

# Eman Ramadan Shehata

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## Summary of Qualifications

- Pursuing a PhD in Computer Science
- Experience in Content Distribution Networks (CDN), Software Defined Networks (SDN), Resilient Routing, Information Centric Networks (ICN), 5G Mobile Networking
- Obtained industry experience through internship at Google

## Education

### Ph.D. Computer Science

Spring 2021 (Expected)  
Minneapolis, MN

- University of Minnesota
  - Research Area: Networking
  - Adviser: Zhi-Li Zhang
  - Coursework highlights: Foundations of Advanced Networking, Advanced Computer Networks (SDN), Graph Theory, Introduction to Data Mining, Computer Systems Performance, Engineering Optimization, and Advanced Algorithms and Data Structures
  - GPA: 3.85/4.0

### M.Sc. Computer Engineering

2012

- Alexandria University Alexandria, Egypt
  - Thesis: Energy Aware Overlapping Multi-hop Clustering for Wireless Sensor Networks
  - Adviser: Moustafa Youssef
  - GPA: 3.95/4.0

### B.Sc. Computer Engineering

2008

- Alexandria University Alexandria, Egypt
  - Graduation Project: Egypt Toll Roads (Electronic Toll Collection with RFID)
  - GPA: 3.91/4.0 (Distinction with Degree of Honor, Ranked 4th)

## Publications

- [1] Arvind Narayanan, **Eman Ramadan**, Rishabh Mehta, Xinyue Hu, Qingxu Liu, Rostand A. K. Fezeu, Udhaya Kumar Dayalan, Saurabh Verma, Peiqi Ji, Tao Li, Feng Qian, and Zhi-Li Zhang. "Lumos5G: Mapping and Predicting Commercial mmWave 5G Throughput". In Internet Measurement Conference (IMC), October 2020.
- [2] Arvind Narayanan, **Eman Ramadan**, Jacob Quant, Peiqi Ji, Feng Qian, and Zhi-Li Zhang. "5G Tracker - A Crowdsourced Platform to Enable Research Using Commercial 5G Services". In SIGCOMM, August 2020. [Poster]
- [3] Arvind Narayanan, **Eman Ramadan**, Jason Carpenter, Qingxu Liu, Yu Liu, Feng Qian, and Zhi-Li Zhang. "A First Measurement Study of Commercial mmWave 5G Performance on Smartphones". In WWW, April 2020.
- [4] **Eman Ramadan**, Pariya Babaie, and Zhi-Li Zhang. "Performance Estimation and Evaluation Framework for Caching Policies in Hierarchical Caches". In Computer Communications, 2019.
- [5] Arvind Narayanan, Saurabh Verma, **Eman Ramadan**, Pariya Babaie, and Zhi-Li Zhang. "Making Content Caching Policies 'Smart' Using the DEEPCACHE Framework." In SIGCOMM CCR, 2019.
- [6] Pariya Babaie, **Eman Ramadan**, and Zhi-Li Zhang. "Cache Network Management Using BIG Cache Abstraction". In INFOCOM, IEEE, 2019.
- [7] Arvind Narayanan, Saurabh Verma, **Eman Ramadan**, Pariya Babaie, and Zhi-Li Zhang. "DeepCache: A Deep Learning Based Framework For Content Caching." In Proceedings of the 2018 Workshop on Network Meets AI & ML (SIGCOMM WKSHPs), (NetAI), 2018. **Best Paper Award**
- [8] **Eman Ramadan**, Pariya Babaie, and Zhi-Li Zhang. "A Framework for Evaluating Caching Policies in a Hierarchical Network of Caches". In IFIP Networking Conference and Workshops, IEEE, 2018.
- [9] Arvind Narayanan, **Eman Ramadan**, and Zhi-Li Zhang. "OpenCDN: An ICN-based Open Content Distribution System Using Distributed Actor Model." In IEEE INFOCOM Conference on Computer Communications Workshops (IECCO), 2018.
- [10] Yang Zhang, **Eman Ramadan**, Hesham Mekky, and Zhi-Li Zhang. "When Raft Meets SDN: How to Elect a Leader and Reach Consensus in an Unruly Network." Asia-Pacific Workshop on Networking (APNet), 2017. **Best Paper Award**
- [11] **Eman Ramadan**, Arvind Narayanan, Zhi-Li Zhang, Runhui Li, and Gong Zhang. "BIG Cache Abstraction for Cache Networks." IEEE International Conference in Distributed Computing Systems (ICDCS), 2017.

