

Behnaz Arzani

CONTACT INFORMATION

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WEBSITE

<https://www.microsoft.com/en-us/research/people/bearzani/>

CURRENT POSITION **Microsoft Research**

- ⊙ Post Doctoral Researcher **August 2017**

EDUCATION

University of Pennsylvania Philadelphia, PA

- ⊙ PhD candidate Computer Science **August 2017**
 - ▷ GPA: 3.94/4.00
- ⊙ PhD candidate Electrical and Systems Engineering **May 2014**
 - ▷ GPA: 3.86/4.00

University of Pennsylvania Philadelphia, PA

- ⊙ Dual Masters degree from Electrical Engineering and Computer Science **August 2017**
- ⊙ GPA: 3.86/4.00

Sharif University of Technology, Tehran, Iran

- ⊙ B.S., Electrical Engineering, Communications **June 2010**

RESEARCH INTERESTS

Network Protocols, Network QOS-QOE Improvement, Network Diagnosis, Network Security, Applications of Machine Learning in Networking, Development of Networking Simulation and Emulation Software

SELECT GRADUATE COURSES

Digital Communications, Networking Theory and Fundamentals, Advanced Programming, Introduction to Algorithms, Advanced Algorithms, Convex Optimization, Optimal Design of Wireless Networks, Game Theory (Audited), Graduate level Probability, Advanced Networking Protocols(Audited), Embedded Systems, Network and Infrastructure Threats: Attacks, Defenses, and Incentives, Machine Learning, Academic Writing, Software Systems, Mathematical Statistics, Beyond MapReduce

PUBLICATION VENUES

I have previously published my work in: SIGCOMM, NSDI, IMC, and ICNP.

PUBLICATIONS

- ⊙ **B. Arzani**, S. Ciraci, S. Saroiu, A. Wolman, J. Stokes, G. Outhred, L. Diwu, PrivateEye: Scalable Privacy-Preserving Compromise Detection In The Cloud, in submission
- ⊙ A. Roy, D. Bansal, D. Brumley, H. K. Chandrappa, P. Sharma, R. Tewari, **B. Arzani**, A. Sneoren, Cloud Datacenter SDN Monitoring: Experiences and Challenges, IMC 2018
- ⊙ D. Yu, Y. Zhu, **B. Arzani**, R. Fonseca, T. Zhang, L. Yuan, K. Deng, dShark: A General, Easy to Program and Scalable Framework for Analyzing In-network Packet Traces, NSDI 2019
- ⊙ **B. Arzani**, S. Ciraci, L. Chamon, Y. Zhu, H. Liu, J. Padhye, B. Thau Loo, G. Outhred, 007: Democratically Finding The Cause of Packet Drops, NSDI 2018
- ⊙ **B. Arzani**, S. Ciraci, L. Chamon, Y. Zhu, H. Liu, J. Padhye, G. Outhred, B. Thau Loo, Closing the Network Diagnosis Gap with Vigil, Proceedings of SIGCOMM Posters and Demos 2017

- ⊙ **B. Arzani**, S. Ciraci, B. Thau Loo, A. Schuster, G. Outhred, Taking The Blame Game Out of Data Center Operations With NetPoirot, SIGCOMM 2016
- ⊙ **B. Arzani**, A. Gurney B. Thau Loo, R. Guerin, FixRoute: Automated Router Configuration Repair with Traffic Engineering Optimizations, arxiv 2015
- ⊙ **B. Arzani**, A. Gurney, S. Cheng, R. Guerin, B. Thau Loo, Deconstructing MPTCP Performance, ICNP 2014
- ⊙ H. Zhang, **B. Arzani**, F. Ivancic, J. Rhee, N. Arora, G. Jiang, OFFLINE QUERIES IN SOFTWARE DEFINED NETWORKS, US Patent, 2014
- ⊙ **B. Arzani**, A. Gurney, S. Cheng, R. Guerin, B. Thau Loo, Impact of Path Selection and Scheduling Policies on MPTCP Performance, PAMS 2013
- ⊙ **B. Arzani**, R. Guerin, A. Rebeiro, A Distributed Routing Protocol for Predictable Rates in Wireless Mesh Networks, ICNP 2012
- ⊙ **B. Arzani** Design Of A Distributed Routing Protocol For Predictable Rates in Wireless Mesh Networks, ICNP PhD forum 2012

PROFESSIONAL
EXPERIENCE

Microsoft., Redmond, WA, USA *Intern* **Summer 2015, Summer 2016**

- ⊙ Automated classification of communication faults using TCP statistics.

NEC Labs., Princeton, NJ, USA *Intern* **Summer 2013**

- ⊙ SDNShadow, a debugging tool for Software Defined Networks.

