






AARATHY EZHUTHUPALLY REGHUPRASAD

PHD STUDENT

CONTACT

 Torino, Italy

 +39 331 317 2924

 aarathy.ezhuthupally@polito.it

 [linkedin.com/in/aarathy/](https://www.linkedin.com/in/aarathy/)

TECHNICAL SKILLS

- › PROGRAMMING/SCRIPTING
- › MATLAB, C, MATHEMATICA
- › COMSOL MULTIPHYSICS
- › MS OFFICE SUITE

PERSONALITY TRAITS

- › COMMUNICATIVE
- › ORGANIZED
- › TEAM ORIENTED
- › DETAIL ORIENTED

ACHIEVEMENTS

1. Best Paper of the Session Award at RACEM 2016 VIT, Mumbai.
2. Selected as one among the 40 interns in national level for the Orientational Course on Accelerators, Lasers and related Science and Technologies (OCAL 2017) at RRCAT, Indore, India.



PROFILE SUMMARY

PhD student in Department of Environment, Land and Infrastructure Engineering working on the development of Fiber Bragg Grating for different geophysics applications with a one-year experience as a FBG Scientist Technology. Post-graduation in Laser science and Applications (MTech) and MSc Physics.



EXPERIENCE

› PHD STUDENT - GEOPHYSICS

SEPT 2019 - PRESENT

- Development of fibre bragg grating and fibre sensors for measuring strain and vibrations which mainly includes seismic vibrations, oceanic bed vibrations.
- Estimation of early age shrinkage and physical properties of two component mix.
- Development of photonic sensors for structural health monitoring.

› FBG SCIENTIST TECHNOLOGY

OCT 2018 - AUG 2019

Lab To Market Innovations Pvt Ltd, SID department, Indian Institute of Science, India

- Design and development of FBG based systems for Indian Railways, mainly the lab and field prototype.
- Documentation of FBG based system.
- Currently working on the real time monitoring of FBG based axle counter system.



EDUCATION

› M. TECH. LASER SCIENCE & APPLICATION

- DEVI AHALIYA VISHWAVIDYALAYA, INDIA

› INTEGRATED M.Sc

- AMRITA UNIVERSITY, INDIA



PROJECTS UNDERTAKEN

1. Semiconductor Materials Lab, Material Science Division, Raja Ramanana Centre for Advanced Technology (RRCAT), India.

Master of Technology Project in the group of Dr. Vijay Kumar Dixit, July 2017 - July 2018

- Involved in the design and development of laser diode for matching the emission spectrum with pumping medium
- Theoretical calculations of the energy levels for designing the symmetric and asymmetric structure by MATLAB programming

- MOVPE growth of symmetric and asymmetric structures
- Fabrication of these structures in three different processes- with lift off, without lift off and using a metal mask. Mask less lithography technique is also carried out
- Investigated properties of symmetric and asymmetric laser diode structures
- Analysis of emission by PL.

2. Nano-Optics & Mesoscopic Optics Laboratory, Department of Nuclear and Atomic Physics, Tata Institute of Fundamental Research (TIFR), India.

Master of Science Project in the group of Dr. Sushil Mujumdar, February 2016 – June 2016.

- Measurement of parameters of frequency locked two mirror resonator
- Stabilization of the cavity by both position and temperature feedback system
- Modelling of the cavity by COMSOL simulations



SCIENTIFIC CONTRIBUTIONS

1. *“Measurement of Parameters of Frequency locked Two Mirror Resonator”*

Aarathy E.R., Rawankar A., Kumar N.S. (2018), Lecture Notes in Electrical Engineering, vol472. Springer, Singapore, Optical & Wireless Technologies conference, MNIT Jaipur (2017).

2. *“Position and Temperature Feedback Control System for Stabilization of Fabry Perot Laser Resonator”*

Aarathy E.R., Rawankar A., Kumar N.S. presented in RACEM 2016, VIT Mumbai.

3. *“Experimental and Computational Study of Fabry-Perot Cavities”*

Poster presentation in International Workshop on Complex Photonics at TIFR, Mumbai (2017).

4. *“Properties of Bonded Laser Diode and Laser Diode Arrays”*

Poster presentation in Anugoonj 2018 at RRCAT, Indore (2018).

WORKSHOPS ATTENDED

1. Participated in one-day workshop on Advanced Functional & Nano materials, held at Amrita Vishwa Vidyapeetham, Coimbatore.

2. Participated in International photonics workshop held at International school of photonics, CUSAT Kochi on Feb 2015.

3. Participated in three days' workshop in Robotics, held at Amrita Vishwa Vidyapeetham, Amritapuri.

4. Participated in one-day workshop on Industry-Institute Interaction, held at School of Physics, DAVV Indore on Jan 2017.

5. Participated in International Workshop on Complex Photonics at TIFR, Mumbai on 22-24th Jan 2017

6. Participated in 3rd International Conference on Recent Advances & Challenges in Engineering & Management at VIT, Mumbai on 2 Dec 2016

7. Participated in 1st International Conference on Optical and Wireless Technologies 2017 at MNIT, Jaipur.