



# CENTRE FOR MICROSYSTEMS

## RESEARCH INTERNSHIP



6 months – Full Time (January 2020 – June 2020)

Session: 2019 – 2020

Sr. No	Problem Statement	Name of Students	Guide
1.	Detection of Fluid Parameter Monitoring System	Mahima Rana Purwa Anasane	Dr. (Mrs.) J. P. Kalambe
2.	Low-Cost Microfluidic based Platform for Quantification of Contaminants in Water	Prajakta Dandekar	Dr. (Mrs.) J. P. Kalambe
3.	Condition Monitoring System for Railway Bridges	Sheetal Singh Shambhavi Ozarkar	Dr. S. S. Balpande
4.	Development of Soil Macro Nutrients Detection System	Riya Joshi Charvi Bisen	Dr. S. S. Balpande



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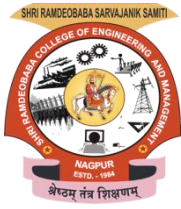
## RESEARCH INTERNSHIP



6 weeks – Part Time (June 2020 – July 2020)

Session: 2020 – 2021

Sr. No	Problem Statement	Name of Students	Guide
1.	Development of Portable Soil Macro Nutrients Detection System with IOT	Swaraj Rathi	Dr. S. S. Balpande
2.	Development of Tribo-electric Blue Energy Harvester for IOT	Prayag Ashtankar Vadant Mehta	Dr. S. S. Balpande
3.	Water quality monitoring system nitrate detection with AI	Shardul Fating Divyansh Kumbhare	Dr. (Mrs.) J. P. Kalambe
4.	Water quality monitoring phosphate detection with AI	Shreya Chakraborty Neeraj Rangwani	Dr. (Mrs.) J. P. Kalambe



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6 months – Part Time (July 2020 – December 2020)

Session: 2020 – 2021

Sr. No	Problem Statement	Name of Students	Guide
1.	Design of MEMS Energy Harvester	Ashish Tripathi Shivkumar Yadav Prateek Bhatiya	Dr. (Mrs.) J. P. Kalambe Mr. Shripad Raja K (Intellisense, Bangalore)
2.	Development of Intelligent Web server over Intranet	Pranati Pandey Fariha Batool	Dr. (Mrs.) J. P. Kalambe
3.	Development of Fluid Adulteration Detection Platform with Machine Learning (Milk)	Neeraj Rangwani Akash Poddar	Dr. (Mrs.) J. P. Kalambe
4.	Design and development of temperature controlled environment for microfluidic applications	Mansi Raghorte Ashish Selokar	Dr. (Mrs.) J. P. Kalambe
5.	Design of automatic fluid dispensing system for microfluidic applications	Himanshu Choudhari Rasika Rewatkar	Dr. (Mrs.) J. P. Kalambe
6.	Development of Triboelectric Energy Harvester	Vedant Mehta Prayag Ashtankar	Dr. S. S. Balpande



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Sr. No	Problem Statement	Name of Students	Guide
7.	Development of soil salinity and organice carbon (OC) detection	Ankit Bawane Anushka Deshmukh	Dr. S. S. Balpande
8.	Development of Colorimetry based portable Soil Nutrients Detection (P, K)	Tanmay Khutate Deepa Gupta	Dr. S. S. Balpande
9.	Material synthesis for Triboelectric Energy Harvester	Swaraj Rathi	Dr. S. S. Balpande
10.	Microsystems for flow cytometry: Simulation on CAD and Prototype Circuit Design to study the effect of frequency resonance energy transfer effect	Aishwarya Agrawal	Dr. D. G. Khushlani
11.	RF MEMS resonator for 5G applications – (a design concept, technology used and principle of operation)	Varad C. Joshi Mandar M. Pimparkar	Dr. P. P. Deshpande