Micromowje Engineering Co., Tehran, Iran
Intern **Summer 2009**

- ⊙ Producing high frequency satellite television transceivers and BTS stations

HONORS AND
AWARDS

- ⊙ Selected for the list of 10 N2Women Rising Stars in Computer Networking and Communications **2018**
- ⊙ Selected for the MIT rising stars in EECS workshop **2018**
- ⊙ Winner of The University of Pennsylvania Rubinoff dissertation award **2018**
- ⊙ Top 10% of my class in the Electrical Engineering department at Sharif University of Technology. **2010**
- ⊙ Admitted on a full scholarship to the PhD program in Electrical and Computer Science department at University of Pennsylvania **2010**
- ⊙ Admitted on a full scholarship to the PhD program in the Electrical Engineering department of Michigan Anne Arbor **2010**
- ⊙ Recipient of Honorary Admission for Graduate Study, Department of Electrical Engineering, Sharif University of Technology **2010**
- ⊙ Top 0.001% (ranked 57th) in the Nationwide Universities Entrance Exam in Mathematics (Konkoor) **2006**
- ⊙ Top 0.001% (ranked 10th) in the Nationwide English Universities Entrance Exam **2006**
- ⊙ Ranked first in the regional chemistry competition (Alborz Province) **2004**
- ⊙ Ranked first in the regional mathematics competition (Alborz Province-1st district) **2004**
- ⊙ Ranked second in the regional physics competition (Alborz Province-1st district) **2004**
- ⊙ Top 1% (ranked 12th) in the national chemistry experiments competition **2004**

ACADEMIC
EXPERIENCE

• **Substitute teacher**

University of Pennsylvania

- ⊙ Introduction to Networks & Security (Instructor: Dr. Heninger) **Fall 2017**

Teaching Assistant

University of Pennsylvania

- ⊙ Introduction to Probability-Coursera (Instructor: Prof. Venkatesh) **Summer-Fall 2014**
- ⊙ Introduction to Probability (Instructor: Prof. Venkatesh) **Spring 2014**
- ⊙ Elements of Probability (Instructor: Prof. Venkatesh) **Fall 2013**
- ⊙ Networking Theory and Fundamentals(Instructor: Prof. Sarkar) **Spring 2012**

Sharif University of Technology

- ⊙ Principles of Electronics (Instructor: Prof. Fardmanesh) **Spring 2009**
- ⊙ Electronics Engineering Principles (Instructor: Prof. Fardmanesh) **Fall 2009**

Laboratory Instructor

- ⊙ Electrical Engineering Principles (Supervisor: Prof. Fardmanesh)
 - ▷ Lab Instructor **Fall 2008**
- ⊙ Electrical Engineering Principles (Supervisor: Prof. Kaboli)
 - ▷ Lab Instructor **Fall 2009**

Physics tutor at Salam Institution, Karaj, Iran

Summer 2008

Other

- ⊙ Graduate Student Representative in Computer Science **Fall 2014, Spring 2015, Fall 2015**
- ⊙ Active member of Resana English Group, SUT
 - ▷ Coordinator of Free Discussion Sections
 - ▷ Active participants in the English Poetry group
- ⊙ Active member of the industrial correspondence group of the MCN national conference, SUT **Fall and Winter 2008**

MENTORING

- ⊙ Nick Iodice (University of Pennsylvania) **2014**
- ⊙ Da Yu (Brown University) **2017**
- ⊙ Robert MacDavid (Princeton University) **2018**
- ⊙ Akshay Narayan (MIT) **2018**
- ⊙ Jiaqi Gao (Harward) **2018**
- ⊙ Nofel Yaseen (University of Pennsylvania) **2018**

PROFESSIONAL
SERVICE

- ⊙ Program Committee Member, SOSR, 2019
- ⊙ Program Committee Member, ACM CoNext, 2018
- ⊙ Program Comittee Member ApSys, 2018
- ⊙ Shadow PC IMC, 2017,2018

LETTER WRITERS

- ⊙ Prof. Boon Thau Loo
Relationship: Advisor
- ⊙ Prof. Roch Guerin
Relationship: Advisor
- ⊙ Prof. Jennifer Rexford
Relationship: Member of PhD thesis committee
- ⊙ Dr. Geoff Outhred
Relationship: Manager at Microsoft
- ⊙ Dr. Jitendra Padhye
Relationship: Colaborator
- ⊙ Dr. Alec Wolman
Relationship: Manager at Microsoft Research
- ⊙ Dr. Victor Bahl
Relationship: 2ⁿd level manager at Microsoft Research

SKILLS

Computer Skills:

- ⊙ *Programming Languages:* Python, R, Haskell, C/C++, Ruby, MATLAB & Simulink, 8051/8085/80x86/AVR Assembly, VHDL, LINGO
- ⊙ *Applications:* Sklearn, PySpark, , NS2/NS3, OPNET, OrCAD PSpice, CodeVision, L^AT_EX, AutoCAD, Microsoft Office,CVX
- ⊙ *Operating Systems:* Microsoft Windows 10/7/Vista/XP/2000, Linux Ubuntu/Fedora, Mac

Language Skills:

- ⊙ Farsi(Native)
- ⊙ English(Fluent) TOEFL(iBT): Reading: 30/ Listening: 30/ Speaking: 28/ Writing: 28