

Education	<b>Department of Computer Science, Duke University</b> Doctor of Philosophy, Computer Science <ul style="list-style-type: none"><li>• Advisor: Prof. Bruce Maggs</li></ul>	08/2017 – 12/2021
	<b>Computer Science &amp; Artificial Intelligence Lab (CSAIL), MIT</b> Visiting Researcher	09/2019 – 09/2020
	<b>National University of Sciences and Technology (NUST), Pakistan</b> Bachelor of Engineering, Software Engineering <ul style="list-style-type: none"><li>• Senior Design Project: Differentiated Services over SDN-IXP</li></ul>	09/2010 – 06/2014
Teaching Experience	<b>Duke University</b> <ul style="list-style-type: none"><li>• Teaching Assistant, CPS 310 Operating Systems</li><li>• Teaching Assistant, CPS 310 Operating Systems</li><li>• Private tutor, CPS 101 Introduction to Computer Science</li><li>• Private tutor, CPS 260 Introduction to Computational Genomics</li><li>• Private tutor, CPS 330 Design and Analysis of Algorithms</li></ul>	01/2018 – 12/2020
	<b>Google, New York City</b> Software Engineer <ul style="list-style-type: none"><li>• Improved geo-targeting accuracy for the Google public DNS resolver (8.8.8.8), the largest public DNS resolver in the world.</li><li>• Using a metrics-driven approach to improve CPU and memory efficiency, and tail latency in the resolver using modern C++ concurrency mechanisms such as fibers, coroutines, and lock-free data structures.</li></ul>	02/2022 – Present
Work Experience	<b>Meta Platforms, Menlo Park</b> Software Engineer Intern <ul style="list-style-type: none"><li>• Designed and implemented eBPF network telemetry for the Magma platform</li><li>• Enabled centralized control for cloud synchronization rates to reduce bandwidth consumption for partners in Brazil with satellite backhaul</li></ul>	06/2021 – 08/2021
	<b>Max Planck Institute for Informatics (MPI), Saarbrücken, Germany</b> Research Scientist <ul style="list-style-type: none"><li>• Worked on privacy in DNS client-side resolution</li><li>• Explored structural differences between landing and internal pages of websites and how that affects prior web performance studies</li></ul>	05/2019 – 08/2019
	<b>Akamai Technologies, New York City</b> Performance Engineer Intern <ul style="list-style-type: none"><li>• Derived methods for inversion of the footprint descriptor calculus. This inversion would create representative traffic traces, preventing privacy leaks from large logs</li></ul>	05/2018 – 08/2018
	<b>Arbisoft, Lahore, Pakistan</b> Software Engineer <ul style="list-style-type: none"><li>• Full-stack web development on Python Django &amp; Backbone.js</li></ul>	09/2015 – 07-2017
	<b>Passive and Active Measurement Conference (PAM)</b> Technical Program Committee member	2024
Service	<b>ACM Computer and Communications Security (CCS)</b> External reviewer	2021
	<b>USENIX Operating Systems Design and Implementation (OSDI)</b> Artifact Evaluation Committee member	2020

## Publications

### No Root Store Left Behind

*J. Larisch, W. Aqeel, T. Chung, E. Kohler, D. Levin, B. Maggs, B. Parno, C. Wilson*  
Hot Topics in Networks (HotNets), 2023

### Hammurabi: A Framework for Pluggable, Logic-based X.509 Certificate Validation Policies

*J. Larisch, W. Aqeel, C. Wilson, A. Mislove, T. Chung, D. Levin, B. Parno, and B. Maggs*  
ACM Conference on Computer and Communications Security (CCS), 2022

**Best Paper Honorable Mention**

### cISP: A Speed-of-Light Internet Service Provider

*Debopam Bhattacharjee\*, Waqar Aqeel\*, Sangeetha Abdu Jyothi, Ilker Nadi Bozkurt, William Sentosa, Muhammad Tirmazi, Anthony Aguirre, Balakrishnan Chandrasekaran, P. Brighten Godfrey, Gregory P. Laughlin, Bruce M. Maggs, Ankit Singla*  
USENIX Networked Systems Design and Implementation (NSDI) 2022

### Puncturable Pseudorandom Sets and Private Information Retrieval with Polylogarithmic Bandwidth and Sublinear Time

*E. Shi, W. Aqeel, B. Chandrasekaran, and B. Maggs*  
IACR Cryptology Conference (Crypto) 2021

### On Landing and Internal Pages: The Strange Case of Jekyll and Hyde in Internet Measurement

*W. Aqeel, B. Chandrasekaran, B. Maggs, and A. Feldmann*  
ACM Internet Measurement Conference (IMC) 2020

**Community Contribution Award**

### A bird's eye view of the world's fastest networks

*D. Bhattacharjee, W. Aqeel, G. Laughlin, B. Maggs, and A. Singla*  
ACM Internet Measurement Conference (IMC) 2020

### Assertion-Carrying Certificates

*W. Aqeel, Z. Hanif, J. Larisch, O. Omolola, T. Chung, D. Levin, B. Maggs, A. Mislove, B. Parno, and C. Wilson*  
Workshop on Foundations of Computer Security (FCS), 2020

### Untangling Header Bidding Lore: Some myths, some truths, and some hope

*W. Aqeel, D. Bhattacharjee, B. Chandrasekaran, P. Godfrey, G. Laughlin, B. Maggs, A. Singla*  
Passive and Active Measurement Conference (PAM) 2020

**Best Dataset Award**

### Gearing up for the 21<sup>st</sup> Century Space Race

*D. Bhattacharjee, W. Aqeel, I. Bozkurt, A. Aguirre, B. Chandrasekaran, P. Godfrey, G. Laughlin, B. Maggs, A. Singla*  
ACM HotNets 2018

### Dissecting Latency in the Internet's Fiber Infrastructure

*I. Bozkurt, W. Aqeel, D. Bhattacharjee, B. Chandrasekaran, P. Godfrey, G. Laughlin, B. Maggs, A. Singla*  
Pre-print on [arXiv](#) 2018

### Benchmarking Expert Surgeons' Path for Evaluating a Trainee Surgeon's Performance

*M. A. Ahmad, S. B. Mansoor, Z. A. Khan, W. Aqeel, and S. H. Kabir*  
ACM SIGGRAPH Virtual-Reality Continuum and Its Applications in Industry (VRCAI) 2013

\* equal contribution

## Awards & Honors

- Internet Measurement Conference, Community Contribution Award 2020
- Passive and Active Measurements Conference, Best Dataset Award 2020
- Duke University Graduate School Fellowship 2017 – 2019
- SEECs-NUST Alumni Association Scholarship 2013 – 2014
- Six merit-based grants from NUST 2010 – 2014
- NUST Entrance Test scholarship for securing rank 20 out of 20,000 students 2010
- Board of Secondary Education, Karachi, scholarship for rank 16 out of 118,000 2008

## Skills

C++, Python, C, Go, JavaScript, Prolog/Datalog, Linux