

Education	PhD, Computer Science	2020-current
	Max Planck Institute for Software-Systems (MPI-SWS), Saarbruecken, Germany	
	Thesis: Human-in-the-loop Specification-Driven Automation for Cloud System Design and Optimization Advisors: Antoine Kaufmann, Deepak Garg, (past: Jonathan Mace)	
	MSc, Computer Science	2018-2020
	University of British Colombia, Vancouver, Canada	
	Thesis: Dara the explorer: coverage based exploration for model checking of distributed systems in Go. Advisor: Ivan Beschastnikh, (2nd Reader: Margo Seltzer)	
	BSc, Computer Science	2013-2018
	University of British Colombia, Vancouver, Canada	
Employment	Research Intern, Microsoft	2024
	Azure Research - Systems	
	<ul style="list-style-type: none">Designed and Developed Cerulean, a tool for automatically generating microservice systems from natural language descriptions.Mentors: Rodrigo Fonseca, Alok Gautam KumbhareCollaborators: Pedro Las-Casas, Celine Irvine, Jonathan Mace, Gagan Somashekar, Chetan Bansal, Ricardo Bianchini	
	Research Intern, MPI-SWS	2019
	<ul style="list-style-type: none">Instrumented DeathStarBench applications with XTrace tracing for large-scale experiments for Sifter.	
	Undergraduate Research Assistant	2018
	University of British Columbia, Under Ivan Beschastnikh	
	<ul style="list-style-type: none">Designed and developed Dara, a tool for model checking distributed systems.	
	Software Engineering Intern, NVIDIA	2017
	MODS (Modular Diagnostics) Team	
	<ul style="list-style-type: none">Implemented memory repair sequences for faulty High Bandwidth Memory(HBM).Designed, developed, and implemented a CUDA based full memory stress test for identifying faulty HBM cells.	
	Software Engineering Intern, NVIDIA	2016
	MODS (Modular Diagnostics) Team	
	<ul style="list-style-type: none">Implemented a synchronization option for CUDA based linpack tests to synchronize CUDA kernel launches within 30μs across multiple GPUs.	
	Software Developer Intern, Thinkbox Software	2015-2016
	Sequoia Team	
	<ul style="list-style-type: none">Designed, developed, and implemented the 3D PDF export feature for point cloud meshes in Sequoia.	

Publications

Peer-Reviewed Publications

1. Iridescent: A Framework Enabling Online System Implementation Specialization. **Vaastav Anand**, Deepak Garg, Antoine Kaufmann. Under Review.
2. Intent-Based System Design and Operation. **Vaastav Anand**, Yichen Li, Alok Gautam Kumbhare, Celine Irvine, Chetan Bansal, Gagan Somashekar, Jonathan Mace, Pedro Las-Casas, Ricardo Bianchini, Rodrigo Fonseca. Practical Adoption Challenges of ML for Systems (co-located with SOSP'25), **PACMI'25**.
3. DMAS-Forge: A Framework for Transparent Deployment of AI Applications as Distributed Systems. Alessandro Cornacchia, **Vaastav Anand**, Muhammad Bilal, Zafar Ayyub Qazi, Marco Canini. 1st Workshop on Systems for Agentic AI (co-located with SOSP'25), **SAA'25**.
4. Generating representative macrobenchmark microservice systems from distributed traces with Palette. **Vaastav Anand**, Matheus Stolet, Jonathan Mace, Antoine Kaufmann. 16th ACM SIGOPS Asia-Pacific Workshop on Systems (co-located with SOSP'25), **ApSys 2025**.
5. Automated Service Design with Cerulean (Project Showcase). **Vaastav Anand**, Alok Kumbhare, Celine Irvine, Chetan Bansal, Gagan Somashekar, Jonathan Mace, Pedro Las-Casas, Rodrigo Fonseca. 6th International Workshop on Cloud Intelligence/AIOps Workshop (co-located with ICSE), **AIOps 2025**.
6. Towards Using LLMs for Distributed Trace Comparison (Abstract). **Vaastav Anand**, Pedro Las-Casas, Rodrigo Fonseca, Antoine Kaufmann. 6th International Workshop on Cloud Intelligence/AIOps Workshop (co-located with ICSE), **AIOps 2025**.
7. Blueprint: A Toolchain for Highly Reconfigurable Microservice Applications. **Vaastav Anand**, Deepak Garg, Antoine Kaufmann, Jonathan Mace. In Symposium on Operating Systems Principles, **SOSP 2023**.
8. The Benefit of Hindsight: Tracing Edge Cases in Distributed Systems. Lei Zhang, Zhiqiang Xie, **Vaastav Anand**, Ymir Vigfusson, Jonathan Mace. In Networked Systems Design and Implementation, **NSDI 2023**.
9. The Odd One Out: Energy is not like Other Metrics. **Vaastav Anand**, Zhiqiang Xie, Matheus Stolet, Roberta De Viti, Thomas Davidson, Reyhaneh Karimipour, Safya Alzayat, Jonathan Mace. In **HotCarbon 2022**.
10. Smooth Kronecker: Solving the Combing Problem in Kronecker Graphs. **Vaastav Anand***, Puneet Mehrotra*, Daniel Margo*, Margo Seltzer. In Joint Workshop on Graph Data Management Experiences and Systems and Network Data Analytics, **GRADES-NDA 2020**.
11. Sifter: Scalable Sampling for Distributed Traces, without Feature Engineering. Pedro Las-Casas, Giorgi Papakerashvili, **Vaastav Anand**, Jonathan Mace. In Symposium on Cloud Computing, **SoCC 2019**.

