

Aisha B Rahman

Graduate Research Assistant

The University of New Mexico, Dept. of Electrical and Computer Engineering, Albuquerque, NM 87131, USA

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Education

Ph.D. Candidate, Department of Electrical and Computer Engineering THE UNIVERSITY OF NEW MEXICO

Albuquerque, NM, USA

Jan. 2022 - Present

- **Laboratory:** Performance and Resource Optimization Lab (**PROTON LAB**)
- **Major Field Program:** Computer Engineering
- **Research Interest and Specialization:** Wireless Communication and Networks, Online Social Networks, Network Economics, Resource Allocation and Management, Cloud, Fog and Edge Computing, Network Security
- **Advisor:** Dr. Eirini Eleni Tsipropoulou
- **Current GPA:** 4.21/4.00

Master of Science (MSc) in Electrical and Electronic Engineering UNIVERSITY OF CHITTAGONG

Chattogram, Bangladesh

Jan. 2019 - Dec. 2021

- **Laboratory:** Wireless Emerging Technology Lab (**WET LAB**)
- **Major Field:** Wireless Communication
- **Advisor:** Dr. Md. Fazlul Kader
- **MSc Thesis Title:** Best Relay Aided Energy Harvesting in a Multi-Relay Cooperative Network: A New Energy Harvesting Scheme
- **GPA:** 3.64/ 4.00

Bachelor of Science (BSc) in Electrical & Electronic Engineering UNIVERSITY OF CHITTAGONG

Chattogram, Bangladesh

Jan. 2015- Dec. 2018

- **Major Field:** Wireless Communication
- **Project:** Bridge Strength Preservation by Automatic Traffic Density Control: an IoT Application
- **Advisor:** Ariful Islam
- **GPA:** 3.68/ 4.00

Work & Research Experience

Research Assistant

Performance and Resource Optimization Lab (**PROTON LAB**)
University of New Mexico

Albuquerque, NM, USA

May 2022 - Present

- Wireless Communication and Networks
- Online Social Networks
- Resource Allocation and Management through Network Economics
- Cloud, Fog, and Edge Computing
- Network Security

Teaching Assistant

University of New Mexico
• ECE-440 Introduction to Computer Networks
• ECE-524 Network Economics

Albuquerque, NM, USA

Jan. 2022- May 2022

Research Assistant

Wireless Emerging Technology Lab (**WET LAB**)
University of Chittagong
• Wireless Communication
• Internet of Things (IoT)
• Simultaneous Wireless Information and Power Transmission (SWIPT)
• Radio Frequency Energy Harvesting

Chattogram, Bangladesh

May 2019 - Feb . 2021

Volunteering Experience

Chair, IEEE Women in Engineering Affinity Group Albuquerque Section

Organizing and conducting monthly public talks, workshops, and other volunteering activities for promoting women engineers and scientists.

Albuquerque, NM, USA

Aug. 2022 - Present

Former Vice-Chair, IEEE Women in Engineering Affinity Group Albuquerque Section

Feb. 2022 - Aug. 2022

Skills

Programming Languages	Python, MATLAB, C
Software Tools	MATLAB, Anaconda, Arduino-IDE, PSPICE, OpenAI
Embedded Skills	Gym Arduino series, Microcontrollers, RadioShark

