Hiba Perveen

Integrated MSc in Photonics,
International School of Photonics (ISP),
CUSAT
Email: hibaprvnahk@gmail.com

AREAS OF INTEREST

Nanophotonics, Quantum Optics, Fiber Optics, Laser Physics

COURSES ATTENDED

Optics and Photonics - Applied Optics, Optoelectronics, Fiber Optics, Laser Physics, Laser systems, Non linear optics, Opto-mechanical engineering, Optical Communication, Analog & Digital signal processing, laser spectroscopy.

Physics - Nuclei, particles and beams, Classical Mechanics, Statistical Mechanics, Thermodynamics, Atomic & Molecular Spectroscopy, Basic and Advanced Solid State Physics, Electromagnetic Theory & Relativistic Phenomena, Basic & Advanced Quantum Mechanics, Quantum Optics.

Electronics – Analog & Digital Electronics, Microprocessors, Electronic Instrumentation.

Mathematics - Statistical Methods, Vector Calculus, Matrices and Complex Numbers, Curvilinear Coordinates, Tensors, Vector Space, Differential Equations, Laplace Analysis, Fourier Analysis, Group Theory, Complex Variables, Non-linear Differential Equations.

Interdisciplinary - Biomedical instrumentation, RF & Microwave Technology

Lab Courses - Basic Optics, Analog & Digital Electronics, Photonics

PROJECT EXPERIENCE

Dec – Present	Synthesis and Characterization of Trans-Stilbene/PMMA Composite for Detector Applications and X-Ray Imaging. [Master Project at RRCAT, Indore]
May – July "19	Developing Micro-fluidic channel and designing an Optical interferometer sensor to detect acoustic wave. [Summer Project at IISER Mohali]
Dec "17–April "18	Modulation of whispering gallery mode lasing in microring embedded dye dopped hollow polymer fiber. [Mini Project at ISP]

ACADEMIC QUALIFICATION

2015-Present	5 year Integrated MSc Photonics CGP until 8th semester(currently 9th semester) - 8.05
2012-2014	Class xii (CBSE) - 87%
2010-2012	Class x (CBSE) - 10

SEMINARS UNDERTAKEN

- Surface Plasmon Resonance
- Diagnosis of human coronary atherosclerosis by morphology-based Raman spectroscopy
- Transmission electron microscope (TEM)
- Restoring sight with Retinal Prosthesis.
- Transparent wood composites and it's applications
- Micro fluidic channel as tunable optical sensor to detect acoustic wave.
- Optical Nanoantenna.

MEMBERSHIPS AND ACTIVITIES

2015-Present	Member of OSA and SPIE student chapter
2017-2019	Organising member of NPS (National Photonics Symposium)
Annually	Organising team of annual optics fest at ISP
11-14 Sep "17	Active member in hosting team of IONS Kochi, ISP
2015-2018	Participant in Sargam University Arts Fest
2014	Hosting member of Sahodhaya CBSE state arts fest

WORK SKILLS

- C, C++
- Mathlab, Origin
- Solid works
- Unity

LANGUAGES KNOWN

English, Arabic, Hindi

CONFERENCES ATTENDED

2019 Workshop on Augmented Reality at ISP, hosted by SPIE student chapter ISP.

2019 Lecture series at IISER Mohali during Summer Program.

2019 Lecture on “Photon mayhem: using light for structural & functional assessment of biological tissues” Dr. Alex Vitkin, “Molecular imaging from the materials perspective” by Dr. Pritam Deb, at IONS Manipal.

2018 “Laser world of Photonics India 2018” exhibition and conference on “Optical component instrumentationand development” by Edmond Optics at BIEC Bangalore.

“15-“19 Annual Photonics Workshop (APW)/National Photonics Symposium (NPS) at ISP, CUSAT.

2017 Lecture on “Quantum nature of light and entanglement” by Prof. Ajoy Ghatak, “Random Lasing and Anderson Localisation” by Dr. Sushil Mujumdar, and “Bell tests and Quantum foundations” by Dr. M Mitchel conducted at IONS Kochi 2017.

REFEREES

- Dr. M Kailasnath
  Professor,
  International School of Photonics,
  Cochin University of Science And Technology, Cochin
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- Dr. Chiranjit Debnath,
  Scientific Officer,
  Laser Functional and Material Division,
  Raja Ramanna Centre for Advanced Technology, Indore
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I affirm that information provided here is true to best of my knowledge.