- [12] **Eman Ramadan**, Hesham Mekky, B. Dumba, and Zhi-Li Zhang. “Adaptive Resilient Routing via Preorders for SDN.” Workshop on Distributed Cloud Computing DCC 2016 (Co-located with PODC’16).
- [13] **Eman Ramadan**, Arvind Narayanan, and Zhi-Li Zhang. “CONIA: Content (provider)-Oriented, Namespace Independent Architecture for Multimedia Information Delivery.” IEEE International Conference on Multimedia & Expo Workshops (ICMEW), 2015.

## Research Experience

<b>University of Minnesota</b> Research Assistant	Minneapolis, MN Fall 2013 - Present
<b>Futurewei Technologies, Inc./Huawei R&amp;D USA</b> Research Intern	Santa Clara, CA Fall 2016
<b>Bell-Labs/Alcatel-Lucent</b> Research Intern	Stuttgart, Germany Summer 2013
<b>Alexandria University</b> Graduate Research Assistant	Alexandria, Egypt Fall 2009 - Fall 2010

## Teaching Experience

<b>University of Minnesota</b> <b>Co-Instructor</b>	Minneapolis, MN Fall 2017
<ul style="list-style-type: none"> <li>• Csci 4211, Introduction to Computer Networks</li> </ul>	
<b>Teaching Assistant</b>	Fall 2012 - Spring 2013
<ul style="list-style-type: none"> <li>• Csci 1902, Structure of Computer Programming II, undergrad level.</li> </ul>	
<b>Alexandria University</b> Graduate Teaching Assistant	Alexandria, Egypt Fall 2008 - Spring 2012

## Work Experience

<b>Google Inc.</b> <b>Software Engineering Intern</b>	Zurich, Switzerland Summer 2011
<b>Ejada Systems</b> <b>Software Engineer</b>	Alexandria, Egypt Fall 2008 - Summer 2009

## Awards & Activities

- Computer Science and Engineering CS&E Grad Coordinator for Inclusiveness, Diversity, Equity, and Advocacy since Fall 2020.
- A member of the Computer Science and Engineering Committee CS-IDEA for Inclusiveness, Diversity, Equity, and Advocacy since Fall 201
- Volunteer at Feed My Starving Children charity organization since 2019.
- Volunteered as a panelist for the CS UMN department’s Visit Day event for prospective graduate students in 2019.
- Best paper award for our paper “DeepCache” SIGCOMM NetAIM workshop 2018.
- Awarded ACM’s Student Research Competition (SRC) travel grant to attend Grace Hopper Celebration 2018.
- The social coordinator for Computer Science Graduate Student Association (CSGSA) since 2018.
- Volunteered at the CS UMN department’s Visit Day event for prospective graduate students in 2018.
- Best paper award for our paper “When Raft Meets SDN” APNet workshop 2017.
- A graduate mentor volunteer for UMN CSE WISE Undergrad-Grad Mentor program since 2017.
- Awarded the travel grant to attend GENI NICE (co-located with CoNEXT) 2016.
- Awarded the N2Women travel grant to attend SIGCOMM 2014 and N2Women workshop.
- Awarded the travel grant to attend GENI Summer Camp 2014.
- Awarded the CRA-W grant to attend the Graduate Cohort Workshop 2014.
- Volunteered at Summer Tech Camp for primary school kids in 2014.
- Awarded the Arab Women in Computing (AWIC) grant to attend Grace Hopper 2013.
- Google Anita Borg EMEA Scholarship Finalist in 2010.

## Computer Skills

- **Programming:** Python, C/C++, C#, Java, shell scripting
- **Web:** HTML, JavaScript, CSS, JSP, ASP.Net, AJAX, J2EE, Struts
- **Network Tools:** NS3, Mininet, OVS, P4-NetFPGA SUME, NS2
- **Others:** Pandas, Matplotlib, Source Version Control (Git), Gnuplot, Linux, Awk, Matlab

## Professional Memberships References

ACM, IEEE student member since 2014.

Available upon request