

Rishabh Iyer

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525 Soda Hall, Berkeley, CA 94720.

RESEARCH INTERESTS

I am a computer systems researcher, broadly construed. My research draws on insights from a broad set of domains, including operating systems, networking, computer architecture, and, more recently, AI.

EDUCATION

Ecole Polytechnique Federale de Lausanne (EPFL) 2017 - 2023
Doctor of Philosophy (PhD), Computer Science
Thesis: Latency Interfaces for Systems Code
Advisors: Prof. George Candea & Prof. Katerina Argyraki

Indian Institute of Technology Bombay 2013 - 2017
Bachelor of Technology (BTech) with Honors, Electrical Engineering
Thesis: Performance Modeling and Dynamic Scheduling for Heterogeneous-ISA Processors
Advisor: Prof. Virendra Singh

PROFESSIONAL EXPERIENCE

Assistant Professor at UC Berkeley July 2025 - present

Postdoctoral Scholar at UC Berkeley March 2024 - June 2025
Supervisor: Prof. Sylvia Ratnasamy

HONORS & AWARDS

Google ML and Systems Junior Faculty Award 2025

Dimitris N. Chorafas Dissertation Award 2024
Awarded yearly to two doctoral theses across all schools at EPFL

eBPF Foundation Research Award 2024

Eurosys Roger Needham Dissertation Award 2024
Awarded yearly for best doctoral thesis in computer systems at a European university

ACM SIGOPS Dennis M. Ritchie Doctoral Dissertation Award 2023
Awarded yearly for best doctoral thesis in computer systems worldwide

Thesis nominated by EPFL for ACM Doctoral Dissertation Award 2023

Best Paper Award VDAT 2019

PUBLICATIONS

- Towards Structurally Extensible Host Network Stacks**
Kumar Kartikeya Dwivedi, Rishabh Iyer, Sanidhya Kashyap.
Hot Topics in Networking (HotNets), 2025. Acceptance rate: 28.1%
- Rethinking the Cost of Distributed Caches for Datacenter Services**
Ziming Mao, Jonathan Ellithorpe, Atul Adya, Rishabh Iyer, Matei Zaharia, Scott Shenker, Ion Stoica.
Hot Topics in Networking (HotNets), 2025. Acceptance rate: 28.1%