Pre-Prints

1. SoK: Demystifying the multiverse of MPC protocols. Roberta De Viti, **Vaastav Anand**, Pierfrancesco Ingo, Deepak Garg.
2. Chatting with Logs: An exploratory study on Finetuning LLMs for LogQL. Vishwanath Seshagiri, Siddharth Balyan, **Vaastav Anand**, Kaustubh Dhole, Ishan Sharma, Avani Wildani, José Cambronero, Andreas Züfle. In **arXiv 2025**, <https://arxiv.org/pdf/2412.03612>.

3. Columbo: Low Level End-to-End System Traces through Modular Full-System Simulation. Jakob Görgen, **Vaastav Anand**, Hejing Li, Jialin Li, and Antoine Kaufmann. In **arXiv 2024**, <https://arxiv.org/pdf/2408.05251>.
4. SoK: The Faults in our Graph Benchmarks. Puneet Mehrotra*, **Vaastav Anand***, Daniel Margo, Milad Rezaei Hajidehi, and Margo Seltzer. In **arXiv 2024**, <https://arxiv.org/pdf/2404.00766>.
5. Aggregate-driven trace visualizations for performance debugging. **Vaastav Anand**, Matheus Stolet, Thomas Davidson, Ivan Beschastnikh, Tamara Munzner, and Jonathan Mace. In **arXiv 2020**, <https://arxiv.org/pdf/2010.13681>.

Datasets

1. X-Trace distributed trace dataset for DeathStarBench. **Vaastav Anand** and Jonathan Mace. https://gitlab.mpi-sws.org/cld/trace-datasets/deathstarbench_traces
2. Fantasy Premier League Gameweek-By-Gameweek Dataset. Vaastav Anand. <https://github.com/vaastav/Fantasy-Premier-League>

Teaching

Instructor, Saarland University	2025
<ul style="list-style-type: none"> • Reliability in Modern Cloud Systems 	2025
Teaching Assistant, Saarland University	2021
<ul style="list-style-type: none"> • 1× TA for Distributed Systems (Core Course) 	2021
Graduate Teaching Assistant	2018-2020
University of British Columbia, Department of Computer Science	
<ul style="list-style-type: none"> • 1× TA for Computer Hardware and Operating Systems (CPSC 313) 	2020
<ul style="list-style-type: none"> • 1× TA for Graduate Operating Systems (CPSC 508) 	2019
<ul style="list-style-type: none"> • 1× TA for Distributed Systems (CPSC 416) 	2018
Academic Assistant	2018
Vancouver Summer Program	
<ul style="list-style-type: none"> • Teaching Assistant for the Algorithms and the World Wide Web course. 	
Undergraduate Teaching Assistant	2014-2018
University of British Columbia, Department of Computer Science	
<ul style="list-style-type: none"> • 1× TA for Introduction to Software Engineering (CPSC 210) 	2018
<ul style="list-style-type: none"> • 1× TA for Advanced Operating Systems (CPSC 415) 	2017
<ul style="list-style-type: none"> • 1× TA for Intermediate Algorithm Design and Analysis (CPSC 320) 	2017
<ul style="list-style-type: none"> • 1× TA for Computer Hardware and Operating Systems (CPSC 313) 	2016
<ul style="list-style-type: none"> • 1× TA for Introduction to Computer Systems (CPSC 213) 	2015
<ul style="list-style-type: none"> • 3× TA for Models of Computation (CPSC 121) 	2014-2015
Awards	
3rd Place, Graduate Category, ACM SRC Grand Finals	2025
1st Place, Graduate Category, SOSP'24 SRC	2024
SoCC Student Scholarship	2019
2nd Place, Undergraduate Category, FSE'18 SRC	2018
SIGSOFT CAPS Award	2018
UBC International Tuition Award	2018-2019
Work Learn International Undergraduate Research Award	2018
UBC Faculty of Science, International Student Award	2015, 2018

ACM ICPC PacNW Regional Contest Division 2 Champion	2017
UBC Trek Excellence Scholarship	2016-17, 2017-2018
UBC Dean's Honor List	2014, 2015, 2017
UBC Computer Science Student Service Award	2015
GIIS Global Citizen Scholarship	2011-2013

Service

Academic Service

- Program Committee Member
 - EuroSys Posters 2025
 - CS-Can Student Symposium 2019
- Organizer
 - Tutorial on using Blueprint to accelerate Microservice Research @ SOSP'24
 - Panel on Reproducibility and Replication @ HotOS'23
- Publicity Chair
 - The Journal of Systems Research 2022-2023.
- Systems Trivia Co-Organizer
 - HotOS 2023
 - SOSP 2021
 - HotOS 2021
- Organization Committee Member
 - The Cornell, Maryland, Max Planck Pre-doctoral Research School (CMMRS) 2022

Invited Talks

Blueprint: A Toolchain for Highly-Reconfigurable Microservices Event: CNI Seminar Series @ IISc Bangalore Host: Sreeshma Shiv	Jun 2024
Blueprint: A Toolchain for Highly-Reconfigurable Microservices Event: Azure Monitor Day of Learning @ Microsoft Redmond Host: Kalyana Sundaram	Jun 2024
Blueprint: A Toolchain for Highly-Reconfigurable Microservices Event: Trustworthy Systems Seminar @ UNSW Sydney Host: Peter Chubb	Aug 2023
Blueprint: A Toolchain for Highly-Reconfigurable Microservices Event: Basser Seminar Series @ University of Sydney Host: Zhanna Sarsenbayeva	Aug 2023
Millenial: Modular Microservice Macrobenchmarks Event: Tracing Jamboree @ Emory University (virtual) Organizers: Avani Wildani, Ymir Vigfusson	Jun 2021

Interests

Computing: Distributed Systems, Operating Systems, Software Engineering
Extra Curricular: Soccer, Linguistics, Cricket.