Ahmed Saeed (Ahmed Said Mohamed Tawfik Issa)

Contact Information

Office: Klaus Building - Room 3337
Mailing address: 715 Highland Sqaure Dr NE, Atlanta, GA (30306)
+1 (678) 925-8050
ahmed.saeed@gatech.edu
http://www.cc.gatech.edu/~amsmti3

Education

Georgia Institute of Technology, Atlanta, Georgia, USA

PhD in Computer Science — August 2014 - Present

- **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

- Thesis title: 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 Dukkipati, 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 Dukkipati, 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 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

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 Dukkipati, *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 Dukkipati, *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 **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

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).