

Arian Akhavan Niaki

College of Information and Computer Sciences
University of Massachusetts
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Research Interests • Computer Networks, Network Measurement, Internet Measurement

Education	University of Massachusetts Amherst,	2017-2022
	MS/PhD student in Computer Science, GPA: (3.9/4)	
	Advisor: Dr. Phillipa Gill	
	Stony Brook University,	2016-2017
	MS/PhD student in Computer Science (Transferred to UMass), GPA: (3.9/4)	
	Sharif University of Technology,	2011-2016
	B.S. in Computer Engineering	
	Microsoft Certified IT Professional, Shatel Academy,	2014
	Studied the course on Windows Server 2008 R2	

Professional Experience	Cloudflare	Summer 2021
	• Research Intern	
	• Worked on deploying a traffic tampering measurement project	
	ThousandEyes (Cisco)	Summer 2020
	• Internet Researcher Intern	
	• Worked on analyzing and comparing CDN performance globally	
	International Computer Science Institute (ICSI)	Summer 2018
	• Supervised by Dr. Nicholas Weaver	
	• Worked on Estimating IoT population using DNS caches	
	Institute for Studies in Theoretical Physics and Mathematics (IPM)	
• Supervised by Dr. Reza Entezari Maleki and Prof. Ali Movaghar		
• Worked on Performance Modeling and Evaluation of Web Services Using High Level Extensions of Petri Nets,	Summer 2015-2016	
As my B.S. Thesis, A joint work with Ms. Negar Ghorbani		
Pishtazan Andishe Pouya, Tehran, Iran	Jan 2016 - May 2016	
• Produced, designed and analyzed models for software information systems and web applications.		
VADA Future Communications, Tehran, Iran	2014	
• Developed several Android mobile applications		
• Designed, developed, and maintained Django/Semantic-UI web applications		
• Designed, developed a web crawler with Scrapy Spider		
Teaching Assistant,		
• University of Massachusetts, Amherst		
	– COMPSCI 453: Computer Networking	Spring 2021
	– COMPSCI 660: Advanced Information Assurance	Fall 2020
	– COMPSCI 460: Intro to Computer and Network Security	Fall 2019

Arian Akhavan Niaki

- Stony Brook University
 - CSE 305: Principles of Database Systems Spring 2017
 - CSE 219: Computer Science III Fall 2016

