

<b>Work Experience</b>	<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
	<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>Smart Machines &amp; Robotics Technology Lab, NUST</b> Undergraduate Researcher <ul style="list-style-type: none"><li>Implemented neural network evaluation in Tele-Surgical Robotic Simulation (TSRS)</li><li>Organized evaluation experiment for TSRS</li></ul>	12/2012 – 05/2013
<b>Education</b>	<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
<b>Publications</b>	<b>Hammurabi: A Framework for Pluggable, Logic-based X.509 Certificate Validation Policies</b> <i>J. Larisch, W. Aqeel, C. Wilson, A. Mislove, T. Chung, D. Levin, B. Parno, and B. Maggs</i> ACM Conference on Computer and Communications Security (CCS), 2022	
	<b>cISP: A Speed-of-Light Internet Service Provider</b> <i>Debopam Bhattacharjee*, Waqar Aqeel*, Sangeetha Abdu Jyothei, Ilker Nadi Bozkurt, William Sentosa, Muhammad Tirmazi, Anthony Aguirre, Balakrishnan Chandrasekaran, P. Brighten Godfrey, Gregory P. Laughlin, Bruce M. Maggs, Ankit Singla</i> 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](https://arxiv.org/abs/1808.08001) 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

### **Teaching Experience**

#### **Duke University**

- Teaching Assistant, CPS 310 Operating Systems 08/2018 – 12/2018
- Teaching Assistant, CPS 310 Operating Systems 01/2018 – 06/2018

### **Service**

#### **ACM Computer and Communications Security (CCS)**

External reviewer

2021

#### **ACM EuroSys**

Shadow Program Committee member

2021

#### **USENIX Operating Systems Design and Implementation (OSDI)**

Artifact Evaluation Committee member

2020

### **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 securing rank 16 out of 118,000 students 2008

### **Skills**

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