Sujay Yadalam

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RESEARCH INTERESTS

Memory and Storage Systems, Computer Architecture, Operating Systems, Hardware Security

EDUCATION

UNIVERSITY OF WISCONSIN-MADISON   August 2019 - Present
MS, PhD in Computer Science, Minor in Life Science Communication
GPA: 3.88/4.0
Courses: Introduction to Operating Systems, Advanced Computer Architecture I, Advanced Computer Architecture II, Next Generation Databases, Advanced Machine Learning, Big Data Systems, Distributed Systems, Algorithms

PES UNIVERSITY
B.E in Electronics and Communication   August 2012 - May 2016 | Bangalore, India
GPA: 9.54/10

PUBLICATIONS

[1] Divyanshu Saxena, Jiayi Chen, Sujay Yadalam, Yeonju Ro, Rohit Dwivedula, Eric Campbell, Aditya Akella, Christopher Rossbach, and Michael Swift . "How I learned to stop worrying and love learned OS policies. " in HotOS 2025.

[2] Sujay Yadalam, Chloe Alverti, Vasileios Karakostas, Jayneel Gandhi, Michael Swift. "BypassD: Enabling fast userspace access to shared SSDs. " in 2024 ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS 2024).

[3] Sujay Yadalam, Nisarg Shah, Xiangyao Yu, Michael Swift. "ASAP: A Speculative Approach to Persistence. " 2022 IEEE International Symposium on High-Performance Computer Architecture (HPCA 2022).

[4] Sujay Yadalam, Vinod Ganapathy, Arkaprava Basu. "SGXL: Security and Performance for Enclaves Using Large Pages. " ACM Transactions on Architecture and Code Optimization (TACO) 18, no. 1 (2020): 1-25

UNDER SUBMISSION

[1] Sujay Yadalam. "From Good to Great: Improving Memory Tiering Performance Through Parameter Tuning ".

[2] Sujay Yadalam. "A Robust Knob-free Tiering System. "

[3] Sujay Yadalam. "A Practical Rowhammer Defense for Cloud Security. "

[4] Sujay Yadalam. "Maximizing Bang for your Byte with Tiered Memory. "

PROFESSIONAL EXPERIENCE

MICROSOFT RESEARCH | Research Intern   May 2022 - June 2023 | Remote (Madison)
Advisor(s): Stefan Saroiu, Alec Wolman
- Researched architectures for DRAM security in the cloud.

VMWARE RESEARCH | Research Intern   June 2021 - September 2021 | Palo Alto
Advisor(s): Jayneel Gandhi
- Developed a design to achieve low cost in-core communication across privilege levels to reduce the cost of privilege mode switches.
- Rethinking I/O architecture to achieve low latency access to NVMe storage devices.

COMPUTER SYSTEMS LAB @ IISC | Research Assistant   August 2018 - July 2019 | Indian Institute of Science
Advisor(s): Arkaprava Basu & Vinod Ganapathy
- Worked on enhancing security of TEEs such as Intel SGX against side-channel attacks.

CYPRESS SEMICONDUCTOR | Applications Engineer   July 2016 - July 2018 | Bangalore, India
- Worked on the Bluetooth stack, mostly on the power management module.
- Developed an Indoor Positioning System based on Bluetooth Low Energy for demonstration purposes.

ANALOG DEVICES | Co-op Intern   Jan 2016 - Jun 2016 | Bangalore, India
- Studied performance of different embedded micro-processors for mathematical and DSP algorithms using trace driven analysis. The results of the analysis were utilized to optimize algorithms.

AWARDS

LAWRENCE H. LANDWEBER NCR FELLOWSHIP   UW-Madison | 2024-25
DISTINGUISHED ARTIFACT AWARD   ASPLOS 2024
TEACHING ASSISTANT AWARD   UW-Madison | 2019

TEACHING

LEAD INSTRUCTOR
CS537 - Intro to OS   UW-Madison, Summer 2024

TEACHING ASSISTANT
CS642 - Intro to Computer Security   UW-Madison, Fall 2019

GUEST LECTURES
CS739 - Distributed Systems | **Cluster Scheduling**   UW-Madison, Fall 2024
CS537 - Intro to OS | **Log structured Filesystems**   UW-Madison, Fall 2024
CS537 - Intro to OS | **Concurrency bugs**   UW-Madison, Spring 2024
CS537 - Intro to OS | **IO devices and disk schedulers, RAID**   UW-Madison, Spring 2023
CS839 - Special Topics on persistence | **NVM architectures**   UW-Madison, Fall 2021
CS642 - Intro to Computer Security | **Hardware security**   UW-Madison, Fall 2019

SERVICE

EuroSys Fall 2025 Shadow PC   2025
USENIX ATC 2024 Artifact Evaluation   2024
OSDI 2024 Artifact Evaluation   2024
EuroSys Fall 2024 Shadow PC   2024
HPCA 2024 Artifact Evaluation   2024
International Student Services Advisory Board   UW-Madison | 2023-2024
Student ACM volunteer   UW-Madison | 2019-2021
CSR volunteer   Cypress Semiconductor | 2016-2018