Jawad T P

CONTACT

International School of Photonics
Cochin University of Science And Technology
kochi, 682022

E-mail: jawadtpisp@gmail.com
Phone: 9946708197

LINKD IN

https://www.linkedin.com/in/jawad-tp-a88a8715b/

EDUCATION

Five year Integrated MSc in Photonics — July-2015 — May -2020

International School of Photonics,Cochin University of Science and Techonogy

GPA: 8.7/10 (Till date)

INTERESTS

Laser Spectroscopy for biomedical and environmental monitoring Application,THz Spectroscopy, Biophotonics

RESEARCH EXPERIENCE

1. Master Thesis Project student, (Advanced Centre of Research in High Energy Materials (ACRHEM)) University of Hyderabad.

Currently working towards my Master thesis project under the guidance of Dr.Anil Kumar Chaudhary, in the area of photoacoustic spectroscopy.

2. MITACS Globalink Research Intern, University of Guelph, Ontario, Canada

Supervised by Dr. Christopher collier (Assistant Professor, University Of Guelph) 05/2019 – 07/2019

When the THz wave propagates in the air, it interacts with water vapor, which causes the water vapor noise to superimpose on the sample signal. In the time domain, the water vapor noise contained in the signals generates ripples on their baseline. In this work, a numerical method was proposed to eliminate water vapor noise from the THz spectra.

3. Summer research fellow, Indian Institute of Technology, Madras

Supervised by Dr. Arun Kumar Thettai (associate professor, IIT Madras) 05/2018 – 07/2019

My work was in the area of photoacoustic tomography which is an emerging imaging modality that combines the effect of both high image contrast and spatial resolution simultaneously. The project was titled as validation of 3D comsol model for Photoacoustic tomography, where I have used comsol multiphysics to simulate the acoustic waves generated for a spherical inclusion of tumor in breast tissue.

4. Mini project (course curriculum project), ISP, CUSAT.

Supervised by Dr. Manu Vaishakh (assistant professor, ISP, CUSAT) 01/2018 -04/ 2018

The intensity variation in the far field of the laser beam in the presence of the lensing medium as predicted by the theoretical model was plotted for three different samples. Apart from the parabolic refractive index distribution of the thermal lens, the aberrant nature of the thermal lens is considered in this model.
A plot regarding the optimization of the thermal lens effect is also done that may give the idea about the positioning of the sample in the experimental setup.

COURSES COVERED

Physics: Classical Mechanics, Quantum Mechanics (Basic and Advanced),Electromagnetic Theory and Relativity, Thermodynamics, Solid State Physics(Basic and Advanced),Nuclear Physics.
Optics: Geometrical and Physical Optics, Atomic and Molecular Spectroscopy, Optical Instrumentation, Non Linear Optics. Optical signal processing.
Photonics: Optoelectronics, Fiber Optics, Laser Physics, Biophotonics, Nano photonics.
Electronics: Basic Electronics, Digital and Analog Electronics, Microprocessors and their Applications, Electronic Instrumentation, Digital Signal Processing.
Mathematics: Differential and Integral Calculus, Statistical Mechanics, Tensor Analysis, Mathematical Physics.
Electives: Optomechanical engineering, biomedical instrumentation, quantum optics, Laser spectroscopy, industrial photonics, complex networks.
Practical experiences: Photonics lab, optics lab, electronics lab, fiber lab, computer lab.

AWARDS

Mitacs Globalink Research Internship Award-2019-
Mitacs Globalink Research Internship is a competitive program that pairs top-ranked international students with specific research expertise with faculty at Canadian universities for a twelve (12) week research project of mutual interest in the period of May to October with a very good funding grant.
State topper award in National Graduate Physics Examination (NGPE-2016)-
It is a competitive test for physics undergraduate students organized by Indian association of physics teachers annually. The state topper award was from a total enrollment of 12000 students all over India.

PROFESSIONAL MEMBERSHIPS

- SPIE (society of photo optical instrumentation engineers)
- OSA (Optical society of America)
- ILA (Indian Laser Association)
- GIAN(Global Initiative for Academic Networks)
- Mitacs GRI (Globalink Research Intern)
- GRI Ambassador

COMPUTER SKILLS

MS office, comsol multiphysics, Matlab

ACTIVE PARTICIPATION

- ILA SHORT COURSE

IN

Completed short course in 'optical interferometry' (Dec1-2, 2018).
Organized by Indian Laser Association. Held at RRCAT Indore.

- SHORT COURSE IN BASIC PHYSICS
  June 11-26, 2016
  Held at IIT Kanpur, TEQIP.
  Organized by IAPT, and Coordinated by Prof: H C VERMA.
- NATIONAL PHOTONICS SYMPOSIUM
  February 27-March-1, 2018
  Focal theme on light matter interaction.
  Organized by international school of photonics.
- SHASTRAYAN 2018
  Stall volunteer in shastryan 2018, January 2-3
  Extent the fruits of research to general public.

- Training course on Single crystal XRD
  January 21-22, 2020 held at Advanced centre of research in High energy Materials
  organized by Bruker India Pvt.Ltd

REFERENCES

1. Dr. Manu Vaishakh
Assistant professor
International school of Photonics
manu.vaishakh@cusat.ac.in