

Md Ashiqur Rahman

GRADUATE ASSISTANT · PHD STUDENT

1025 E Orange St. Apt 206, Tempe, AZ 85281

☎ (+1) 480-310-7674 | ✉ marahman@email.arizona.edu

🏠 ashiqrahman.com | 📧 ashiqopu | 📷 ashiqopu117

Overview

7+ years of experience as a researcher, developer, problem-solver, mentor, and instructor. Love to work on challenging problems and finding more straightforward solutions that others might easily overlook.

Education

The University of Arizona

AZ, U.S.A

PHD STUDENT, COMPUTER SCIENCE (COURSEWORK GPA: 3.75)

2016 - 05/2021

Khulna Univ. of Engineering & Technology (KUET) Bangladesh

B.Sc. IN COMPUTER SCIENCE AND ENGINEERING (GPA: 3.60)

2011 - 2015

Skills

Research Routing in ad-hoc networks, Scheduling algorithms
Coding & Tools C/C++, Scala, Python, Bash, Lucene, Vim, GDB, Docker

Experience

Network Research Lab, The University of Arizona

AZ, U.S.A

GRADUATE RESEARCH ASSISTANT

2016 - Present

- Routing in Mobile ad-hoc, Delay-tolerant, and challenged networks using Named Data Networking (NDN).

Computer Science, The University of Arizona

AZ, U.S.A

GRADUATE TEACHING ASSISTANT

2016 - Present

- CSC 452 Operating Systems (Fall 2018); CSC 425 Computer Networks (Spring-Fall 2017); CSC 477/577 Intro. to Computer Vision (Fall 2016).

Computer Sc. & Engrg., Daffodil Intl. Univ. (DIU) Bangladesh

INSTRUCTOR

2015 - 2016

- Mentor: Competitive Programming (Beginner-Intermediate).
- Courses instructed: CSE 221 Algorithms; CSE 134 Data Structures.

Computer Science and Engineering, KUET

Bangladesh

LEADING UNDERGRADUATE RESEARCHER (WITH DR. G.G. NAWAZ ALI)

2014 - 2015

- Studying scheduling algorithms and applications of Network Coding in On-demand Vehicular Ad-hoc Networks.

SGIPC (Special Group of Interest in Programming Contests), KUET

Bangladesh

WORKSHOP MANAGER AND INSTRUCTOR

2012 - 2015

Honors & Awards

- 2019 **2nd Runners-up**, 8th NDN Hackathon at UCLA, CA, USA
- 2018 **Winner**, 6th NDN Hackathon at FIU, FL, USA
- 2017 **Winner**, 4th NDN Hackathon at Unive. of Memphis, TN, USA
- 2014 **Position 75**, ACM ICPC 2014 Asia Regional Dhaka Site
- 2014 **Winner**, Water Hackathon App Fest by WORLD BANK, BGD

Publications (Graduate research)

On Data-centric Forwarding in MANETs: An In-depth Analysis and Baseline Design

China

[SUBMITTED] 2020 IEEE INFOCOM

2020

- Md Ashiqur Rahman; Beichuan Zhang

Publications (Undergraduate research)

Cooperative Cache Transfer-based On-demand Network Coded Broadcast in Vehicular Networks

ACM

ACM TRANSACTION ON EMBEDDED COMPUTING SYSTEMS

2019

- G. G. MD. Nawaz Ali; MD. Noor-A-Rahim; Md. Ashiqur Rahman; Beshah Ayalew; Peter H. J. Chong; Yong Liang Guan

Efficient Real-time Coding-assisted

Heterogeneous Data Access in Vehicular Network

IEEE

IEEE INTERNET OF THINGS JOURNAL

2018

- G. G. MD. Nawaz Ali; MD. Noor-A-Rahim; Md. Ashiqur Rahman; Syeda Khairunnesa Samantha; Peter Han Joo Chong; Yong Liang Guan

Efficient coding based heterogeneous data access in vehicular networks

France

IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS (ICC)

2017

- G. G. M. Nawaz Ali; Md. A. Rahman; S. K. Samantha; Yumeng Gao; Peter H.J. Chong; Y. L. Guan

On Accessing Heterogeneous Data Items Using Network Coding in Wireless Broadcast

Canada

IEEE 84TH VEHICULAR TECHNOLOGY CONFERENCE (VTC-FALL)

2016

- Md. Ashiqur Rahman; G. G. MD. Nawaz Ali; Yumeng Gao; Syeda K. Samantha; Peter H. J. Chong

On Scheduling Real-Time Multi-item Query with Network Coding in Multi-RSU VANETS

S. Korea

22ND IEEE RTCSA

2016

- Md. A. Rahman; G.G.M. Nawaz Ali; Peter H.J. Chong; S.K. Samantha; M.F. Muntasir; C. Chen

On Efficient Data Dissemination Using Network Coding in Multi-RSU VANETS

China

IEEE 83RD VEHICULAR TECHNOLOGY CONFERENCE (VTC SPRING)

2016

- G. G. MD. Nawaz Ali; Md. Ashiqur Rahman; Peter Han Joo Chong; Syeda Khairunnesa Samantha

Projects

NFD: Named-Data Forwarding Daemon

STUDENT DEVELOPER (TOOLS: BOOSTC++, GERRIT, JENKINS)

2016-Present

- A network forwarder that evolves together with the NDN protocol (Site: <https://named-data.net/doc/NFD/current/>).

Weighted Dropout: Supporting Multi-Level Annotations for Medical Literature on Patient, Interventions and Outcomes

UofA, AZ

CSC 585 ALGORITHMS IN NLP

Fall 2018

- Variable dropout-probability based on distance from tokens of interest.
- Maintains higher context information from all hot-word neighbors.
- Near-SotA performance with significantly lower model training time.
- Tools: Python, Tensorflow, Docker.

Implementing components of MINIBASE in C

UofA, AZ

CSC 560 DATABASE SYSTEMS AND IMPLEMENTATIONS

Fall 2017

- Implementing Heapfile manager, Buffer manager, B+ tree in a DBMS.

Building (a part of) Watson

UofA, AZ

CSC 583 TEXT RETRIEVAL & WEB SEARCH

Spring 2017

- An end-to-end Information Retrieval system that indexes a large set of Wikipedia pages to retrieve top relevant pages for short queries similar to the Jeopardy game.
- Tools: Scala, Apache Maven, Lucene.

Implementing a Software Router in C

UofA, AZ

CSC 525 PRINCIPLES OF COMPUTER NETWORKING

Fall 2016

- A software router with ARP protocol, IP forwarding, and PWOSPF routing algorithm that can forward IP packets while reacting to link changes.