

Omkar Bhoite

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Fields of Interest

○ Robotics, Physics, Automation, Rocket Science, Astrophysics.

Education Credentials

2015-2019 : **Bachelor of Engineering : Instrumentation & Control Engineering**, Pune Univeristy (College name: All India Shri Shivaji Memorial Society's Institute of Information Technology), Pune,

- First year of Engineering : 8.7 SGPA
- Second year of Engineering : 8.38 SGPA
- Third year of Engineering : 8.33 SGPA
- Fourth year of Engineering : 8.89 SGPA
- CGPA : 8.57

Projects & Seminars

- B.E. 3rd Sem: To design a regulated power supply using IC 7805 & IC 7905 and to build a printed circuit board to implement the circuit.
- B.E. 4th Sem: To design a object counter circuit using IC 4026 CMOS Decade Counter/ Divider.
- B.E. 5th Sem: Presented a seminar on topic " Quantum computer " with thorough details on Maxwell demons and energy exchange method to do build cryogenic system for quantum computer to reach the near absolute zero temperature. Introduced the concept of logic gates that can be implemented using the QC.
- B.E. 6th Sem: Studied the working of gyroscope & accelerometer for determining the spatial position of the drone in 3-Dimensional Space and also to calculate it's velocity. Studied YPR parameters of drone and implement it to have a controlled positioning of the drone in 3-D Space
- B.E. 7th Sem Design and development of an automated testing equipment for an switch mode power supply (SMPS)
& 8th Sem: & its analysis and data acquisition using LabVIEW.

Research Experience

2017-2018 : **Fabrication of Micropillars and Study of DBR & Exciton-Polariton Laser**:, With the state-of-the-art technology of LW405B laser writer for photolithography I fabricated different structure of copper like disc & pillars of varying dimensions. Modified the MATLAB code meant for two layer DBR into a generalised code for "n" number of layers DBR, also coded the program for DBR with spacer in it, for studying microcavity and stop-band formation for different Bragg's wavelength and layers of dielectric with different refractive index. Studied exciton-polariton laser, its woking principle and how it produces coherent light without population inversion like convential lasers, **Indian Institute of Science Education and Research (IISER)**, Pune, Maharashtra, India.
Guide & Adviser : Dr. Datta Shouvik

2018 : **Building Gigahertz Transimpedance amplifier for low temperature RF amplification and shot noise measurement**:, Developed a technique to build a miniature size printed circuit board for implementing the TIA circuit and also studied how to troubleshoot the problems like EMI, parasitic capacitance etc., that hamper's the operation of the amplifier for measuring the signal in RF region and also signal amplification. Analyzed commercially available TIA to see whether it meets the specification specified by the manufacturer, **Indian Institute of Science Education and Research (IISER)**, Pune, Maharashtra, India.
Guide & Adviser : Dr. Datta Shouvik

Computer Skills

- *Software* : Matlab, Arduino IDE, LabVIEW, Simulink, MultiSim, Ultiboard, LaTeX.
- *Languages* : C Language, Netbeans, SQL.

Publications

- **Omkar Vilas Bhoite**, Pramod Bhausahab Divekar, Kshitij Vijay Bhalerao & Prof. Hemant Chaudhari, " *Design and development of an automatic testing equipment for a Switch Mode Power Supply (SMPS) and its analysis and data acquisition using LabVIEW* ", JETIR/Vol 6/Issue 5 /Q53, <http://www.jetir.org/view?paper=JETIR1905Q53>.

Achievements & Certifications

- 2011-2013 : IT Quizzes by Tata Consultancy Services.
- 2016 : Secured 1st position in "How Tech Works" competition conducted by IIT, Madras in Shastra Technical event
- 2016 : Workshop on Embedded System (Arm Cortex MSP432) by Texas Instrumentation at IIT, Bombay.
- 2016 : Secured 3rd position in "Let's C programming" competition in event INSTRON conducted by AISSMS IOIT, Pune.
- 2017 : Participated in RoboWar, Search N destroy & Bot Wrestling competitions at MINDSPARK Technical Event conducted by Government College of Engineering, Pune.
- 2017 : Participated in RoboRace competition at AISSMS's College of Engineering.
- 2018 : Participated in RoboWar competition at VIT, Pune.
- 2019 : Workshop on "FLEXIBLE ELECTRONICS" at IIT Kanpur.

Leadership

- Class Representative of 2nd & 3rd year of engineering course
- Team leader of the robotics team.

Hobbies

- Watching TV Series (Favourite's: The Big Bang Theory, Silicon Valley, Young Sheldon, Marvels Agents Of S.H.I.E.L.D & also love to watch Discovery & NatGeo)
- Drawing & Painting.