |
| | NSDI '15 Best Paper Award | 2015 |
| | OSDI '14 Jay Lepreau Best Paper Award | 2014 |
| | UW CSE Industrial Affiliate Madrona Prize Winner | 2014 |
| | Wang Chu Chien-Wen Research Award | 2011 |
| | James B. Angell Scholar Award | 2011 |
| INVITED TALKS | Pegasus: Tolerating Skewed Workloads in Distributed Storage with In-Network Coherence Directories Symposium on Operating Systems Design and Implementation (OSDI '20) Nov 2020 | |
| | Systems Design in the Post-Moore's Law Era NUS Computing Research Week | Aug 2020 |
| | Co-Designing Distributed Systems with Programmable Network Hardware MPI-SWS ETH Zürich | Oct 2019 Sep 2019 |
| | Eris: Coordination-Free Consistent Transactions Using In-Network Concurrency Control Symposium on Operating Systems Principles (SOSP '17) | Oct 2017 |
| | Just Say NO to Paxos Overhead: Replacing Consensus with Network Ordering Symposium on Operating Systems Design and Implementation (OSDI '16) Nov 2016 UW CSE Industrial Affiliates Meeting UW CSE Cloud Day | Nov 2016 Oct 2016 Jun 2016 |
| | Designing Distributed Systems Using Approximate Synchrony UW CSE Systems, Architecture and Networking Retreat | May 2014 |
| TEACHING | Systems Design for Next Gen Hardware (NUS CS6280) Instructor | Singapore Fall 2020 |
| | Distributed Systems (UW CSE 452) Teaching Assistant | Seattle, WA Spring 2017 |
| | PMP Operating Systems (UW CSEP 551) Teaching Assistant | Seattle, WA Fall 2014 |
| | The Hardware/Software Interface (UW CSE 351) Tutor Tutor Tutor | Seattle, WA Fall 2016 Spring 2016 Fall 2015 |

Engineering Design Projects (UM ENGR 100)
Teaching Assistant

Ann Arbor, MI
Winter 2012

Computer Organization and Design (UM EECS 370)
Teaching Assistant

Ann Arbor, MI
Fall 2011

**OTHER WORK
EXPERIENCE**

VMware, Inc.
MTS, Nicira NSX Group

Palo Alto, CA
Jun - Sep 2014

Confucius Institute at the University of Michigan
Office Assistant and Teaching Assistant

Ann Arbor, MI
Sep 2010 - May 2012