Antoine Kaufmann

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EDUCATION

2018 **Ph.D. in Computer Science and Engineering**
University of Washington
Advisors: Thomas Anderson, Simon Peter (UT Austin), Arvind Krishnamurthy
Thesis: Efficient, Secure, and Flexible High Speed Packet Processing for Data Centers

2014 **M.Sc. ETH in Computer Science**
ETH Zurich
Advisor: Timothy Roscoe
Thesis: Efficiently executing the Dragonet network stack

2012 **B.Sc. ETH in Computer Science**
ETH Zurich
Advisor: Timothy Roscoe
Thesis: Low-latency OS protocol stack analysis

PROFESSIONAL EXPERIENCE

2018 – present **Max Planck Institute for Software Systems, Germany**
Research Group Leader: Operating Systems Group

2015 **Intel Labs, Hillsboro OR, USA**
Research Intern Systems and Architecture

2006 – 2014 **HILOTEC E&C AG, Switzerland**
Software Developer

2012 **ITmovement AG, Switzerland**
Course Instructor

PUBLICATIONS

2020 Reza Karimi, Arpan Gujarati, Safya Alzayat, **Antoine Kaufmann**, Ymir Vigfusson, Jonathan Mace. Serving DNNs like Clockwork: Performance Predictability from the Bottom Up. In *14th Symposium on Operating Systems Design and Implementation (OSDI)*, 2020.

2019 **Antoine Kaufmann**, Tim Stamler, Simon Peter, Naveen Kr. Sharma, Thomas Anderson, and Arvind Krishnamurthy. TCP Acceleration as an OS Service. In *14th EuroSys Conference (EuroSys)*, 2019.

2019 Amit Samanta, Suhas Shrinivasan, **Antoine Kaufmann**, Jonathan Mace. No DNN Left Behind: Improving Inference in the Cloud with Multi-Tenancy. In *(arXiv)*, 2019.

2018 Phitchaya Mangpo Phothilimthana, Ming Liu, **Antoine Kaufmann**, Simon Peter, Rastislav Bodik, and Thomas Anderson. Floem: A Programming System for NIC-Accelerated Network Applications. In *13th Symposium on Operating Systems Design and Implementation (OSDI)*, 2018.

2017	Naveen Kr. Sharma, **Antoine Kaufmann**, Thomas Anderson, Changhoon Kim, Arvind Krishnamurthy, Jacob Nelson, and Simon Peter. Evaluating the Power of Flexible Packet Processing for Network Resource Allocation. In *14th USENIX Symposium on Networked Systems Design and Implementation (NSDI)*, 2017.
2016	**Antoine Kaufmann**, Simon Peter, Naveen Kr. Sharma, Thomas Anderson, and Arvind Krishnamurthy. High performance packet processing with FlexNIC. In *21st International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, 2016.
2016	James Bornholt, **Antoine Kaufmann**, Jialin Li, Arvind Krishnamurthy, Emina Torlak, and Xi Wang. Specifying and checking file system crash-consistency models. In *21st International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, 2016.
2015	Kornilios Kourtis, Pravin Shinde, **Antoine Kaufmann**, and Timothy Roscoe. Intelligent NIC Queue Management in the Dragonet Network Stack. In *3rd Conference of Timely Results in Operating Systems (TRIOS)*, 2015.
2015	**Antoine Kaufmann**, Simon Peter, Thomas Anderson, and Arvind Krishnamurthy. FlexNIC: Rethinking Network DMA. In *15th Workshop on Hot Topics in Operating Systems (HOTOS)*, 2015.
2013	Pravin Shinde, **Antoine Kaufmann**, Kornilios Kourtis, and Timothy Roscoe. Modeling NICs with Unicorn. In *7th Workshop on Programming Languages and Operating Systems (PLOS)*, 2013.
2013	Pravin Shinde, **Antoine Kaufmann**, Timothy Roscoe, and Stefan Kaestle. Modeling NICs with Unicorn. In *14th Workshop on Hot Topics in Operating Systems (HOTOS)*, 2013.

HONORS & AWARDS

2020	Google Cloud Patform Research Credits, $5K
2020	Finalist Facebook ML Systems Research Award (Co-PI)
2015	Eurosys Best Poster Award
2014	Gary Kildall Endowed Fellowship

TEACHING EXPERIENCE

	Operating Systems (graduate), MPI-SWS, Saarland University
2019 – 2020	Instructor
	Computer Operating Systems (graduate), University of Washington
2017	Teaching Assistant, Guest Lecturer
	Introduction to Operating Systems, University of Washington
2016	Teaching Assistant, Tutor
	The Hardware/Software Interface, University of Washington
2016 – 2017	Tutor
	Systems Programming and Computer Architecture, ETH Zurich
2012	Teaching Assistant
	Operating Systems and Networks, ETH Zurich
2012	Teaching Assistant

SUPERVISED
STUDENTS

2019 – present	**Mehrshad Lotfi**, Doctoral Student
2019 – present	**Artem Ageev**, Doctoral Student
2018 – present	**Ahmed Nematallah**, master's research project
2020	**Dominik Luche**, master thesis
2020	**Florian Bauckholt**, bachelor thesis
2020	**Hejing Li**, intern
2020	**Emiliano Luci**, intern
2019	**Guruprasad Hedge**, master thesis
2017	**Paul Yau**, undergraduate research and master's project (University of Washington)

SERVICE

2021	**SOSP'21 general co-chair**
2021	**EuroSys'21 travel grant co-chair**
2020	**Program Committees: SPMA'20**
2020	**CS @ Max Planck admissions committee**
2020	**CMMRS summer school poster session organization**
2019	**Program Committees: SFMA'19, EdgeSys'19**
2019	**CMMRS summer school poster session organization**
2015	**UW Graduate Admissions Committee**

LANGUAGES

German: native
English: fluent
French: intermediate (reading), basic (writing, speaking)

REFERENCES

Thomas Anderson
tom@cs.washington.edu
Professor
University of Washington

Arvind Krishnamurthy
arvind@cs.washington.edu
Professor
University of Washington

Simon Peter
simon@cs.utexas.edu
Assistant Professor
The University of Texas at Austin

Timothy Roscoe
troscoe@inf.ethz.ch
Professor
ETH Zurich