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Ana Klimovic

Divya Mahajan

Stanford University Advisor: Christos Kozyrakis **Research Interests:** Computer Systems, Cloud Computing, Distributed Systems, Computer Architecture

Georgia Institute of Technology

Research Interests: Computer

Architecture, Data Management

Technologies, Machine Learning,

Advisor: Hadi Esmaeilzadeh

Programming Languages



Caroline Trippel

Princeton University Advisor: Margaret Martonosi **Research Interests:** Computer architecture, security, formal verification, memory consistency

models



Esha Chousaka

University of Texas, Austin Advisor: Mattan Erez **Research Interests:** Memory Systems, Compression, Interconnect, Deep Learning

Memory Optimizations



<u>Lisa Wu</u>

UC Berkeley Postdoc Sponsor: Krste Asanovic; PhD Advisor: Martha Kim **Research Interests:** Computer architecture and

microarchitecture, accelerators, energy-efficient computing, big data, precision medicine.



Mengjia Yan University of Illinois, Urbana-Champaign Advisor: Josep Torrelas Research Interests: Hardware security, cache-based side channel

attacks and countermeasures, deep neural network accelerators



Nandita Vijaykumar

Carnegie Mellon University Advisor: Onur Mutlu, Phillip B. Gibbons

Research Interests: Computer architecture; programming

abstractions; memory systems; GPUs



<u>Yihan Sun</u>

Carnegie Mellon University Advisor: Guy Blelloch **Research Interests:** Parallel systems, algorithms, implementations, programming tools



Tamara Lehman

Duke University

Advisor: Benjamin Lee, Andrew Hilton

Research Interests: Computer architecture, secure hardware, memory systems.



<u>Xuan Yang</u>

Stanford University Advisor: Mark Horowitz **Research Interests:** Computer Systems, Hardware Acceleration, Compiler, Machine Learning





Ana Klimovic

Stanford University

Advisor: Christos Kozyrakis

Ana Klimovic is a final year Ph.D. student at Stanford University. Her research interests are in computer systems and computer architecture. She is particularly interested in building high performance, resource efficient storage and computing systems for large-scale datacenters. Before coming to Stanford, Ana graduated from the Science program Engineering at the University of Toronto. Ana Klimovic is a Microsoft Research Ph.D. Fellow, Stanford Graduate Fellow and Accel Innovation Scholar. She has received a Memorable Paper Award for her work on ReFlex, a software system for fast, predictable access

to Flash storage over commodity networks (published at ASPLOS'17). She has also received a Best Paper Award for IX, a dataplane operating system for low latency, high throughput networking (OSDI'14). Ana is interested in faculty and industry research positions.

Research Interests: Computer Systems, Cloud Computing, Distributed Systems, Computer Architecture

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Caroline Trippel

Princeton University

Advisor: Margaret Martonosi

Caroline Trippel is a PhD candidate in the Computer Science department at Princeton University. She is advised by Professor Margaret Martonosi on her computer architecture dissertation research, specifically on the topic of concurrency and security verification in heterogeneous parallel systems. Her work has resulted in formal, automated tools and techniques for specifying and verifying the correct and secure execution of software running on such systems. She has influenced the design of the RISC-V ISA memory consistency model (MCM) both via full-stack MCM analysis of its draft specification and her subsequent participation in the RISC-V Memory Model Task Group. Additionally, she has developed a novel methodology and tool that synthesized two new variants of the recently publicized Meltdown and

Spectre attacks. Caroline received her BS in Computer Engineering from Purdue University in 2013, her MA in Computer Science from Princeton University in 2015, and was a 2017-2018 NVIDIA Graduate Fellow. Caroline was selected for 2018 MIT Rising Stars in EECS Workshop; selected for 2018 ACM Heidelberg Laureate Forum. Her work on TriCheck was chosen as an IEEE MICRO Top Pick of 2017 (top 12 Computer Architecture papers of 2017). Caroline is interested in faculty and industry research positions.

Research Interests: Computer architecture, security, formal verification, memory consistency models

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Divya Mahajan

Georgia Institute of Technology

Advisor: Hadi Esmaeilzadeh

Divya Mahajan is a PhD candidate in the Computer Science Department at Georgia Institute of Technology where she is advised by Professor Hadi Esmaeilzadeh. She received her Bachelors (2012) in Electrical Engineering from Indian Institute of Technology Ropar, India where she was honored with the President of India Gold medal for her outstanding academic performance. Subsequently, she completed her Masters (2014) from the University of Texas, at Austin in Electrical and Computer Engineering. She joined her PhD studies in Fall 2014 and her research interests include

computer architecture, microarchitecture design, and developing alternative technologies for efficient computing. She is continuously working towards designing full stack solutions and template-based architectures for accelerating Machine Learning and Deep Learning algorithms on an FPGA. Besides her primary research-area of computer architecture, she has also worked at the intersection of machine learning, hardware design, programming languages and databases. Divya has been honored with a National Center for Women & Information Technology (NCWIT) Collegiate Award 2017, HPCA 2016 Distinguished Paper Award, and is a Qualcomm Innovation Fellowship 2016 Finalist.

