

SOUJANYA PONNAPALLI

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INTERESTS	Distributed systems · Storage systems · Operating systems · AI systems	
	I am a systems researcher. I build systems that are not just fast and scalable but also reliable, providing strong guarantees such as performance isolation and fault tolerance in practice.	
WORK & EDUCATION	Postdoc · University of California, Berkeley	UC Berkeley
	Supervisors: Prof. Natacha Crooks and Prof. Matei Zaharia	2023-Ongoing
	Research Intern · Microsoft Research, Redmond	MSR
	Mentors: Jonathan Goldstein and Anirudh Badam	Summer'22, Summer'20
	Research Intern · Microsoft Research, Cambridge	MSR
	Mentors: Dushyanth Narayanan and Antony Rowstron	Summer'19
	Research Intern · VMware Research, California	VMware
PUBLICATIONS	Mentors: Michael Wei and Dahlia Malkhi	Summer'18
	PhD · University of Texas at Austin	UT Austin
	Advisor: Prof. Vijay Chidambaram	2017-23
	Bachelor's · International Institute of Information Technology, Hyderabad	IIIT-H
	Advisor: Prof. Suresh Purini	2013-17
	1. Metronome: I/O-Efficient Logging for State Machine Replication	[VLDB'27]
	Under revision	
PUBLICATIONS	2. Delta Fair Sharing: Performance Isolation for Multi-Tenant Storage Systems	[VLDB'27]
	Under submission	
	3. Time is Here for Just-in-Time Systems: Challenges and Opportunities	[MLForSys'26]
	Under submission	
	4. Rollbaccine: Herd Immunity against Storage Rollback Attacks in TEEs	[SIGMOD'26]
	5. SkyStore: Cost-Optimized Object Storage Across Regions and Clouds	[VLDB'25]
	[Best of VLDB'25 nomination]	
	6. Real Life Is Uncertain. Consensus Should Be Too!	[HotOS'25]
	7. Lost in Translation: Network-Attached AI Accelerator Disaggregation	[HotNets'25]
	8. Supporting Our AI Overlords: Redesigning Data Systems to be Agent-First	[SAA'25]
	9. DINOMO: A Key-Value Store for Disaggregated Persistent Memory	[VLDB'22]
	10. RainBlock: Faster Transaction Processing in Public Blockchains	[ATC'21]
	11. WineFS: Hupage-Aware File System for PM that Ages Gracefully	[SOSP'21]
	12. Software-Defined Data Protection at the Storage Layer	[VLDB'21]
	13. Finding Crash-Consistency Bugs with Bounded Black-Box Crash Testing	[OSDI'18]
PREPRINTS	14. mLSM: Making Authenticated Storage Faster in Ethereum	[HotStorage'18]
	15. Holographic Storage for the Cloud: Advances and Challenges	[TOS'25]
	16. CrashMonkey and ACE: Systematically Testing File-System Crash Consistency	[TOS'19]
PATENTS	17. Token Latency Fairness: Performance Isolation for Multi-Tenant LLM Serving	[arXiv'26]
	18. SKYE: Write-Optimized Key-Value Store for Persistent Memory	[arXiv'26]
PATENTS	Recoverable Processes	[US Patent App. 17/981,296]

ONGOING PROJECTS	Page Cache Fairness: Performance Isolation for Multiple Tenants in Operating Systems Powder: Fine-Grained Fault-Tolerance for Distributed Storage Systems Fugue: Exploring Durability Trade-Offs in Replicated Storage	
SERVICE	NSF Proposal Reviewer	2026
	Program Committee	OSDI'26, NSDI'26, ATC'25, NSDI'25, EuroSys'25
	External Program Committee	FAST'25, ATC'24, NSDI'19
	Journal Reviewer, ACM TOCS	2024
AWARDS	Summer Research Institute (SuRI) Fellowship, EPFL	2025
	Berkeley RDI Frontier Research Funding	2024
	The James C. Browne Graduate Fellowship, UT Austin	2017-18
REFERENCES	Natacha Crooks and Matei Zaharia (UC Berkeley), Vijay Chidambaram (UT Austin), Marcos K. Aguilera (NVIDIA), and Tianyin Xu (UIUC)	