

Lesley (Yajie) Zhou

PhD Student in Computer Science
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Research Interests

AI for Network Operations, Self-driving Networking and Systems, Large Language Models for Network Management, Advanced Persistent Threat Detection, Privacy-Preserving Network Telemetry

Education

University of Maryland, College Park <i>PhD in Computer Science</i> Advisor: Prof. Zaoxing (Alan) Liu	2023 – Present
Boston University <i>PhD in Computer Engineering</i> Advisor: Prof. Zaoxing (Alan) Liu	2021 – 2023
Korea Advanced Institute of Science and Technology (KAIST) <i>M.S. in Electrical Engineering</i> Advisors: Prof. Yung Yi, Prof. Dongsu Han	2020
Xidian University <i>B.E. in Computer Science and Technology</i> Bachelor Dissertation Award: Top 1% in CS Department	2018

Research Experience

Carnegie Mellon University, CyLab <i>Visiting Researcher</i> Host: Prof. Vyas Sekar	<i>Oct 2025 – Present</i>
Microsoft Research (Redmond, WA) <i>Research Intern</i> Focus: Synthesizing Log Alerting Rules with LLMs	<i>May – Aug 2025</i>
Microsoft Research (Redmond, WA) <i>Research Intern</i> Focus: Build AI Agents for Network Management	<i>May – Aug 2024</i>
Microsoft Research (Redmond, WA) <i>Research Internship</i> AI-driven Network Operations; Zero Trust Cloud Security	<i>May - Aug 2023</i>

Publications

Conference Papers

1. NetArena: Dynamically Generated LLM Benchmarks for Network Applications
Yajie Zhou, Jiajun Ruan, Eric S. Wang, Sadjad Fouladi, Francis Y. Yan, Kevin Hsieh, Zaoxing Liu
International Conference on Learning Representations (ICLR), 2026
2. Tidal: Tackling Concept Drift in Provenance-based Advanced Persistent Threats Detection
Yajie Zhou, Nengneng Yu, Tuo Zhao, Zaoxing Liu
New Ideas in Networked Systems (NINeS), 2026
3. PrvTel: Lightweight Models for Private and Accurate Telemetry Data Retention
Yajie Zhou, Fuheng Zhao, Eric Wang, Ayse Coskun, Divyakant Agrawal, Amr El Abbadi, Zaoxing Liu
USENIX Symposium on Networked Systems Design and Implementation (NSDI), 2026
4. MeshAgent: Enabling Reliable Network Management with Large Language Models
Yajie Zhou, Kevin Hsieh, Sathiya Kumaran Mani, Srikanth Kandula, Zaoxing Liu
ACM SIGMETRICS International Conference on Measurement and Modeling of Computer Systems, 2026
5. Securing Public Cloud Networks with Efficient Role-based Micro-Segmentation
Sathiya Kumaran Mani, Kevin Hsieh, Santiago Segarra, Ranveer Chandra, **Yajie Zhou**, Srikanth Kandula
USENIX Symposium on Networked Systems Design and Implementation (NSDI), 2025
6. Towards Interactive Research Agents for Internet Incident Investigation
Yajie Zhou*, Nengneng Yu*, Zaoxing Liu (**equal contribution*)
ACM Workshop on Hot Topics in Networks (HotNets), 2023
7. Enhancing Network Management Using Code Generated by Large Language Models
Sathiya Kumaran Mani, **Yajie Zhou**, Kevin Hsieh, Santiago Segarra, Trevor Eberl, Eliran Azulai, Ido Frizler, Ranveer Chandra, Srikanth Kandula
ACM Workshop on Hot Topics in Networks (HotNets), 2023
8. Genet: Automatic Curriculum Generation for Learning Adaptation in Networking
Zhengxu Xia*, **Yajie Zhou***, Francis Y. Yan, Junchen Jiang (**equal contribution*)
ACM SIGCOMM Conference, 2022

PATENT

- Sathiya Kumaran Mani, **Yajie Zhou**, Kevin Hsieh, Santiago Segarra, Ranveer Chandra, Srikanth Kandula. 2023. "Graph Analysis and Manipulation."
US Patent Application MS#413451-US-NP, registered January 2025.
- **Yajie Zhou**, Kasim Te. 2020. "Method and Apparatus for Transmitting Video Data."
Korean Patent Application 10-2020-0141018, registered October 2020.

Honors and Awards

- KAUST Rising Stars in AI Symposium 2026 (top 6%)

2026

- **N2Women Young Researcher Fellowship** 2022
- **CRA-WP Grad Cohort for Women** 2022

Professional Service

Conference Service

- **SIGMETRICS 2026** – Shadow Program Committee Member
- **EuroSys 2026** – Shadow Program Committee Member
- **HotNets 2025** – Web Chair
- **Sensors S&P Workshop 2025** – Technical Program Committee Member

Community Service

- **N2Women Young Researcher Workshop 2023** – Event Host
Connected mentors from academia and industry with female PhD students and postdocs to share career development advice

Teaching Experience

Boston University

Fall 2022, Spring 2023

Teaching Assistant – Introduction to Networking (EC441)

Technical Skills

Programming Languages: Python, C++, JavaScript, \LaTeX

Machine Learning: PyTorch, TensorFlow, Keras, LangChain, Hugging Face

Systems & Tools: Docker, Git, Linux, AWS, Azure

Development: Emacs, PyCharm, Visual Studio Code