Aastha Mehta

Ph.D. Student, MPI-SWS, Germany

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🖥 https://aasthakm.github.io/

Education

2012 – 2020 **Ph.D. in Computer Science**
Max Planck Institute for Software Systems (MPI-SWS), Saarbrücken, Germany
and Saarland University (UdS), Saarbrücken, Germany
Advisors: Peter Druschel, Deepak Garg
Thesis: Ensuring Compliance with Data Privacy and Usage Policies in Online Services

2012 – 2014 **Preparatory Phase (Graduate Coursework)**
Max Planck Institute for Software Systems (MPI-SWS), Saarbrücken, Germany
and Saarland University (UdS), Saarbrücken, Germany

2007 – 2011 **B.E. (Hons.) in Computer Science**
Birla Institute of Technology and Science (BITS) Pilani, Pilani Campus, India

Work Experience

2021 – **Assistant Professor (starting January 2021)**
Computer Science, University of British Columbia, Vancouver, Canada

2015 **Research Intern (three months)**
Systems and Networking Group, Microsoft Research, Cambridge, UK
Mentor: Manuel Costa
Focus areas: Secure multiparty computation in the Cloud, and designing oblivious ML algorithms.

2011 – 2012 **Member of Technical Staff**
NetApp Inc., Bengaluru, India
Manager: Paramita Das
Focus areas: Optimizing the performance of an fsck-like file system checker for the WAFL (Write Anywhere File Layout) file system.

2011 **Intern (six months)**
Advanced Technology Group, NetApp Inc., Bengaluru, India
Mentor: Ajay Bakre and Priya Sehgal
Focus areas: Improving the capacity utilization in Hadoop storage clusters.

2010 **Summer Research Intern (three months)**
MPI-SWS, Saarbrücken, Germany
Mentor: Peter Druschel
Focus areas: Deterministic record and replay for multicore systems.

2009 **Project trainee (three months)**
Division of Remote Handling & Robotics, Bhabha Atomic Research Centre (BARC), Mumbai, India
Mentor: Dr. P. K. Pal
Focus areas: Indoor localization of mobile robots using a laser range finder.

Honors and Awards

2018 **Invited to Rising Stars Workshop in EECS**
One of 76 women researchers in Computer Science, and one out of only 3 from Europe selected to attend this academic career workshop.

2016 **Invited to the 4th Heidelberg Laureate Forum**
One of 200 young researchers selected to attend the forum. Also awarded Romberg travel grant fellowship, which covered the travel expenses.

2009 **Goldman Sachs Global Leaders Award**
One of top 50 students in India across the fields of science, engineering, economics and humanities.

Publications

Under submission **Pacer: Network Side-Channel Mitigation in the Cloud**
Aastha Mehta, Mohamed Alzayat, Roberta De Viti, Björn B. Brandenburg, Peter Druschel, Deepak Garg
Under submission, arXiv: CoRR/abs/1908.11568, http://arxiv.org/abs/1908.11568

USENIX Security'17	**Qapla: Policy compliance in database-backed systems** Aastha Mehta, Eslam Elnikety, Katura Harvey, Deepak Garg, Peter Druschel USENIX Security Symposium, Vancouver, Canada
USENIX Security'16	**Thoth: Comprehensive Policy Compliance in Data Retrieval Systems** Eslam Elnikety, Aastha Mehta, Anjo Vahldiek-Oberwagner, Deepak Garg, Peter Druschel USENIX Security Symposium, Austin, USA
USENIX Security'16	**Oblivious Multi-Party Machine Learning on Trusted Processors** Olga Ohrimenko, Felix Schuster, Cédric Fournet, Aastha Mehta, Sebastian Nowozin, Kapil Vaswani, Manuel Costa USENIX Security Symposium, Austin, USA
EuroSys'15	**Guardat: Enforcing data policies at storage layer** Anjo Vahldiek-Oberwagner, Eslam Elnikety, Aastha Mehta, Deepak Garg, Peter Druschel, Ansley Post, Rodrigo Rodrigues, Johannes Gehrke European Conference on Computer Systems (EuroSys), Bordeaux, France
HiPC'11	**HDFS Space Consolidation** Aastha Mehta, Deepti Banka, Kartheek Muthyala, Priya Sehgal, Ajay Bakre Student Research Symposium, International Conference on High Performance Computing (HiPC)

Invited Talks

May 2019	**Pacer: Network Side-Channel Mitigation in the Cloud** University of Maryland, Host: Bobby Bhattacharjee
Nov 2018	**Pacer: Network Side-Channel Mitigation in the Cloud** Systems lunch at Cornell University, Host: Lorenzo Alvisi
Jul 2018	**Pacer: Efficient Network I/O Side-Channel Mitigation in the Cloud** First Workshop on Speculative Side Channel Analysis (WoSSCA), Amsterdam, Netherlands

Professional Activities

Program Committee

EuroDW	EuroSys Doctoral Workshop (2021)
PriSC	Workshop on Principles of Secure Compilation (2021)
EuroSys	European Conference on Computer Systems (2021)
Middleware	Middleware Doctoral Symposium (2020)

External Reviewer

HotOS	Hot Topics in Operating Systems (2017)
OSDI	Operating Systems Design and Principles (2016)
FC	Financial Cryptography (2016)
ASPLOS	Architectural Support for Programming Languages and Operating Systems (2015)
MobiSys	Mobile Symposium (2015)

Teaching Experience

2019	**Co-instructor, Operating Systems (core course)**, MPI-SWS and UdS Lectures on storage subsystem.
2016	**Teaching Assistant, Secure Information Flow Control in Systems (seminar)**, MPI-SWS and UdS Assisted in seminar design, teaching, and evaluation
2013	**Teaching Assistant, Operating Systems (core course)**, MPI-SWS and UdS Assisted in designing and evaluating assignments and exams.

Mentoring

2016 – 2019	**Mohamed Alzayat (Ph.D. student, MPI-SWS)** Collaborated and mentored on the Pacer project
2017 – 2019	**Roberta De Viti (Ph.D. student, MPI-SWS)** Collaborated and mentored on the Pacer project
2016	**Katura Harvey (Intern, MPI-SWS)** Collaborated and mentored on the Qapla project