

GAYATRI RESHMA SASIDHARAN

Integrated M.Sc. in Photonics
International School of Photonics
Cochin University of Science and Technology
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OBJECTIVE:

To excel in the field of Optics and Photonics and to utilize my skill in challenging and creative environment.

RESEARCH INTERESTS:

Light Matter Interactions (Quantum and Atom Optics), Nanophotonics, Non-Linear Optics

ACADEMIC QUALIFICATION:

Currently in the 10th semester of 5-year Integrated M.Sc. in Photonics at International School of Photonics, CUSAT, Cochin.

UNIVERSITY/BOARD	COLLEGE / SCHOOL NAME	EXAMINATION	% OF MARKS / GPA (10-point scale)
Cochin University of Science And Technology	International School of Photonics	Semester 1,2,3,4,5,6,7 and 8 Semester 9	8.95 (Till Date) Result Awaiting
Central Board of Secondary Education	Kendriya Vidyalaya NAD Aluva	Class 12 (High School)	83.2%
Central Board of Secondary Education	Kendriya Vidyalaya NAD Aluva	Class 10	10

PROJECTS UNDERTAKEN:

1) INTERNATIONAL SCHOOL OF PHOTONICS

COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY, (CUSAT)

Summer Internship Project, May-June 2017

Guide: - Dr. Saji K J, Assistant Professor, International School of Photonics, CUSAT, India

“SYNTHESIS OF NANOPARTICLES (MoS₂) USING LASER ABLATION”

2) INTERNATIONAL SCHOOL OF PHOTONICS

COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY,

Academic Curriculum Project, Dec 2017- May 2018

Guide: -Muhammed Rishad K P, Assistant Professor, International School of Photonics, CUSAT, India

“NON-LINEAR CHARACTERIZATION OF SILVER NANOPARTICLES”

3) INSTITUTE OF ATOMIC AND MOLECULAR SCIENCES

ACADEMIA SINICA, TAIWAN

Summer Internship Project, May-June 2019

Guide: Dr. Ming-Shien Chang, Associate Research Fellow, Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan.

“FREQUENCY STABILIZATION OF AN EXTERNAL CAVITY DIODE LASER FOR ATOM GUIDING”

SEMINARS UNDERTAKEN:

- Free Space Optics
- Hyperspectral Imaging
- Plasmonic Laser
- Cold Atoms
- Dual Comb Spectroscopy
- Polarization Resolved Spectroscopy

COURSES UNDERTAKEN:

OPTICS: Physical Optics, Geometrical Optics, Optical Instrumentation, Applied Optics, Quantum Optics, Non-Linear Optics, Holography

PHOTONICS: Optoelectronics, Fiber Optics, Laser Physics, Nanophotonics, Optical Communication, Laser Spectroscopy.

PHYSICS: Mechanics and Wave Phenomena, Electricity and Magnetism, Nuclei, particles and beams, Classical Mechanics, Statistical Mechanics, Thermodynamics, Atomic and Molecular Spectroscopy, Electromagnetic Theory and Relativistic Phenomena, Basic and Advanced Quantum Mechanics, Solid State Physics, Quantum Field Theory.

ELECTRONICS: Basic Electronics, Digital and Analog Electronics, Microprocessors and their Applications, Electronic Instrumentation, Digital Signal Processing.

MATHEMATICS: Computational Techniques, 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, Partial Differential Equations.

ACTIVITIES:

WORKSHOPS

- Summer School in Optics and Photonics 2017, Indian Institute of Science (IISc) Bangalore, India

CONFERENCE

- IONS Kochi 2017, Cochin University of Science And Technology (CUSAT) Kochi, India
- National Photonics Symposium 2016, 2017, 2018, 2019, International School of Photonics, India

POSTER PRESENTATION'S

- Student Conference in Optics and Photonics 2019, Physical Research Laboratory (PRL), Ahmedabad, India
Poster Title: Frequency Stabilization of an External Cavity Diode Laser for Atom Guiding.

STUDENT CHAPTER:

SPIE: Society of Photographic Instrumentation Engineers

OSA: Optical Society of America

COMPUTER SKILLS:

- ❖ C++, MATLAB, Origin
- ❖ LaTeX, MS Word, MS Power Point, MS Excel
- ❖ Zeemax Optics Studio 14
- ❖ Density Functional Theory (DFT)

ACHIEVEMENTS:

- Nalanda Endowment Award for securing highest GPA in first semester of 5 Year Integrated MSc Degree in Photonics.
- Recipient of Taiwan International Graduate Program – International Internship Program (TIGP-IIP) May-June 2019.
- Visiting Studentship Program at Raman Research Institute (RRI), Bangalore, India from December 2019- June 2020.

LANGUAGES KNOWN: Malayalam, Sanskrit, Hindi, English

REFERENCES:

- **Dr. Ming-Shien Chang**
Associate Research Fellow
Institute of Atomic and Molecular Sciences
Academia Sinica, Taiwan
- **Dr. Saji K J**
Assistant Professor
International School of Photonics
Cochin University of Science And Technology, Kerala, India
- **Mr. Muhammed Rishad K P**
Assistant Professor
International School of Photonics
Cochin University of Science And Technology, Kerala, India

I affirm that information provided here is true to best of my knowledge.

GAYATRI RESHMA SASIDHARAN