

Ranjana Shrikant Ubale

Present Position

- Assistant Professor

Contact Details

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in <https://www.linkedin.com/in/ranjana-ubale-176744a2>

Work Experience

- Teaching: 13 Years

Personal Profile

My educational qualification is M.Sc. (Electronic Science), SET, and currently pursuing a Ph.D. at Fergusson College Research Center. I have 13 years teaching experience for M.Sc. Electronic Science, Department of Electronic Science, at Fergusson College, Pune. I am a team member of Social Outreach Enabling Center (SOCE) at College Level. I have good skill in Embedded System, Simulation, and Experimentation. My dedication is to provide students with appropriate learning activity design to fulfill their potential for Emotional, Intellectual, Social, and Physical growth. I m using effective and efficient methods of teaching while focusing on the individual need of each student.

Courses Taught

- Embedded System Design
- Electronics Communication
- Semiconductor Devices and Technology
- Digital System Design using Verilog
- Electronic Design Automation (EDA)Tool for Microcontrollers
- Mechatronics

Field of Specialization/Areas of Interests

- Embedded systems
- Internet of things
- Communication Electronic
- Digital Electronic
- Semiconductor devices
- HDL

Education

- **Ph.D. – Electronic Science** : From 19/04/2022 (Pursuing)
Title of the Thesis : “Development of Energy Efficient Lighting Control System for Industrial Environment”
Name of University : Fergusson College (Autonomous), Department of Electronic
/ Institution Science, Pune, Maharashtra, India
- **Master of Science - Electronic Science:** 2008
Pune University, Fergusson College, Pune University
- **Bachelor of Science- Electronic Science:** 2006
P.V.P College, Pravaranagar, Dist.: Ahmednagar.

Fellowship/Awards/ Certifications/Achievements/Recognitions

- Qualified State Eligibility Test for Lectureship (SET).

Member of College Committees/ Professional Bodies and Others

College Level	Professional Bodies	Others
A team member of Social Outreach Enabling Center (SOCE).	-	Member- BOS Department of Electronic Science, Fergusson College (Autonomous), Pune.

Employment History

Organization : Fergusson College

Role : Assistant professor

Duration : 15/06/2008 to till date

Responsibilities	<ul style="list-style-type: none"> Implementing and conducting Practical course of 1st & 2nd Year M.Sc. Set up of practical, preparation of booklet for practical course Conducting allocated subjects. Worked as Paper Setter, Junior Supervisor for theory examinations, Examiner for evaluation of theory papers. Examiner for Practical Courses. Guidance for Academic projects to the Electronic Science students Worked as a team member of ERP Academic admin role for PG (Electronic Science) till 2021.
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Research Projects

Title of the Project	Name of Funding Agency	Amount (Rs)	Duration (Year) (From To)	Type (Minor/Major)	Outcome
“IoT Based Smart Aquaponics System”,	Under College of Excellence (CE)	10,000/-	2017-2018	Minor	Project completed Successfully
“Music Box using FPGA”	Under College of Excellence (CE)	5,000/-	2018-2019	Minor	Project completed Successfully
“IOT Based Telepresence Surveillance Robot Using Raspberry Pi”	Under College of Excellence (CE)	10,000/-	2019-2020	Minor	Project completed Successfully

Research Publications in National and International Journals

- Chinthapatla Sri Varshini, Mohammad Arif Khan, Yogita Khandge and **Ranjana Ubale**, “Telepresence Surveillance Robot”, International Journal of Emerging Technologies and Innovative Research (www.jetir.org | UGC and issn Approved), ISSN:2349-5162, Vol.8, Issue 3, page no. pp1127-1132, **March-2021**,
- Mayur Thete, Nikita Pulate and **Ranjana Ubale**, “MQTT Based Raspberry Pi Home Automation System, at Shri R.L.T. College of Science, Akola, in National Conference on Multidisciplinary Research in Science and Technology for Healthy Lifestyle Management, (NCMRST 2020), Publish paper in

- Khandge Y.S, **Tilekar R.T**, Komal Deokar, Akshada Joshi and Zambare M.S, “Implementation of DT Filters in real time on TMS320C6713 DSK”, “in National Conference on Advances in Electronics and its Interdisciplinary Application [NCAEIA-2014] , ISBN No. 9789351747833, pp-190, **19th and 20th September 2014**
- Khandge Y.S, **Tilekar R.T**, Komal Deokar, Akshada Joshi and Zambare M.S,” Implementation of real time Audio effects on TMS320C6713 DSK”, “in National Conference on Advances in Electronics and its Interdisciplinary Application [NCAEIA-2014], ISBN No. 9789351747833, pp-194, **19th and 20th Sept 2014**

Participation in Conferences/Seminars/Symposia/Workshop/paper presented:

