Ahmed Saeed (Ahmed Said Mohamed Tawfik Issa)

CONTACT INFORMATION

32 Vassar Street, 32-G930
Cambridge, MA 02139

asaeed@csail.mit.edu
https://saeed.github.io

RESEARCH INTERESTS

My work broadly covers networking and systems with focus on improving the predictability and scalability of networked systems. My interests also include edge computing, visual sensor networks, cognitive radio networks, and device free localization.

EDUCATION

Georgia Institute of Technology, Atlanta, Georgia, USA

PhD in Computer Science — August 2019

- *Dissertation:* Scalable Network Scheduling in Software
- *Advisors:* Mostafa Ammar and Ellen W. Zegura

Georgia Institute of Technology, Atlanta, Georgia, USA

Master's of Science in Computer Science — May 2018

Alexandria University, Alexandria, Egypt

Bachelor's of Science, Computer and Systems Engineering — July 2010

HONORS AND AWARDS

Google PhD Fellowship in Systems and Networking (2017-2019).

Third place in Student Research Competition (SRC) at MobiCom 2011.

Second place in undergraduate Student Research Competition (SRC) at MobiCom 2009.

Travel grants to attend: MobiSys'17, ICC'13, and PerCom'12.

PROFESSIONAL EXPERIENCE

Massachusetts Institute of Technology, Cambridge, Massachusetts, USA

Postdoctoral Associate	Mentor: Mohammad Alizadeh	Sep. 2019 - now

Google Inc., Sunnyvale and Mountain View, CA, USA.

Student Researcher	Host: Nandita Dukkipati	Aug. 2018 - Dec. 2018
Software Engineering Intern	Host: Nandita Dukkipati	May 2018 - Aug. 2018
Software Engineering Intern	Host: Nandita Dukkipati	May 2016 - Jan. 2017
Software Engineering Intern	Host: Jing Ai	May 2015 - Aug. 2015

Carnegie Mellon University Qatar and **Qatar University**, Doha, Qatar.

Research Fellow — Nov. 2013 - July 2014

Egypt-Japan University for Science and Technology, Alexandria, Egypt

Research Assistant — July 2010 - Aug. 2013

Nile University, Cairo, Egypt

Intern Research Assistant — July 2009 - Aug. 2009

CONFERENCE PUBLICATIONS

16. **Annulus: A Dual Congestion Control Loop for Datacenter and WAN Traffic Aggregates**
ACM SIGCOMM 2020 (Accepted)
Ahmed Saeed, Varun Gupta, Prateesh Goyal, Milad Sharif, Rong Pan, Mostafa Ammar, Ellen Zegura, Keon Jang, Mohammad Alizadeh, Abdul Kabbani, Amin Vahdat

15. **Eiffel: Efficient and Flexible Software Packet Scheduling**
USENIX NSDI 2019
Ahmed Saeed, Yimeng Zhao, Nandita Dukkipati, Ellen Zegura, Mostafa Ammar, Khaled Harras, Amin Vahdat

14. **zD: A Scalable Zero-Drop Network Stack at End Hosts**
ACM CoNEXT2019
Yimeng Zhao, *Ahmed Saeed*, Ellen Zegura , Mostafa Ammar

13. **Unison: Enabling Content Provider/ISP Collaboration using a vSwitch Abstraction**
IEEE ICNP 2019
Yimeng Zhao, *Ahmed Saeed*, Mostafa Ammar, Ellen Zegura

12. **Characterizing the Effects of Rapid LTE Deployment: A Data Driven Analysis**
IEEE/IFIP TMA 2019
Kareem Abdullah, Noha Othman Korany, Ayman Khalafallah, *Ahmed Saeed*, Ayman Gaber

11. **If you can't beat them, augment them: Improving Local WiFi with Only Above-driver Changes**
IEEE ICNP 2018
Ahmed Saeed, Mostafa Ammar, Ellen Zegura, Khaled Harras

10. **Carousel: Scalable Traffic Shaping at End-Hosts**
ACM SIGCOMM 2017
Ahmed Saeed, Nandita Dukkipati, Vytautas Valancius, Vinh The Lam,
Carlo Contavalli, Amin Vahdat

9. **Local and Low-cost White Space Detection**
IEEE ICDCS 2017
Ahmed Saeed, Khaled Harras, Ellen Zegura, Mostafa Ammar

8. **Argus: Realistic Target Coverage by Drones**
ACM/IEEE IPSN 2017
Ahmed Saeed, Ahmed Abdelkader, Mouhyemen Khan, Azin Neishaboori, Khaled Harras, Amr Mohamed
– Full version published in ACM Transactions on Sensor Networks 2019

7. **The Inapproximability of Illuminating Polygons by α-Floodlights**
CCCG 2015
Ahmed Abdelkader, *Ahmed Saeed*, Khaled Harras, Amr Mohamed

6. **Up and Away: A Visually-Controlled Easy-to-Deploy Wireless UAV Cyber-Physical Testbed**
IEEE WiMob 2014
Ahmed Saeed, Azin Neishaboori, Khaled Harras, Amr Mohamed

5. **Low complexity target coverage heuristics using mobile cameras** *(short paper)*
IEEE MASS 2014
Azin Neishaboori, *Ahmed Saeed*, Khaled Harras, Amr Mohamed

