Department of Electrical and Electronic Engineering
Khulna University of Engineering & Technology
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Dr. Md. Jahirul Islam
Professor
Research Area Optical Hollow Core Fiber (HCF) and Photonic Crystal Fiber (PCF) Optical sensor design Nonlinear fiber optics Nanotechnology High efficiency solar cell design Heterostructure Laser

Biography

Welcome to My Official Webpage

I'm **Dr. Md. Jahirul Islam**, currently working as a Professor at the Department of Electrical and Electronic Engineering (EEE) in Khulna University of Engineering & Technology (KUET), Khulna-9203, Bangladesh. I've received my B.Sc. and M.Sc. Engineering degrees in Electrical and Electronic Engineering from KUET with honors in all terms. I've received my PhD from The University of Sydney, Australia. My research interest includes nonlinear optics, solitons, semiconductor laser, semiconductor solar cells, and nano technologies.

If you have any inquiry feel free to Contact me.

****My research group is open to enthusiastic prospective students. To know further about the ongoing research projects, group members, and collaboration, please visit** Photonics Group KUET

Education

Doctor of Philosophy
The University of Sydney,Australia(2013-2016)
Thesis Title: Stability and Dynamics of Bragg Grating Solitons in a Semilinear Dual-Core System with Cubic-Quintic Nonlinearity
M.Sc. in Electrical and Electronic Engineering
Khulna University of Engineering & Technology (KUET),Bangladesh(2009-2012)
Thesis Title: Modeling and Performance Analysis of 1.55 Î¼m Quantum Well Edge Emitting Laser Based on InGaN
B.Sc. in Electrical and Electronic Engineering
Khulna University of Engineering & Technology (KUET),Bangladesh(2005-2009)Achievement:Gold Medalist

Service Records

- **Professor**
  Department/Section: EEE
  Khulna University of Engineering & Technology *From to*
  Responsibility:Teaching Undergraduate and Postgraduate students, and also supervising undergraduate and postgraduate thesis and projects
- **Associate Professor**
  Department/Section: EEE
  Khulna University of Engineering & Technology *From to*
  Responsibility:Teaching Undergraduate and Postgraduate students, and also supervising undergraduate and postgraduate thesis and projects
- **Assistant Professor**
  Department/Section: Electrical and Electronic Engineering,
  Khulna University of Engineering & Technology *From to*
  Responsibility:Teaching Undergraduate and Postgraduate students, and also supervising undergraduate and postgraduate thesis and projects
- **Teaching Assistant**
  Department/Section: Electrical and Information Engineering
  The University of Sydney *From to*
  Working Area:Electrical Circuits, Optoelectronics, and Electromagnetics
  Responsibility:Teaching, Tutoring and Evaluation
- **Lecturer**
  Department/Section: Electrical and Electronic Engineering,
  Khulna University of Engineering & Technology *From to*
  Working Area:Teaching and supervision
  Responsibility:Teaching 1st, 2nd, 3rd and 4th year students and also supervising undergraduate thesis and projects.
- **Lecturer (Part Time)**
  Department/Section: Electrical and Electronic Engineering,
  Khulna University of Engineering & Technology *From to*
  Working Area:Teaching

Research Interest

Optical Hollow Core Fiber (HCF) and Photonic Crystal Fiber (PCF)

Design devices with HCF and PCF.

Optical sensor design

Use of Multiphysics COMSOL, CST Studio Suite, and MEEP

Nonlinear fiber optics

Related to solve Maxwell and non-linear Schrodinger equations.
Optical solitons in single or coupled media.

Nanotechnology

High efficiency solar cell design

Numerical investigation on the efficiency enhancement of solar cells

Heterostructure Laser

Modelling and performance analysis of semiconductor based lasers.

Publication

Books

1(2023) , ***Book Chapter in Studies in Autonomic, Data-driven and Industrial Computing*** , ISBN:978-981-19-7528-8,Springer