Hossain Mansur Resalat Faruque

Research Associate at Arizona State University, USA.

Phone: 480-572-5805

Email: hfaruque@asu.edu

Research Gate: https://www.researchgate.net/profile/Hossain_Mansur_Resalat_Faruque

Google Scholar: https://scholar.google.com/citations?user=IxYYbB4AAAAJ&hl=en

Objective

Electrical Engineering PhD student with specialization in the field of Nanomaterials, Nanophotonics, 2D exfoliation, EBM, Optics, and Optoelectronics

Qualifications

- Strong background in core concepts of electrical and computer engineering
- Strong publication in top-tier Journals and international conferences including IEEE Access and Energies
- Skilled in MATLAB with experience of developing quantum mechanical model for nanomaterials and nanodevices
- First-hand experience of using First Principle Calculation and FDTD simulation for determining carrier dynamics of 2D nanomaterials and Plasmonic devices.
- Worked on cutting edge research topic such as: Graphene, TMDC materilas, 2D Hexagonal Boron Nitride, 2D ZnO, Polarimetric imaging and Polarimetric microscope
- Dr. Fatema Rashid Best Paper Award, 5th International Conference on Advances in Electrical Engineering (ICAEE), Dhaka, Bangladesh, IEEE, 2019
- Strong communication skill as demonstrated through research presentations
- Can legally work in the USA

Work Experience

2018-2019 Research Assistant of Dr. Eklas Hossain, Assistant Professor, Oregon Institute of Technology, Oregon, USA (Working remotely from Bangladesh)

2019-Current Research Associate, Arizona State University, Arizona, USA.

Education

2013-2018 Bachelor of Science in Electrical and Electronic Engineering, Khulna University of Engineering & Technology, Khulna, Bangladesh, CGPA: 3.39 (out of 4.00)

2020-Current PhD in Electrical Engineering, Arizona State University, USA, GPA 3.5 (out of 4.00)

Graduate Courses

Advanced Silicon Processing, Optoelectronic Devices, VLSI Design for Reliability, Solar Cells

Skills

- Programming language: C, C++, MATLAB
- Simulation package: Quantum Espresso, Virtual Nano Lab, PSpice, Xcrysden, Verilog HDL, DSCH2.
- Hardware Experience: ATmega328P Microcontroller
- Design: Solidworks

Published Papers:

2018 **H. M. R. Faruque**, A. Mukherjee, M. S. Islam, A. G. Bhuiyan, and A. Hashimoto, "Effects of Edge Termination on the Electronic Properties of Zigzag Boron Nitride Nanoribbons," *10th International Conference on Electrical and Computer Engineering (ICECE),* Dhaka, Bangladesh, pp. 305-308, IEEE.

2019 A. Mukherjee, **H. M. R. Faruque**, M. S. Islam, A. G. Bhuiyan, and A. Hashimoto, "Permeability Analysis of Pure Water across Nano Porous Graphene," *2nd International Conference on Electrical, Computer and Communication Engineering (ECCE),* Cox's Bazar, Bangladesh, pp. 1-4, IEEE.

2019 **H. M. R. Faruque**, K. Hosen, A. S. M. J. Islam, and M. S. Islam, "Impact of Halogen Impurity Doping on the Electronic Properties of 2D ZnO: A First Principles Study," *5th International Conference on Advances in Electrical Engineering (ICAEE),* Dhaka, Bangladesh, IEEE.

2019 M. S. Rahman, M. S. Hossain, E. H. Rahat, D. R. Dipta, **H. M. R. Faruque**, and F. K. Fattah, "Efficient Hardware Implementation of 256-bit ECC Processor Over Prime Field," *2nd International Conference on Electrical, Computer and Communication Engineering (ECCE),* Cox's Bazar, Bangladesh, pp. 1-6, IEEE.

2019 E. Hossain, D. Murtaugh, J. Mody, **H. M. R. Faruque**, M. S. H. Sunny, and N. Mohammad, "A Comprehensive Review on Second-Life Batteries: Current State, Manufacturing Considerations, Applications, Impacts, Barriers & Potential Solutions, Business Strategies, and Policies," *IEEE Access,* vol. 7, pp. 73215-73252.

2020 E. Hossain, **H. M. R. Faruque**, M. S. H. Sunny, N. Mohammad, and N. Nawar, "A Comprehensive Review on Energy Storage Systems: Types, Comparison, Current Scenario, Applications, Barriers, and Potential Solutions, Policies, and Future Prospects," *Energies*, vol. 13, no. 14, p. 3651.

2019 M. S. H. Sunny, D. R. Dipta, S. Hossain, **H. M. R. Faruque,** and E. Hossain, "Design of a Convolutional Neural Network Based Smart Waste Disposal System," *1st International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT),* Dhaka, Bangladesh, IEEE.

2019 F. I. Bappy, M. J. Islam, A. K. Podder, D. R. Dipta, **H. M. R. Faruque,** and E. Hossain, "Comparison of Different Hybrid Renewable Energy Systems With Optimized PV Configuration to Realize the Effects of Multiple Schemes," *1st International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT),* Dhaka, Bangladesh, IEEE.

2019 M. R. Hasan, E. Hossain, **H. M. R. Faruque**, and T. Sultan, "IoT Based Smart Energy Management in Residential Applications," *1st International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT),* Dhaka, Bangladesh, IEEE.

Service to Scientific Community

2018-Current Serving as a Reviewer for the journal IEEE Access (September, 2018-Continuing),

2019 Served as a Reviewer for 5th International Conference on Advances in Electrical Engineering (ICAEE)