Mina Tahmasbi Arashloo

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Research Interests

◇ **Networked Systems**; with an emphasis on *Software Defined Networks (SDNs)* and *Programmable Data Planes*

Education

◇ **Princeton University (2014–2019)**.
- PhD and M.A in Computer Science (GPA: 4.0/4.0)
- Thesis: Stateful Programming of High-Speed Network Hardware
- Advisor: Professor Jennifer Rexford

◇ **Sharif University of Technology (2010–2014)**.
- B.Sc. in Computer Engineering (GPA: 19.50/20.00)
- Thesis: A Distance-Vector Routing Protocol for Named Data Networks
- Thesis Supervisor: Professor Ali Movaghar

Selected Work Experience

◇ **Cornell University**
Post-Doctoral Researcher (July 2019 – present)
supervised by Nate Foster and Rachit Agarwal

◇ **Microsoft Research**
Research Intern (Summer 2017)
supervised by Manya Ghobadi
Project: HotCocoa: Hardware Congestion Control Abstractions

◇ **Microsoft Azure**
Research Intern (Fall 2016)
supervised by Lihua Yuan
Project: A Scalable VPN Gateway for Multi-Tenant Cloud Services

Honors and Awards

◇ **Best Paper Award** at ACM SOSR'20 (2020).

◇ **ACM SIGCOMM Dissertation Award** (2019).

◇ **Cornell Presidential Post-Doctoral Fellow** (2019 - present).

◇ **Siebel Scholar** (Class of 2019).

◇ **Microsoft Research Dissertation Grant** (2018).

◇ Selected for **Rising Stars in EECS** at MIT (2018).

◇ **School of Engineering and Applied Science (SEAS) Award of Excellence**, Princeton University (2017).

◇ **Ranked 1st** in terms of cumulative GPA among class of 2014 students of Computer Engineering, Sharif University of Technology (2014).

◇ **Iranian National Elites Foundation** grant for undergraduate studies, for outstanding academic success (2010–2014).

- **Ranked 2nd** in Iran's national entrance exam for M.Sc in computer engineering (June 2014).
- **Ranked 33rd** in Iran's university entrance exam among over 400,000 participants (June 2010).
- **National Organization for Development of Exceptional Talents** (NODET) member (2003–2010).

Publications

- *Petr4: Formal Foundations for P4 Data Planes,* **POPL 2021**
  Ryan Doenges, Mina Tahmasbi Arashloo, Santiago Bautista, Alexander Chang, Newton Ni, Samwise Parkinson, Rudy Peterson, Alaia Solko-Breslin, Amanda Xu, Nate Foster.
- *Enabling Programmable Transport Protocols on High-Speed NICs,* **NSDI 2020**
  Mina Tahmasbi Arashloo, Alexey Lavrov, Manya Ghobadi, Jennifer Rexford, David Walker, David Wentzlaff.
- *Tracking P4 Program Paths in the Data Plane,* **SOSR 2020 (Best Paper Award)**
  Suriya Kodeswaran, Mina Tahmasbi Arashloo, Praveen Tammana, Jennifer Rexford.
- *Elastic Switch Programming with P4All,* **HotNets 2020**
  Mary Hogan, Shir Landau-Feibish, Mina Tahmasbi Arashloo, Jennifer Rexford, David Walker, Rob Harrison.
- *A Scalable VPN Gateway for Multi-Tenant Cloud Services,* **SIGCOMM CCR 2018**
  Mina Tahmasbi Arashloo, Pavel Shirshov, Rohan Gandhi, Guohan Lu, Lihua Yuan, Jennifer Rexford.
- *HotCocoa: Hardware Congestion Control Abstractions,* **HotNets 2017**
  Mina Tahmasbi Arashloo, Monia Ghobadi, Jennifer Rexford, David Walker.
- *SNAP: Stateful Network-wide Abstractions for Packet Processing,* **SIGCOMM 2016**
  Mina Tahmasbi Arashloo, Yaron Koral, Michael Greenberg, Jennifer Rexford, David Walker.
- *Compiling Path Queries,* **NSDI 2016**
  Srinivas Narayana, Mina Tahmasbi Arashloo, Jennifer Rexford, David Walker.

Professional Service

- **Program Committee Member**
  - ACM HotNets (2021)
  - ACM CoNEXT (2021)
  - ACM SIGCOMM (2020)
  - ACM SIGCOMM Poster and Demos (2020)
  - Symposium on SDN Research (SOSR) (2019, 2020, 2021)
  - Asia-Pacific Workshop on Networking (2020)
  - P4 Workshop (2018, 2019, 2021)
  - EuroP4 Workshop (2020)
- **Other Committees and Panels**
  - ACM SIGCOMM Publication co-chair (2020)
  - NSF CNS Panel (2020)
- **External Reviewer**
  - Conferences: ASPLOS (External Review Committee, 2021), INFOCOM (2017)
  - Journals: IEEE Transactions on Networking (TON), IEEE Transactions on Very Large Scale Integration Systems (TVLSI), IEEE Transactions on Network and Service Management (TNSM), IEEE International Conference on Computer Communications, Journal of Cloud Computing

Selected Talks and Lectures

- "Enabling Programmable Transport Protocols on High-Speed NICs", Rutgers CS System Reading Group (Fall 2020)
- "An Introduction to SmartNICs and their Use Cases", Guest lecture for the Computer Networks course at MIT (Fall 2019)
- "SNAP: Stateful Network-wide Abstractions for Packet Processing", University of Washington System's Lunch (Summer 2017)
- "SNAP: Stateful Network-wide Abstractions for Packet Processing", Stanford University Networking Seminar (Spring 2017)

Teaching Experience

- **Princeton University**
  Teaching Assistant
  Courses: Computer Networks (Spring 2016), Functional Programming (Fall 2015)
- **Sharif University of Technology**
  Teaching Assistant
  Courses: Computer Networks (Spring 2014, Fall 2013), Theory of Machine Languages and Automata (Fall 2012 - Fall 2013), Artificial Intelligence (Spring 2014, Fall 2013, Head-TA), Design and Analysis of Algorithms (Fall 2012)