

Aastha Mehta

Ph.D. Student

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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
(expected to complete by September 2020)
- 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

- Middleware Middleware Doctoral Symposium (2020)
EuroSys European Conference on Computer Systems (2021)

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