Research Interests: Computer Architecture, Microarchitecture Design, Data Management Technologies, Machine Learning, Programming Languages.

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Esha Chousaka

University of Texas, Austin

Advisor: Mattan Erez

Esha is a 5th year PhD candidate in Computer Architecture, advised by Dr. Mattan Erez. Her research interests lie in memory systems in general, and her dissertation focuses on designing systems with memory compression for higher capacity. Esha earned her Bachelors in Electrical Engineering at IIT Kharagpur, and worked at Qualcomm for 2 years before joining grad school. Over the years at grad school, she has done internships at ARM Research, Intel, and NVIDIA Research. Her dissertation

focuses on main memory compression across CPUs and GPUs, with little or no changes to the OS. The aim is to gain larger effective capacity and bandwidth from the installed memory, using compression, such that the overheads when one does not need more memory are negligible. This is done by designing and managing the compressed system with minimal data movement and metadata overheads. Esha is interested in industry research positions.

Research Interests: Memory Systems, Compression, Interconnect, Deep Learning Memory Optimizations.

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Lisa Wu

UC Berkeley

Postdoc Sponsor: Krste Asanovic; PhD Advisor: Martha Kim

Lisa Wu is a postdoctoral researcher at University of California, Berkeley under the advisement of Professor Krste Asanović and the mentorship of Professor David Patterson. Prior to joining UC Berkeley, she was a research scientist at Intel Labs. Lisa received her doctoral degree in computer science at Columbia University where she was advised by Professor Martha Kim. Lisa has a MS in computer science and engineering from University of Michigan Ann Arbor, and a BS in electrical and computer engineering from University of Illinois

Urbana-Champaign. Prior to pursuing her doctorate, she was a computer and performance architect at Intel for many years, architecting various Xeon and IPF server processors including leading the Xeon Phi Vector Processing Unit architecture. Lisa has received the MICRO best paper award 2016 for Graphicionado; IEEE Micro Top Picks 2015 and ASPLOS best paper nominee for Q100: A Database Processing Unit; IEEE Micro Top Picks 2014 for Hardware Accelerated Range Partitioner; Best of CAL 2011 for Cache Impacts on Datatype Acceleration. Lisa is interested in faculty positions.

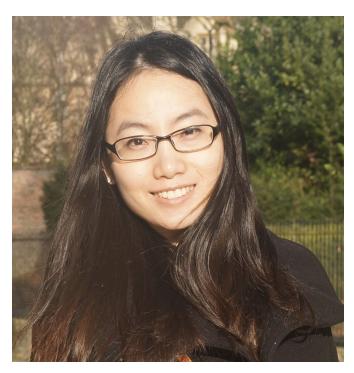
Research Interests: Computer architecture and microarchitecture, accelerators,

energy-efficient computing, and emerging applications related to big data such as database and graph analytics, and healthcare such as genomics analytics for precision medicine.

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Mengjia Yan

University of Illinois, Urbana-Champaign

Advisor: Josep Torrelas

Mengija Yan is a PhD student at the University of Illinois at Urbana-Champaign (UIUC), advised by Professor Josep Torrellas. She is a UIUC College of Engineering Mavis Future Faculty Fellow in 2018, and has received the UIUC Computer Science W.J. Poppelbaum Memorial Award for academic performance and design creativity. She interned at NVIDIA Research during the summer of 2018. Prior to UIUC, she earned her MS degree from UIUC in 2016 and her BS

degree from Zhejiang University in 2013. Her research lies in the field of computer architecture, with an emphasis on hardware support for security. Her work has focused on cache-based side channel attacks and speculative execution attacks. She has designed new types of attacks targeting evolving applications and architectures to help the community to identify unexploited security vulnerabilities. And, she has also worked on designing practical detection and defense mechanisms to combat speculative execution attacks and cache-based side channels by leveraging architecture innovations. She was selected for Rising Stars in EECS at MIT, 2018. She is interested in faculty and post-doctoral positions.