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Sr. No	Problem Statement	Name of Students	Guide
12.	Microfluidic channel for fluid adulteration detection	Harsh Mahajan Geetesh Mokhare	Prof. A. H. Harkare
13.	Development of Heart Beat Generating System for Biomedical Applications	Nikesh Rathod Jay Dhiraj Awale	Prof. A. M. Gupta
14.	Development of ML / Ai based heavy metal detection and display system	Vinamra Vij Shreya Chakravorty	Prof. V. R. Rathee
15.	Design and Development of Microwave Integrated Circuits	Ved Katyayan	Dr. J. A. Shrawankar
16.	Design and simulation of 180 nm Xray radiation sensor using MOS technology	Ayesha Shahu Shubham Sharma	Prof. S. C. Anjankar
17.	Design and simulation of 180 nm Gamma radiation sensor using MOS technology	Tejas Raghunath Sathawane Abhinav Sunil Kayarkar	Prof. S. C. Anjankar



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Sr. No	Problem Statement	Name of Students	Guide
1.	Design and Analysis of MEMS Accelerometer using Intellisuite Software	Georgina Frank Aryant Telange	Dr. (Mrs.) J. P. Kalambe Mr. Shripad Raja K. (Intellisense, Bangalore)
2.	Development of soil nutrients detection system for farmers	Swapnil Kurve Himanshu Ambule	Dr. S. S. Balpande
3.	Antenna Design for 5G	Dinkal Chug Nikhil Assudani	Prof. Ankita Harkare
4.	Detection of myocardial motion and deformation using machine learning approach	Kunal Thakur Sarvesh Kavimandan	Prof. Anju Gupta
5.	Design and development of millimeter wave components for future communication networks	Megha Manglani Abhishek Agrawal	Dr. J. A. Shrawankar



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6 months – Part Time (January 2021 – June 2021)

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Sr. No	Problem Statement	Name of Students	Guide
6.	Design and development of Automated Fluid dispensing system using FPGA	Rashmi Rathod Rishabh Sharma	Dr. (Mrs.) J. P. Kalambe
7.	Design and development of temperature controlled environment for Biomedical applications	Ravish Dhawan Radha Padhye	Dr. (Mrs.) J. P. Kalambe
8.	Nanomaterials for high performance energy storage application	Ritika Sharma Nirmayi Itankar	Dr. Priti Mangrulkar
9.	Carbon based nanomaterials for effective water desalination	Eshan Sanghi Prajwal Gorle	Dr. Priti Mangrulkar



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Sr. No	Problem Statement	Name of Students	Guide
10.	Microfluidic channel for fuel adulteration detection	Aditya Dhabekar Anmol Khetpal	Prof. Ankita Harkare
11.	Sensor design for bio medical applications	Spandan Shrivastava Sadicscha Khandait	Prof. Jitendra Zalke
12.	Interface circuit design for energy harvesting	Mitali Chaudhari	Prof. Jitendra Zalke
13.	Glucose detection by photoacoustics method	Nishant Yadav	Prof. Jitendra Zalke
14.	Design and characterization of thin oxide mos capacitor	Rushikesh Talmale	Prof. S. C. Anjankar





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1.	Development of Android App for Colorimetric adulteration detection systems	Tejashri Agasti Anurag Sharma	Dr. (Mrs.) J. P. Kalambe
2.	Colorimetric Detection of Adulterant in Fluid using Image Processing Techniques	Rahul Pillai Anish Gard	Dr. (Mrs.) Richa Khandelwal
3.	Development of Imaging Technique for Biomedical Application	Sourabh Ambade Siddesh Gupta	Dr. (Mrs.) Richa Khandelwal
4.	Read out for Variable Current / Voltage Detection of a Sensor	Rishabh Thadani	Dr. Deepak Khushalani
5.	Automated detection of chest diseases using Machine Learning Approach	Sanskar Jain Daksh Parekh	Dr. Deepali Kotambkar (Shelke)



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Sr. No	Problem Statement	Name of Students	Guide
6.	LiDAR integration with ROS for the perception of environment PART-I	Bhaves M. Bhaisare Maharshi Pandya	Prof. Rushikesh Deshmukh
7.	LiDAR integration with ROS for the perception of environment PART-II	Ruta Kothari Samiha Keskar	Prof. Rushikesh Deshmukh
8.	Facial Shield with Health Monitoring and Indicating System	C. Rohit Suchet Nawade	Prof. Vishal Rathee
9.	Characterization of chest diseases using Machine Learning Approach	Sushant Borkar Shreya Bharati	Dr. Deepali Kotambkar (Shelke)