

Yoshi Sato

Undergraduate Researcher | Systems & Security

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EDUCATION

WASEDA UNIVERSITY

Tokyo, Japan

Bachelor of Science in Computer Science and Communications Engineering

OCT 2022 - SEPT 2026

Research Interests: Privacy-Preserving Systems, Systems Security (TEEs), Microarchitectural Security

RESEARCH EXPERIENCE

Research Intern, Decentralized Systems Group, Yale University

Jul 2025 - Present

Advisor: Prof. Fan Zhang

- Led implementation of DeadDrop's core system, integrating OMR cryptographic primitives with TEEs to deliver the first functional prototype.
- Built a prototype framework enabling secure and private vulnerability reporting for smart contracts, showing the feasibility of oblivious bug reporting.

Research Assistant, IIJ Research Laboratory

Mar 2025 - Present

Advisor: Dr. Pierre-Louis Aublin | Collaboration with Imperial College London LSDS Group

- Contributing to SC2, a serverless confidential computing framework combining Knative, k8s, and CVMs.
- Investigating techniques to reduce confidential VM cold-start latency via caching and reuse, enabling practical privacy-preserving serverless computing.

Student Researcher, Kimura-Kasahara Lab, Waseda University

Apr 2025 - Present

Advisor: Prof. Keiji Kimura

- Conducted performance analysis of GPU workloads under Intel TDX confidential VMs.
- Built framework to evaluate and compare passthrough overheads, memory models, and security-perf tradeoffs.
- Co-authored poster paper "Towards GPU Passthrough in Intel TDX" accepted at *IEEE DASC* 2025.

PUBLICATIONS

Y. Sato, H. Uranami, A. Saiki, K. Kimura. "Towards GPU Passthrough in Intel TDX: Design Challenges and Early Baselines." In *Proceedings of the IEEE 23rd International Conference on Dependable, Autonomic and Secure Computing (DASC)*, 2025.

EXTRACURRICULAR ACTIVITIES

Incoming Officer, IEEE-HKN, Mu Tau Chapter, 2025

June 2025 - Present

- Nominated by 2018 IEEE Computer Society President; invited to chapter leadership calls and IEEE-CS presidential discussions; formal induction upcoming later this year.

Cofounder of Kuma Lab

APR 2024 - Present

- Founded a student community of ~30 members to explore robotics and AI research, fostering collaboration and knowledge-sharing in STEM. Organized events and monthly workshops with 10–15 University students.

SKILLS

- Systems: Intel TDX, AMD SEV-SNP, QEMU, Kubernetes, Knative, Docker, CUDA, Linux
- Programming Languages: Python, C++, Rust