

Jing Liu

Senior Researcher
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EDUCATION

Department of Computer Sciences, University of Wisconsin – Madison

Ph.D. in Computer Sciences

August 2024

M.S. in Computer Sciences

May 2022

Advisors: Prof. Andrea Arpaci-Dusseau & Prof. Remzi Arpaci-Dusseau

Thesis: *Scale, Performance, and Fault Tolerance in a Filesystem Semi-Microkernel*

Software Institute, Nanjing University

B.E. in Software Engineering Rank: 1/238

May 2016

Thesis: *Depth-aware layered edge for elastic RGB-D object proposal*

APPOINTMENTS

Senior Researcher, Microsoft Research Asia

September 2024 – Present

REFEREED CONFERENCE PUBLICATIONS

[1] **Jing Liu**, Xiangpeng Hao, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau, and Tej Cheped. *Shadow Filesystems: Recovering from Filesystem Runtime Errors via Robust Alternative Execution* In Proceedings of the 16th ACM Workshop on Hot Topics in Storage and File Systems (HotStorage '24), Santa Clara, CA, 2024.

[2] Yifan Dai, **Jing Liu**, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. *Symbiosis: The Art of Application and Kernel Cache Cooperation*. In Proceedings of the 22th USENIX Conference on File and Storage Technologies (FAST '24), Santa Clara, 2024.

[3] **Jing Liu**, Anthony Rebello, Yifan Dai, Chenhao Ye, Sudarsun Kannan, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. *Scale and Performance in a Filesystem Semi-Microkernel*. In Proceedings of the 28th ACM Symposium on Operating Systems Principles (SOSP '21), Virtual Event, Germany, 2021.

[4] Irene Zhang, Amanda Raybuck, Pratyush Patel, Kirk Olynyk, Jacob Nelson, Omar S. Navarro Leija, Ashlie Martinez, **Jing Liu**, Anna Kornfeld Simpson, Sujay Jayakar, Pedro Henrique Penna, Max Demoulin, Piali Choudhury, and Anirudh Badam. *The Demikernel Library OS Architecture for Microsecond, Kernel-Bypass Datacenter Systems*. In Proceedings of the 28th ACM Symposium on Operating Systems Principles (SOSP '21), Virtual Event, Germany, 2021.

[5] Suli Yang, **Jing Liu**, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. *Principled Schedulability Analysis for Distributed Storage Systems using Thread Architecture Models*. In Proceedings of the 13th Symposium on Operating System and Design Implementation (OSDI '18), CA, USA, 2018.

[6] Ramnath Alagappan, Aishwarya Ganesan, **Jing Liu**, Andrea Arpaci-Dusseau, and Remzi Arpaci-Dusseau. *Fault-Tolerance, Fast and Slow: Exploiting Failure Asynchrony in Distributed Systems*. In Proceedings of the 13th Symposium on Operating System and Design Implementation (OSDI '18), CA, USA, 2018.

[7] **Jing Liu**, Tongwei Ren, Bingkun Bao and Jia Bei. *Depth-aware Layered Edge for Object Proposal*. In Proceedings of IEEE International Conference on Multimedia and Expo (ICME '16), Seattle, USA, 2016.

[8] **Jing Liu**, Tongwei Ren and Jia Bei. *Elastic Edge Boxes for Object Proposal on RGB-D images*. In Proceedings of International Conference on Multimedia Modeling (MMM '16), Miami, USA, 2016.

JOURNALS AND WORKSHOPS

- [1] Suli Yang, **Jing Liu**, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. *Principled Schedulability Analysis for Distributed Storage Systems using Thread Architecture Models*. In ACM Transactions on Storage (TOS), March, 2023.
- [2] **Jing Liu**, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau, and Sudarsun Kannan. *File Systems as Processes*. In 11th USENIX Workshop on Hot Topics in Storage and File Systems (HotStorage '19), Renton, WA, 2019.
- [3] Irene Zhang, **Jing Liu**, Amanda Austin, Michael Lowell Roberts, and Anirudh Badam. *I'm Not Dead Yet! The Role of the Operating System in a Kernel-Bypass Era*. In Workshop on Hot Topics in Operating Systems (HotOS '19), Bertinoro, Italy, 2019.
- [4] **Jing Liu**, Tongwei Ren, Yuantian Wang, Sheng-Hua Zhong, Jia Bei, and Shengchao Chen. *Object proposal on RGB-D images via elastic edge boxes*. In Neurocomputing (NEUCOM), 236:134-146, May, 2017.

HONORS AND AWARDS

Meta PhD Research Fellowship, Meta Inc.	2022 – 2024
Student Travel Grant (SOSP '17, OSDI '18, and OSDI '22)	2017, 18, & 22
CS Department Golden Brick Award, CS@UW-Madison	2022
CS Summer Research Award, UW-Madison	2017
Graduate Research Fellowship, UW-Madison	2016 – 2017
Outstanding Graduate, Nanjing University	2016
Departmental Best Undergraduate Thesis, University Highest Honor	2016
Outstanding National Undergraduate Innovation Project (Role: Lead, Grant: ~3000\$)	2016
National Encouraging Scholarship, Ministry of Education of China	2014, 2015
National Scholarship, Ministry of Education of China	2013

TEACHING EXPERIENCE

Computer Sciences Department of UW–Madison, WI <i>Instructor</i> Class: Introduction to Operating Systems.	Summer 2023
Computer Sciences Department of UW–Madison, WI <i>Teaching Assistant</i> Class: Distributed Systems. Instructor: Prof. Andrea Arpaci-Dusseau	Spring 2022, Spring 2023
Computer Sciences Department of UW–Madison, WI <i>Teaching Assistant</i> Class: Advanced Operating System. Instructor: Prof. Andrea Arpaci-Dusseau	Spring 2018
Software Institute of Nanjing University, Nanjing, China <i>Teaching Assistant, and Head Teaching Assistant</i> Class: Computer Operating System. Instructors: Prof. Bin Luo & Prof. Jidong Ge	Spring 2015, Spring 2016

INDUSTRY EXPERIENCE

Google, Madison, WI <i>Software Engineering Intern</i> Mentor: Dr. Marc De Kruijf	Summer 2019
Microsoft Research, Redmond, WA <i>Research Intern</i> Mentor: Dr. Irene Zhang	Summer 2018

SERVICE

ATC/OSDI Artifact Evaluation Committee	2022
Topic (OS & Emerging Hardware) Moderator, SOSP '21 Diversity Workshop	Oct. 2021
President, W-ACM, UW Madison Chapter of ACM's Women in Computing	Aug. 2021 – Aug. 2022
FAST External Reviewer	2018

PRESENTATIONS AND INVITED TALKS

Scale and Performance in a Filesystem Semi-Microkernel.

Invited talk at UIUC, Champaign, IL.	Oct. 2022
Invited talk at ENS de Lyon – France, virtual.	Mar. 2022
Invited talk at Samsung MSL Tech Talk, virtual.	June 2021
Talk at SOSP '21, virtual.	Oct. 2021

File Systems as Processes.

Talk at HotStorage '19, Renton, WA.	July 2019
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Elastic Edge Boxes for Object Proposal on RGB-D Images.

Talk at MMM '16, Miami, MI.	Jan. 2016
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