
Resume' of **Sishir Bhowmick**

Lecturer
Department of EEE
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RESEARCH INTEREST:

Physics, simulation, modeling of nanoelectronic devices; Nano-photonics.

EDUCATION:

- M.Sc. in Electrical and Electronic Engineering
Bangladesh University of Engineering and Technology (BUET)
CGPA: 3.83 (out of 4.0)
- B.Sc. in Electrical and Electronic Engineering, 2006
Bangladesh University of Engineering and Technology (BUET)
CGPA: 3.90 (out of 4.0)
Class Rank: 6th among 135

PUBLICATIONS:**Journal:**

1. Sishir Bhowmick, and Khairul Alam, "Dielectric scaling of a top gate silicon nanowire on insulator transistor" Journal of Applied Physics, Vol. 104, No.(12), page 124308 ,2008 .
- Sishir Bhowmick, Khairul Alam, and QDM khosru, "Effects of source-drain underlaps on the performance of silicon nanowire on insulator transistors" IEEE transaction on nanotechnology (revised and resubmitted).

Conference Proceedings:

1. Sishir Bhowmick, Redwan Noor Sajjad, and QDM Khosru "Effects of Gate Length on the Performance of a Top Gate Silicon Nanowire on Insulator (SOI) Transistor" IEEE International Conference on Electron Device and Solid State Circuit, 2008, Hong Kong, December, 8-10, 2008.
2. Redwan Noor Sajjad, Sishir Bhowmick, and QDM khosru "Cross-sectional shape effects on the electronic properties of Silicon nanowires" IEEE International Conference on Electron Device and Solid State Circuit, 2008, Hong Kong, December, 8-10, 2008.
3. Sishir Bhowmick, Khairul Alam and QDM khosru "The effects of doping, gate length and gate dielectric on inverse subthreshold slope and on/off current ratio of a top gate silicon nanowire transistor" International Conference on Electrical and Computer Engineering, Dhaka, 20-22 December 2008.
4. Redwan Noor Sajjad and Sishir Bhowmick, "Growth Direction Dependent Electronic Properties of Silicon Nanowires", Proceedings of IEEE EDS Bangladesh Student Paper Contest, 2007.
5. S. Bhowmick, Tanzina Khaleque, Shamim Reza, and S.P. Majumder, "Performance Limitations of a Subcarrier Multiplexed Optical Transmission System

Due to Optical Beat Interference ”, international Conference on Information and Communication Technology, 7-9, March, 2007, Dhaka, Bangladesh.

RESEARCH EXPERIENCES:

- Silicon nanowire transistor:
 - Developed a 3-D self-consistent Poisson-Schrödinger quantum solver for silicon nanowire transistor and observed the effects of source-drain underlaps and different scaling parameters.
 - Developing a self-consistent Poisson-Schrödinger quantum solver for silicon nanowire transistor using atomistic approach.
- Fiber optic communication:
 - Performance evaluation of a subcarrier multiplexed optical transmission system.

HONORS AND AWARDS:

- Dean’s List Scholarship, EEE, BUET
- University Merit Scholarship
- Board Scholarship
- Academic Excellence Award, Sher-e-Bangla Hall, BUET, June 2006

PROFESSIONAL EXPERIENCE:

- Lecturer, Department of Electrical and Electronic Engineering, BUET (February '07 - Present)
- Lecturer, Department of Electrical and Electronic Engineering, Ahsanullah University of Science & Technology (October '06 - February '07)

PROFESSIONAL AFFILIATIONS:

- The Institute of Electrical and Electronics Engineers, Inc. (IEEE).
- IEEE Electron Devices Society.

RELEVANT COURSEWORK:

Undergraduate courses:

Semiconductor Devices, Optoelectronic Devices, Electrical Engineering Materials, Electromagnetic Fields & Waves, VLSI circuits, Electronic Circuits 2 (MOSFET, fabrication), Physics (Heat & thermo-dynamics, modern physics), Linear Signals & Systems, Digital Signal Processing.

Postgraduate courses:

Semiconductor Materials and Heterostructures, MOS Devices, Electric and Magnetic Properties of Materials, Advanced VLSI Design, Applied EM Theory, Bio-medical Signal Processing.

REFERENCES:

Dr. Quazi Deen Mohd Khosru
Professor, Department of EEE
BUET, Dhaka-1000, Bangladesh
Email: qdmkhosru@eee.buet.ac.bd

Dr. Mohammad Ali Choudhury
Professor, Department of EEE
BUET, Dhaka-1000, Bangladesh
Email: mac@eee.buet.ac.bd