

MD. SHARIFUL ISLAM

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EDUCATION

Shahjalal University of Science and Technology, Sylhet, Bangladesh *Jan 2016 - Dec 2019*
Bachelor of Engineering. CGPA: 3.72 out of 4 (Class Position: 5)
Department of Electrical and Electronic Engineering

Notre Dame College, Dhaka, Bangladesh *July 2013 - June 2015*
Higher Secondary Certificate GPA: 5 out of 5

Government Laboratory high School, Dhaka, Bangladesh *Jan 2003 - Mar 2013*
Secondary School Certificate GPA: 5 out of 5

RESEARCH EXPERIENCE

Lattice Structure Dependent Modulation of Photonic Band Gap in Gallium Phosphide Based 2D Photonic Crystal

A study of band structure modulation by lattice constituent, the photonic band gap characteristics of gallium phosphide (GaP) based photonic crystals (PCs) for different lattice structures have been reported. Three different types of configurations, triangular, hexagonal and honeycomb lattice structures for both hole and rod variant have been considered in this study.

Research Assistant, Farmer Robot for Harvesting and Maintaining Plants

A prototype of farming bot to pick fruit and plant maintenance, consisting an automatic sensor-based pumping system and a robotic arm with 6 degrees of freedom. Specially designed for low costing so that the poor farmers can afford. This project was funded by Shahjalal university research center.

TRAINING EXPERIENCE

TICI, Narshingdi, Bangladesh November - December 2019
Trainee

- Industrial Technology on Electrical Engineering and Instrumentation. A 3-week long training program focused on industrial electrical instrumentation, automation, PLC, DCS and control system.

SKILLS

Drawing and Designing AutoCad (2D), Autocad, Adobe Illustrtor

Numerical analysis & Simulation Tools MATLAB and Simulink, Cadence OrCAD, Cadence Virtuoso and Assura, Powerworld Simulator, Lumerical FDTD and MODE.

Programming Language C, Python, Assembly.

Document Preparation Microsoft Word and L^AT_EX

PROJECTS

PFI PLANT Apr 2018–June 2018

A prototype of automatic power factor improving system. It can improve power factor to around 0.97 to 1.

ELECTRONIC CHIP WEBSITE Oct 2018–Mar 2019

A website contains datasheets, pin diagram etc. of electronics chips. Especially designed for the use of any electronics laboratory.

CMOS 4-BIT USR DESIGN Feb 2019–Apr 2019

Design and testing of an Integrated Circuit (IC) layout for a 4-bit USR. The layout was designed by use of a well-known EDA tool named Cadence. A total of 360 MOSFETs were used to complete the whole circuit and the device area was only 87.89nm*36.56nm. Design and testing of an Integrated Circuit (IC) layout for a 4-bit USR. The layout was designed by use of a well-known EDA tool named Cadence. A total of 360 MOSFETs were used to complete the whole circuit and the device area was only 87.89nm*36.56nm.

BANGLA SIGN LANGUAGE INTERPRETER July 2019–Feb 2020

Bangla sign language detection from real-time video using neural network. Trained for 15 different Bangla sign language and a comparative analysis of different optimizers has also done.

TEST SCORES

GRE	Verbal	Quant	AWA

IELTS	Reading	Writing	Speaking	Listening	Total

TOEFL	Reading	Writing	Speaking	Listening	Total

ACTIVITIES

Publication secretary of IEEE SUST Student Branch, 2018-19

Ambassador, IEEEEXTREME 12.0 and 13.0.

Lead Ambassador, IEEE Collabratec

Mentor, Mentors Without Border (MWB)