
Khandker Akif Aabrar

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RESEARCH INTEREST

Nano electronic devices, Nano magnetism, Device modeling

EDUCATION

PhD in Electrical Engineering

University of Notre Dame du Lac, Indiana, 46556, USA

Major: Electronic Materials & Devices

August 2019-Present

B.Sc. in Electrical & Electronic Engineering

Bangladesh University of Engineering & Technology (BUET)

Major: Electronics

Undergraduate Thesis Title:

Temperature Dependent Structural Studies and Magnetic
Characterization of Pure Bismuth Ferrite (BiFeO₃) Nanoparticle
Synthesized by Sol-gel Method

CGPA: **3.89**/4.00 Class Rank **18**/189

October 2015

PROFESSIONAL EXPERIENCE

October 2015-August 2019

Lecturer, Department of Electrical & Electronic Engineering

United International University, Dhaka
Bangladesh

RESEARCH EXPERIENCE

Undergraduate Projects:

- Proteus Design of **Digital Clock with Resettable Alarm Using Basic Logic Gates** and Implementation on PCB
- Proteus design of an **8-bit PC which can carry out 29 basic instructions**
- Simulation and threshold **voltage extraction of Tunnel-FET in TCAD ATLAS**
- **PID Control System implemented Two Wheeler**
- Designing **addition of generator unit and transmission line so as to handle double the Base Case load**
- Water purification by **parabolic trough concentrator** using solar energy.

GRANTS & PUBLICATIONS

Designing & modeling “ZnO-gated III-V Semiconductor Channel based Ion-sensitive FinFET” using TCAD, UIU Research Grant.

SL#30: <http://www.uiu.ac.bd/about-uiu/uiu-research-grant/research-grant-2016/>

Conference Papers

[1] Abid Anjum Sifat, **Khandker Akif Aabrar**, Khairul Bashar, Bashir Ahmmad, M. A. Basith and Md. Ziaur Rahman Khan ” *Temperature Dependent Structural Studies and Magnetic Characterization of Pure BiFeO₃ Nanoparticles Synthesized by Sol-gel Method* ” 9th International Conference on Electrical and Computer Engineering (ICECE 2016), Dhaka, December 20-22,2016

[2] **K. A. Aabrar**, L. Wei, U. Radhakrishna “*Modeling Layout, Distribution and Breakdown Effects in GaN HEMTs in the MVSG Approach*”-, TN, USA, BCICTS, 2019

OTHER EXPERIENCES

TRAINING

- Participant of “Introductory Training Programme on Nanofabrication Technologies”, at Centre for Nano Science and Engineering (CeNSE), Indian Institute of Science (IISc), Bangalore, India (2017)
-Fabricated and characterized MOSCap, MEMS Cantilever.

ORGANIZING EXPERIENCE

- Member, Event Management Committee, 4th International Conference on the Developments in Renewable Energy Technology (ICDRET-2016)
- Member, Organizing Committee, 1st International Conference on Medical Engineering, Health Informatics and Technology (MediTec-2016)

COMPUTER SKILLS:

- Programming Languages: MATLAB, Verilog, Verilog-A, Assembly, C, C++
- Simulation and Design Software: ATLAS(TCAD), Proteus, Quartus, PSpice, Origin, Cadence
- Others: MS Word, MS Excel, MS Power Point, Adobe Illustrator

ACADEMIC HONORS & AWARDS

- **Dean’s List Award** in all Levels(for undergrad studies in BUET)
- **University Merit Scholarship** in six semesters(from BUET)
- **Board Scholarship** for Secondary Certificate Examination(from the education board of Bangladesh)
- **Board Scholarship** for Higher Secondary Certificate Examination (from the education board of Bangladesh)
- **Junior Scholarship** in Secondary School (from the government of Bangladesh)