Research Interests: Hardware security, cache-based side channel attacks and countermeasures, deep neural network accelerators

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Nandita Vijaykumar

Carnegie Mellon University

Advisor: Onur Mutlu, Phillip B. Gibbons

Nandita Vijaykumar is a Ph.D. candidate at Carnegie Mellon University, advised by Prof. Onur Mutlu and Prof. Phil Gibbons. She is also currently a visiting student at ETH Zurich. Her research focuses on the interaction between programming models, system software, and hardware architecture, and she is excited about rethinking the roles played by different levels of the stack in the rapidly modern era of evolving, specialized, and data-centric computing landscapes. Her thesis research makes a case for rethinking the current

hardware-software contract and the abstractions with which the different levels of the stack communicate. Her work demonstrates how we can open up a rich new space of performance optimization with significant benefits in productivity, portability, and performance in both CPUs and GPUs by designing rich and powerful performance-only cross-layer abstractions that are recognized by all levels of the stack. She is the recipient of the Benjamin Garver Lamme/Westinghouse Fellowship at CMU and is Qualcomm Innovative Fellowship Finalist. During her Ph.D., she has been fortunate to intern at Microsoft Research, Nvidia Research, and Intel Labs. Nadita is interested in faculty and industry research positions.

Research Interests: Computer architecture; programming abstractions; memory systems; GPUs

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Tamara Lehman

Duke University

Advisor: Benjamin Lee, Andrew Hilton

Tamara Silbergleit Lehman is a PhD candidate at Duke university advised by Andrew Hilton and Benjamin Lee. Her research interests lie on the intersection of computer architecture and security. She is also interested in memory systems, simulation methodologies and emerging technologies. Her thesis work focuses on reducing overheads of secure memory. Tamara has a Bachelor's degree from the University of Florida in Industrial Engineering and a Masters degree in Computer Engineering from Duke University. Her

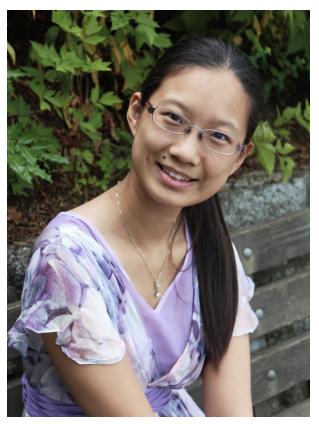
latest publication on understanding metadata access patterns in secure memory at ISPASS 2018, MAPS, won the best paper award. Her earlier work on developing a safe speculation mechanism for secure memory, PoisonIvy, published in MICRO 2016 got an honorable mention in Micro Top Picks. Tamara is interested in faculty and industry research positions.

Research Interests: Computer architecture, secure hardware, memory systems

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Yihan Sun

Carnegie Mellon University

Advisor: Guy Blelloch

Yihan Sun is currently a fifth-year Ph.D. student in Computer Science Department at Carnegie Mellon University. Before that, she received her Bachelor's degree in Computer Science from Tsinghua University in 2010. She got the Best Bachelor Thesis Award in Tsinghua University (1st place in CS Department) in 2014. Her research interests lie in parallel and concurrent algorithms, data structures, frameworks and their applications that are simple, generic, practically efficient, and meanwhile have good theoretical guarantees for worst-case performance. Her thesis is about a parallel and concurrent tree structure, that is highly parallelized, work efficient, safe for concurrency, persistent (and

functional), and also supports a full interface for commonly-used functions. Her proposed techniques are extendable to four balancing schemes, and can be applied to several applications including computational geometry, database systems, transactional memories, inverted index searching, and so on. Yihan is interested in faculty positions.

Research Interests: Parallel systems, algorithms, implementations, programming tools

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Xuan Yang Stanford University

Advisor: Mark Horowitz

Xuan Yang is a Ph.D. student in the Department of Electrical Engineering, Stanford University. Currently she is working with Professor Mark Horowitz in Stanford VLSI Research Group. Her research interests lie in the area computer architecture of and systems, focusing on energy-efficient and high-performance acceleration for deep learning, computer vision based applications. Specifically, She designed an systematic framework to analyze the design space of Deep Neural Network (DNN) accelerators,

including the design choices of dataflow, loop transformation and resource allocation. Besides, she developed an automatic hardware generation toolchain that can generate DNN accelerators from a Domain-Specific Language (DSL) called Halide. She also received a Master of Science degree at Stanford in 2014. Before coming to Stanford, She got Bachelor of Engineering degree in Mechatronic Engineering in Beijing Institute of Technology, Beijing, China, in July, 2012. Xuan is interested in industry research and industry product positions.

Research Interests: Computer Systems, Hardware Acceleration, Compiler, Machine Learning

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