Publications

Conference Papers

- How Great is the Great Firewall? Measuring China’s DNS Censorship
Nguyen Phong Hoang, Arian Akhavan Niaki, Jakub Dalek, Jeffrey Knockel, Pel-
laeon Li, Bill Marczak, Masashi Crete-Nishihata, Phillipa Gill and Michalis Poly-
chronakis
In Proceedings of the 30th USENIX Security Symposium August 2021
- Domain Name Encryption Is Not Enough: Privacy Leakage via IP-based Website
Fingerprinting
Nguyen Phong Hoang, Arian Akhavan Niaki, Nikita Borisov, Phillipa Gill and
Michalis Polychronakis
*In Proceedings of the 21st Privacy Enhancing Technologies Symposium. (PoPETs
2021).* July 2021
- Cache me Outside: A New Look at DNS Cache Probing
Arian Akhavan Niaki, William Marczak, Sahand Farhoodi, Andrew McGregor,
Phillipa Gill and Nicholas Weaver
*In Proceedings of the 22nd Passive and Active Measurement Conference (PAM
2021).* March 2021
- Triplet Censors: Demystifying Great Firewalls DNS Censorship Behavior
Anonymous, Arian Akhavan Niaki, Nguyen Phong Hoang, Phillipa Gill and Amir
Houmansadr
*In Proceedings of the 10th USENIX Workshop on Free and Open Communications
on the Internet. FOCI 20. USENIX. 2020.* August 2020
- Assessing the Privacy Benefits of Domain Name Encryption
Nguyen Phong Hoang, Arian Akhavan Niaki, Nikita Borisov, Phillipa Gill and
Michalis Polychronakis
In Proceedings of ACM ASIACCS 2020. July 2020
- The web is still small after more than a decade
Nguyen Phong Hoang, Arian Akhavan Niaki, Michalis Polychronakis and Phillipa
Gill
In ACM SIGCOMM Computer Communication Review 2020. June 2020
- A Global, Longitudinal Internet Censorship Measurement Platform
Arian Akhavan Niaki, Shinyoung Cho, Zachary Weinberg, Nguyen Phong Hoang,
Abbas Razaghpanah, Nicolas Christin, and Phillipa Gill
*Proceedings of the 41st IEEE Symposium on Security and Privacy (Oakland).
IEEE. 2020.* May 2020
- A Large-Scale Analysis of Deployed Traffic Differentiation Practices
Fangfan Li, Arian Akhavan Niaki, David Choffnes, Phillipa Gill, and Alan Mislove
In Proceedings of ACM SIGCOMM 2019. August 2019
- Studying TLS Usage in Android Apps
Abbas Razaghpanah, Arian Akhavan Niaki, Narseo Vallina-Rodriguez, Srikanth
Sundaresan, Johanna Amann, and Phillipa Gill
*Conference on emerging Networking EXperiments and Technologies (CoNEXT).
Seoul/Incheon, South Korea.* December 2017
- liberate (n): A library for exposing (traffic-classification) rules and avoiding them
efficiently
Fangfan Li, Abbas Razaghpanah, Arash Molavi Kakhki, Arian Akhavan Niaki,
David Choffnes, Phillipa Gill, and Alan Mislove
Internet Measurement Conference (IMC). London, UK. November 2017

Journal Papers

- Modeling and Evaluation of Service Composition in Commercial Multi-Clouds using Timed Colored Petri Nets
R. Entezari-Maleki, S.E. Etesami, N. Ghorbani, A.A. Niaki, L. Sousa, and A. Movaghar,
IEEE Transactions on Systems, Man, and Cybernetics: Systems (Volume: PP, Issue: 99) Nov. 2017

Projects

Information Controls Lab (ICLab): I took part in a global Internet censorship measurement platform.

- Curated a database of analyzed data about Internet censorship.
- Used robust censorship detection techniques with low false positive rates.

Movie genre classification using movie posters and storylines: We proposed a deep neural network that leverages both the movie poster and storyline to predict its movie genre.

- Curated a database of movie posters and storylines from IMDb.
- Compared the performance of our proposed network to the cases of networks only using movie posters and only storylines.

A TLS Measurement on Universities Around The US: We measured several factors about HTTPS servers, including TLS/SSL version, cipher suites, and certificates.

- Indexed data using Elasticsearch and written in Python which ended up as being one of the best course projects. Project available at: [Link](#)

Enterprise Resource Planning System: Analyzed, designed and implemented a desktop based Enterprise Resource Planning system.

- Developed a maintainable, fully documented Object Oriented Software written in Java using The RUP methodology and proper UML diagrams. Class's second best project. Project available at: [Link](#)

Hotel Reservation System: Designed and Implemented a web based Hotel Reservation System.

- Used the MVC architecture and relational databases and a combination of Python-Django, HTML, and JavaScript. The class's best project overall. Project available at: [Link](#)

Skills

- Programming Languages: Python, Java, Matlab, C/C++(basic), Android Programming, SQL, Swift(basic), Go, Golang(basic)
- Web Development: HTML, CSS, JavaScript(JQuery), Python(Django)
- Operating Systems: Linux(Ubuntu), Windows, Macintosh, Windows Server
- Typesetting Tools: Microsoft Office, L^AT_EX, Google Docs
- Network Tools: Wireshark, Cisco Packet Tracer, Microsoft Exchange Server

Activities

- Iranian Graduate Student Association at UMass 2017-2018
Vice president - Event Coordinator