

Ahmed Saeed (Ahmed Said Mohamed Tawfik Issa)

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Malden, MA (02148) <https://saeed.github.io>

EDUCATION **Massachusetts Institute of Technology**, Cambridge, Massachusetts, USA

Postdoctoral Associate Sep. 2019 - now

- *Dissertation*: Scalable Network Scheduling in Software
- Working with Prof. Mohammad Alizadeh

Georgia Institute of Technology, Atlanta, Georgia, USA

PhD in Computer Science August 2019

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

Georgia Institute of Technology, Atlanta, Georgia, USA

Master's of Science in Computer Science May 2018

- Specialization: Computing Systems

Alexandria University, Alexandria, Egypt

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

- *Dissertation*: Towards Numerical Weather Prediction Acceleration Using GPUs

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 and PerCom'12.

CONFERENCE PUBLICATIONS

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

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

14. **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

13. **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

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

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

10. **Argus: Realistic Target Coverage by Drones**
ACM/IEEE IPSN 2017
Ahmed Saeed, Ahmed Abdelkader, Mouhyemen Khan, Azin Neishaboori, Khaled Harras, Amr Mohamed

9. **The Inapproximability of Illuminating Polygons by α -Floodlights**
 CCCG 2015
 Ahmed Abdelkader, *Ahmed Saeed*, Khaled Harras, Amr Mohamed
 8. **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
 7. **Low complexity target coverage heuristics using mobile cameras (*short paper*)**
 IEEE MASS 2014
 Azin Neishaboori, *Ahmed Saeed*, Khaled Harras, Amr Mohamed
 6. **On Target Coverage in Mobile Visual Sensor Networks**
 ACM MOBIWAC 2014
 Azin Neishaboori, *Ahmed Saeed*, Khaled Harras, Amr Mohamed
 5. **Location-Aware Probabilistic Route Discovery for Cognitive Radio Networks**
 IEEE WCNC 2014
 Ahmed Elbagori, *Ahmed Saeed*, Moustafa Youssef
 4. **A Low-Cost Large-Scale Framework for Cognitive Radio Routing Protocols Testing**
 IEEE ICC 2013
Ahmed Saeed, Mohamed Ibrahim, Khaled Harras, Moustafa Youssef
 3. **Unconventional TV Detection using Mobile Devices**
 IARIA UBICOMM 2013
 Mohamed Ibrahim, *Ahmed Saeed*, Moustafa Youssef, Khaled Harras
 2. **Robust WLAN Device-free Passive Motion Detection**
 IEEE WCNC 2012
 Ahmed E. Kosba, *Ahmed Saeed*, Moustafa Youssef,
 1. **RASID: A Robust WLAN Device-free Passive Motion Detection System**
 IEEE PerCom 2012
 Ahmed E. Kosba, *Ahmed Saeed*, Moustafa Youssef,
- 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 WiTECH 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

4. **Enabling Large Scale Flexible Deployment of Cognitive Radio Routing Protocols**
ACM WiNTECH 2012 in conjunction with ACM MobiCom
Ahmed Saeed, Mohamed Ibrahim Khaled Harras, Moustafa Youssef
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

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

PATENTS

- Patent 9800946, “Dynamic real-time TV white space awareness”, Khaled Harras, Moustafa Amin Youssef, Mohammed Ibrahim, *Ahmed Issa*, Granted Oct. 2017.
- US Patent Application No. 15/411,341, “Device And Method For Scalable Traffic Shaping With A Time-Indexed Data Structure”, Carlo Contavalli, Nandita Dukkhipati, *Ahmed Issa*, Vytautas Valancius, filed Jan. 2017.
- US Patent Application No. 15/411,335, “Device And Method For Scalable Traffic Shaping At A Receiver With A Time-Indexed Data Structure”, Carlo Contavalli, Nandita Dukkhipati, *Ahmed Issa*, Vytautas Valancius, filed Jan. 2017.

PRACTICAL
EXPERIENCE

- College of Computing, Georgia Institute of Technology**, Atlanta, GA, USA.
Research Assistant **August 2014 - Present**
- Google Inc.**, Sunnyvale and Mountain View, CA, USA.
Student Researcher **Aug. 2018 - Dec. 2018**
Software Engineering Intern **May 2018 - Aug. 2018**
Software Engineering Intern **May 2016 - Jan. 2017**
Software Engineering Intern **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
Research Assistant Intern **July 2009 - Aug. 2009**
- eSpace Technologies**, Alexandria, Egypt
Software Engineering Intern **July 2008 - Feb. 2009**

TEACHING
EXPERIENCE

Georgia Institute of Technology,

Guest Lecturer on Congestion Control in Datacenters
Advanced Computer Networks (CS 6250)

Spring 2017, Fall 2017

Teaching Assistant
Advanced Computer Networks (CS 6250)
Introduction to Computer Networks (CS 8803)

Fall 2015, Spring 2017

Alexandria University, Alexandria, Egypt

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

Fall 2010

TECHNICAL
SKILLS

Programming:

- C/C++, Python, Go, Java, Ruby, CUDA, TCL/OTCL, Assembler, FORTRAN, VHDL, Matlab, Shell, JavaScript, GNU make, SQL.

Libraries and frameworks:

- Linux Networking Stack (TCP/IP, QDisc, and wireless), Docker Containers, Kubernetes, AR Drone SDK, GNU Radio, Click Modular Router, Windows Win32 Networking API (Layered Service Provider), MPI, OpenMP, ns2, GTK+, WPF, SWT, SWING.

ACTIVITIES AND
PROFESSIONAL
SERVICES

- Reviewer: 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).