4. **On Target Coverage in Mobile Visual Sensor Networks**
ACM MOBIWAC 2014
Azin Neishaboori, *Ahmed Saeed*, Khaled Harras, Amr Mohamed

3. **Location-Aware Probabilistic Route Discovery for Cognitive Radio Networks**
IEEE WCNC 2014
Ahmed Elbagori, *Ahmed Saeed*, Moustafa Youssef

2. **A Low-Cost Large-Scale Framework for Cognitive Radio Routing Protocols Testing**
IEEE ICC 2013
Ahmed Saeed, Mohamed Ibrahim, Khaled Harras, Moustafa Youssef

1. **RASID: A Robust WLAN Device-free Passive Motion Detection System**
IEEE PerCom 2012
Ahmed E. Kosba, *Ahmed Saeed*, Moustafa Youssef
– Full version published in IEEE Journal of Selected Topics in Signal Processing 2014

Journal Publications

4. **On Realistic Target Coverage by Autonomous Drones**
   ACM Transactions on Sensor Networks 2019
   Ahmed Saeed, Ahmed Abdelkader, Mouhyemen Khan, Azin Neishaboori, Khaled Harras, Amr Mohamed

3. **Toward Dynamic Real-time Geo-location Databases for TV white Spaces**
   IEEE Network 2015
   Ahmed Saeed, Mohamed Ibrahim, Khaled Harras, Moustafa Youssef

2. **Ichnaea: A Low-overhead Robust WLAN Device-free Passive Localization System**
   IEEE Journal of Selected Topics in Signal Processing 2014
   Ahmed Saeed, Ahmed E. Kosba, Moustafa Youssef

1. **Nuzzer: A Large-Scale Device-Free Passive Localization System for Wireless Environments**
   IEEE Transactions on Mobile Computing 2013
   Moustafa Seifeldin, *Ahmed Saeed*, Ahmed E. Kosba, Moustafa Youssef, Amr El-Keyi

Workshop Publications

3. **Vision: The Case for Symbiosis in the Internet of Things**
   ACM MCS 2015 in conjunction with ACM MobiCom
   Ahmed Saeed, Mostafa Ammar, Khaled Harras, Ellen Zegura

2. **Towards a Characterization of White Spaces Databases Errors: An Empirical Study**
   ACM WiNTECH 2014 in conjunction with ACM MobiCom
   Ahmed Saeed, Khaled Harras, Moustafa Youssef

1. **Target Coverage Heuristics Using Mobile Cameras**
   Robotic Sensor Networks 2014 part of Cyber-Physical Systems Week
   Azin Neishaboori, *Ahmed Saeed*, Amr Mohamed, Khaled Harras

Refereed Posters

3. **A Robust Technique for WLAN Device-free Passive Motion Detection**
   ACM MobiCom 2011
   Ahmed E. Kosba, *Ahmed Saeed*, Moustafa Youssef

2. **Quantifying the Impact of GPU Specific Optimizations: An Experimental Study on a Weather Forecasting Application**
   ACM PACT 2010
   Ahmed Saeed, Emad Elwany, Emad Tawadros, Kareem Abdelsalam, Pakinam Yousry, Samia Hafez

1. **DNIS: A Middleware for Dynamic Multiple Network Interface Scheduling**
   ACM MobiCom 2009
   Ahmed Saeed, Karim Habak, Mahmoud Fouad, Moustafa Youssef

Research Demos

DNIS: Dynamic Multiple Network Interface Scheduler
ACM MobiCom 2009
Ahmed Saeed, Karim Habak, Mahmoud Fouad, Moustafa Youssef

Patents

US Patent 10,454,835
"Device And Method For Scalable Traffic Shaping With A Time-Indexed Data Structure"
Carlo Contavalli, Nandita Dukkipati, *Ahmed Issa*, Vytautas Valancius, Granted Oct. 2019.

US Patent 9,800,946
"Dynamic real-time TV white space awareness"
Khaled Harras, Moustafa Amin Youssef, Mohammed Ibrahim, *Ahmed Issa*, Granted Oct. 2017.

Teaching Experience

Massachusetts Institute of Technology,

Guest Lecturer on Evolution of Internet Routing **Fall 2019**
Computer Networks (6.829)

Georgia Institute of Technology,

Guest Lecturer on Congestion Control in Datacenters **Spring 2017, Fall 2017**
Advanced Computer Networks (CS 6250)

Teaching Assistant **Fall 2015, Spring 2017**
Advanced Computer Networks (CS 6250)
Introduction to Computer Networks (CS 8803)

Alexandria University, Alexandria, Egypt

Teaching Assistant/Demonstrator **Fall 2010**
Introduction to Computers and Programming
Programming in C
Systems Programming

Activities and Professional Services

- Reviewer: IEEE/ACM ToN, IEEE JSAC, IEEE Computer, IEEE Micro, IEEE TVT, Elsevier COMNET, Elsevier Ad Hoc Networks, Elsevier Pervasive and Mobile Computing, and IEEE VTC'15.
- Vice President of Graduate Student Council for College of Computing at Georgia Tech (2015-2016).
- Senator at Graduate Student Senate of the Graduate Student Government Association (2015-2016).
- Software Freedom Day @ Alexandria University 2009 Team Leader.
- Campus Ambassador of *Sun Microsystems* in Alexandria University (2008-2009).
- Class Representative of Computer Science Class 2010, Alexandria University (2006-2007).