3. **Fast End-to-End Performance Simulation of Accelerated Hardware–Software Stacks**
 Jiacheng Ma, Jonas Kauffman, Emilien Guandalino, Rishabh Iyer, Thomas Bourgeat, George Candea.
Symposium on Operating Systems Principles (SOSP), 2025. Acceptance rate: 17.9%
4. **The Case for Validating Inputs in Software-Defined WANs**
 Alexander Krentsel, Rishabh Iyer, Isaac Keslassy, Sylvia Ratnasamy, Anees Shaikh, Rob Shakir.
Hot Topics in Networking (HotNets), 2024. Acceptance rate: 27.8%
5. **Revisiting Cache Freshness for Emerging Real-Time Applications**
 Ziming Mao, Rishabh Iyer, Scott Shenker, Ion Stoica.
Hot Topics in Networking (HotNets), 2024. Acceptance rate: 27.8%
6. **If Layering Is Useful, Why Not Sublayering?**
 Rathin Singha, Rishabh Iyer, Charles Liu, Caleb Terrill, Todd Millstein, Scott Shenker, George Varghese.
Hot Topics in Networking (HotNets), 2024. Acceptance rate: 27.8%
7. **Fast, Flexible, and Practical Kernel Extensions**
 Kumar Kartikeya Dwivedi, Rishabh Iyer, Sanidhya Kashyap.
Symposium on Operating Systems Principles (SOSP), 2024. Acceptance rate: 17.3%
Also accepted to the Linux Plumbers Conference (LPC), 2024
eBPF Foundation Research Award
[Upstreamed into the Linux kernel mainline](#)
8. **Automatically Reasoning About How Systems Code Uses the CPU Cache**
Rishabh Iyer, Katerina Argyraki, George Candea.
Symposium on Operating Systems Design and Implementation (OSDI), 2024. Acceptance rate: 15.6%
Also accepted to the Linux Plumbers Conference (LPC), 2024
9. **Performance Interfaces for Hardware Accelerators**
 Jiacheng Ma, Rishabh Iyer, Sahand Kashani, Mahyar Emami, Thomas Bourgeat, George Candea.
Symposium on Operating Systems Design and Implementation (OSDI), 2024. Acceptance rate: 15.6%
10. **Achieving Microsecond-Scale Tail Latency Efficiently with Approximate Optimal Scheduling**
Rishabh Iyer, Musa Unal, Marios Kogias, George Candea.
Symposium on Operating Systems Principles (SOSP), 2023. Acceptance rate: 18.7%
11. **The Case for Performance Interfaces for Hardware Accelerators**
Rishabh Iyer, Jiacheng Ma, Katerina Argyraki, George Candea, Sylvia Ratnasamy.
Hot Topics in Operating Systems (HotOS), 2023. Acceptance rate: 26.4%
12. **Performance Interfaces for Network Functions**
Rishabh Iyer, Katerina Argyraki, George Candea.
Symposium on Networked Systems Design and Implementation (NSDI), 2022. Acceptance rate: 19.7%
13. **Bypassing the Load Balancer Without Regrets**
 Marios Kogias, Rishabh Iyer, Edouard Bugnion.
Symposium on Cloud Computing (SoCC), 2020. Acceptance rate: 24.4%
Deployed as part of Alibaba’s Next-Generation Load Balancer
14. **Classification-Based Scheduling for Heterogeneous-ISA Architectures**
 Nirmal Boran, Dinesh Yadav, Rishabh Iyer.
Symposium on VLSI Design and Test (VDATE), 2020. Acceptance rate: 28.7%
15. **Verifying Software Network Functions with No Verification Expertise**
 Arseniy Zaostrovnykh, Solal Pirelli, Rishabh Iyer, Luis Pedrosa, Matteo Rizzo, Katerina Argyraki, George Candea.
Symposium on Operating Systems Principles (SOSP), 2019. Acceptance rate: 13.7%
16. **Performance Contracts for Software Network Functions**
Rishabh Iyer, Luis Pedrosa, Arseniy Zaostrovnykh, Solal Pirelli, Katerina Argyraki, George Candea.
Symposium on Networked Systems Design and Implementation (NSDI), 2019. Acceptance rate: 14.7%
17. **Performance Modeling and Dynamic Scheduling for Heterogeneous-ISA Architectures**
 Nirmal Boran, Dinesh Yadav, Rishabh Iyer.

Symposium on VLSI Design and Test (VDATE), 2019. Acceptance rate: 27.3%

Awarded Best Paper

18. **Automated Synthesis of Adversarial Workloads for Network Functions**

Luis Pedrosa, Rishabh Iyer, Arseniy Zaostrovnykh, Jonas Fietz, Katerina Argyraki.

ACM SIGCOMM Conference (SIGCOMM), 2018. Acceptance rate: 18%

TEACHING

- CS294-262: Performance Analysis and Optimization of Computer Systems Fall 2025
- CS 168: Introduction to the Internet: Architecture and Protocols Spring 2026

SERVICE

- **Member of Program Committee** for SOSP 2026, OSDI 2026, NSDI 2026, NSDI 2025, Eurosys 2025, eBPF Workshop (SIGCOMM 2024), SOSP 2024 (Posters), and SOSP Doctoral Workshop 2024.
- **Member of Graduate Admissions Committee** EECS, UC Berkeley in 2026.
- **Member of EPFL CS Doctoral Admissions Committee** in 2022 and 2023.
- **Member of Artifact Evaluation Committee** for SOSP 2019.