

## Arian Akhavan Niaki

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**Research Interests**     • Computer Networks, Network Measurement, Internet Measurement

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

<b>Professional Experience</b>	<b>Cloudflare</b>	Summer 2021
	• Research Intern	
	• Worked on deploying a traffic tampering measurement project	
	<b>ThousandEyes (Cisco)</b>	Summer 2020
	• Internet Researcher Intern	
	• Worked on analyzing and comparing CDN performance globally	
	<b>International Computer Science Institute (ICSI)</b>	Summer 2018
	• Supervised by Dr. Nicholas Weaver	
	• Worked on Estimating IoT population using DNS caches	
	<b>Institute for Studies in Theoretical Physics and Mathematics (IPM)</b>	
• 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		
<b>Pishtazan Andishe Pouya,</b> Tehran, Iran	Jan 2016 - May 2016	
• Produced, designed and analyzed models for software information systems and web applications.		
<b>VADA Future Communications,</b> 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		
<b>Teaching Assistant,</b>		
• 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<sup>A</sup>T<sub>E</sub>X, Google Docs
- Network Tools: Wireshark, Cisco Packet Tracer, Microsoft Exchange Server

### Activities

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