Publications

Conferences

1. **A. B. Rahman**, P. Charatsaris, E. E. Tsiropoulou, S. Papavassiliou, "Information-Centric Networking Cache Memory Allocation: A Network Economics Approach", IEEE GLOBECOM 2023. (Accepted)
2. **A. B. Rahman**, J. Patrizi, P. Charatsaris, E. E. Tsiropoulou, S. Papavassiliou, "Bioinspired Dynamic Spectrum Management in 3D Networks", IEEE DCOSS-IoT 2023. (To appear)
3. M. S. Siraj, **A. B. Rahman**, P. Charatsaris, E. E. Tsiropoulou, S. Papavassiliou, "Positioning, Navigation, and Timing on the Air", IEEE DCOSS-IoT 2023. (To appear)
4. **A. B. Rahman**, P. Charatsaris, M. S. Siraj, E. E. Tsiropoulou, "Symbiotic Content Caching in Next-Generation Information-Centric Networking", IEEE DCOSS-IoT 2023. (To appear)
5. **A. B. Rahman**, M. S. Siraj, E. E. Tsiropoulou, S. Papavassiliou, "Mutualistic Compute Continuum: A Network Economics Analysis", IEEE ICC, 2023. (To appear)
6. A. Adesokan, M. S. Siraj, **A. B. Rahman**, E. E. Tsiropoulou, S. Papavassiliou, "How to become an Influencer in Social Networks", IEEE ICC 2023. (To appear)
7. M. S. Siraj, **A. B. Rahman**, M. Diamanti, E. E. Tsiropoulou, S. Papavassiliou and J. Plusquellec, "Orchestration of Reconfigurable Intelligent Surfaces for Positioning, Navigation, and Timing." MILCOM 2022 - 2022 IEEE Military Communications Conference (MILCOM), Rockville, MD, USA, 2022, pp. 148-153, doi: 10.1109/MILCOM55135.2022.10017665.
8. **A. B. Rahman**, M. S. Siraj, N. Kubiak, E. E. Tsiropoulou and S. Papavassiliou, "Network Economics-based Crowdsourcing in Online Social Networks," GLOBECOM 2022 - 2022 IEEE Global Communications Conference, Rio de Janeiro, Brazil, 2022, pp. 4655-4660, doi: 10.1109/GLOBECOM48099.2022.10001611.
9. **A. B. Rahman** and M. F. Kader, "Best Relay Transmission Aided Energy Harvesting in a Multi Relay Cooperative Network," 2020 IEEE Region 10 Symposium (TENSYMP), Dhaka, Bangladesh, 2020, pp. 106-109, doi: 10.1109/TENSYMP50017.2020.9230985.
10. **A. B. Rahman**, M. S. Kamal and A. Islam, "Bridge Strength Preservation by Automatic Traffic Density Control: an IoT Application," 2019 1st International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT), Dhaka, Bangladesh, 2019, pp. 1-5, doi: 10.1109/ICASERT.2019.8934520.

Journals

1. M. S. Siraj, **A.B. Rahman**, M. Diamanti, E. E. Tsiropoulou, S. Papavassiliou, "Alternative Positioning, Navigation, and Timing in Satisfaction Form and Reconfigurable Intelligent Surfaces, in IEEE Systems Journal, doi: 10.1109/JYST.2023.3268989.
2. **A. B. Rahman**, M. F. Kader, "A new energy harvesting scheme for multi-relay cooperative networks", Digital Signal Processing, Volume 133, March 2023. doi: 10.1016/j.dsp.2022.103846
3. P. Khan et al., Machine Learning and Deep Learning Approaches for Brain Disease Diagnosis: Principles and Recent Advances," in IEEE Access, vol. 9, pp. 37622-37655, 2021, doi: 10.1109/ACCESS.2021.3021000.

Honors & Awards

2023	IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids 2023 Technical Committee (TPC) Member	Glasgow, Scotland
2023	IEEE Albuquerque Section Service Award 2023.	Albuquerque, NM, USA
2023	3rd International Conference on Electrical, Computer and Communication Engineering (ECCE 2023) Technical Program Committee (TPC) Member	Chattogram, Bangladesh
2022	2022 Women in Technology Scholarship, Cadence	California, USA
2022	IEEE GLOBECOM 2022 GCSN Technical Program Committee (TPC) Member	Rio de Janeiro, Brazil
2022	IEEE ISCC 2022 Technical Program Committee (TPC) Member	Rhodes Island, Greece
2021	Education Board Scholarship based on Merit during M. Sc. degree program, 2019 - 2021	Chattogram, Bangladesh
2018	1st Position in 1st APECE Project Competition, University of Chittagong 2nd Runners Up , Project Showcasing, EDU Engineering Day, East Delta University Education Board Scholarship based on Merit during B. Sc. degree program, 2015 - 2018	Chattogram, Bangladesh
2009	General Grade Scholarship, Education Board Bangladesh	Dhaka, Bangladesh

References available upon request.