- **Ranjana Ubale**, Madhukar Zambare and Nitin Kulkarni, International Multidisciplinary Conference on Innovations, Research and Challenges in Current Global Scenario (Icirc-2022), Presented a paper titled “Daylight and Proximity Control for Led-Based Energy Efficient Lighting System” Organized by Kaveri College of Arts, Science and Commerce Pune, Maharashtra, India and Inspira Research Association- Ira Jaipur, Rajasthan, India, held on **26 and 27 Aug 2022**,
- Satish Kanawade, Dushyant Pethakar, Shripad Kulkarni and, **Ranjana Ubale**, International Conference on “Recent Trends in Science and Technology”, Presented a paper titled “Touch Less Smart Switch”, at Willingdon College, Sangli, held on **29th June 2022**
- Yogita Khandge, Jayashri Bangali, Madhukar Zambare, **Ranjana Ubale**, Panchsheela Kamble, International Conference on “Recent Trends in Science and Technology”, Presented a paper titled “Secured Home Vigilance System Using Esp32cam with Telegram”, at Willingdon College, Sangli, held on **29th June 2022**
- Mayur Thete, Nikita Pulate and **Ranjana Ubale**, National Conference on Multidisciplinary Research in Science and Technology for Healthy Lifestyle Management, (NCMRST-2020), at Shri R.L.T. College of Science, Akola, Presented and Publish a paper titled “MQTT Based Raspberry Pi Home Automation System”, held on **24th January, 2020**.

- Chinthapatla Sri Varshini, Mohammad Arif Khan, Yogita Khandge and **Ranjana Ubale**, Conference on Engineering Systems Design and Optimization, presented a paper titled “Telepresence Surveillance Robot Using Raspberry Pi”, held on **February 27-28, 2020**,
- Akshay Mohite, Meghasham Birari, Yogita Khandge and **Ranjana Ubale**, Conference on Engineering Systems Design and Optimization, presented a paper titled “IoT Based Smart Aquaponics System”, held on **February 27-28, 2020**,
- Khandge Y.S, **Tilekar R.T**, Komal Deokar, Akshada Joshi and Zambare M.S, National Conference on Advances in Electronics and its Interdisciplinary Application [NCAEIA-2014], presented a paper titled “Implementation of DT Filters In Real Time on Tms320c6713 DSK”, Held on **19th and 20th September 2014**.
- Khandge Y.S, **Tilekar R.T**, Das Ritika and Zambare M.S, National Conference on Advances in Electronics and its Interdisciplinary Application [NCAEIA-2014], presented a paper titled” Implementation of Real Time Audio Effects on Tms320c6713 DSK”, held on **19th and 20th Sept 2014**.

Sr. No	Name of the Workshop/ Seminars / Participated etc.:	Name of Organizing Institute/ College/ University	Dates
1.	One day workshop on Grant-Writing,	Fergusson College (Autonomous), Pune	25th to 26th July 2022
2.	One day workshop Faculty Development Program on “Interrelationship between pedagogy, Assessment and learning outcome”,	Fergusson College (Autonomous), Pune.	on 23rd May 2022,
3.	One-week online Faculty Development Program on Advanced Research Methodology	Lucknow (An Associated College of Lucknow University),	March 21 – 27, 2022,
4.	One-week online International Workshop on “Advance Statistical Data Analysis Using SPSS”	Science Tech Institute, Lucknow	Sept 21-27, 2021.

5.	One day Participated in state level webinar on “Research Opportunities in Higher Studies”.	Annasaheb Magar Mahavidyalaya, Hadapsar Pune - 411028.	Friday 27th, August 2021,
6.	Five days Participated in FDP (online) on” Recent Trends in Next Generation Communication Technologies”	Department of Electronics & Communication Engineering, Bapatla Engineering College, Andhra Pradesh, India	16 th to 20 th August, 2021.
7.	One day National Level Online Workshop on “Electronic Design Automation (EDA) Tools”,	Maratha Vidya Prasarak Samaj, Nashik K. K. Wagh Arts, Science and Commerce College Pimpalgaon (B.) Tal. Niphad, Dist. Nashik,	10th August, 2021.
8.	One day international Webinar on “Futuristic Devices: From Healthcare to Quantum Computing”	Department of Electronics, Mahatma Gandhi Shikshan Mandal's Arts, Science and Commerce College Chopda, Dist: Jalgaon, Maharashtra, India	9th August 2021
9.	Three days Faculty Development Program (Online) on “Research Trends in Deep Learning and Communication Networks”	Department of Electronics and Communication Engineering, Bapatla Engineering College, Andhra Pradesh.	28 th to 30 th June, 2021
10.	One day Webinar titled “Recent Trends in Machine Learning and Artificial Intelligence for Image Processing”	Department of Electronics and Communication Engineering, Dr. Mahalingam College of Engineering and Technology (Pollachi, Coimbatore, Tamil Nadu.	4 th June 2021.

11.	One-week International online workshop on “How to Write A Quality Research Article”	sri vidya mandir arts & science college (autonomous) Katteri – 636 902, Uthangarai, Krishnagiri District Tamilnadu, India.	24th to 30th may 2021.
12.	Five days participated Short Term Training Program on “Emerging Nanoscale Devices, Circuits and Its Applications”	Department of Electronics and Communication Engineering, Delhi Technological University, Delhi-110042,	May 10-14, 2021.
13.	Five days international Research Workshop on “Smart Transportation and Autonomous Systems (STAS)”	Indian Institute of Information Technology, Sri City, Chittoor.	26 th to 30 th April 2021(3PM TO 7.30PM).
14.	One week faculty Development Program (Online) attended on “Research Methodology and IPR”.	G. H. Raisoni College of Arts, Commerce and Science, Wagholi, Pune,	26 th April to 1 st May 2021(11am to 1pm).
15.	Five days participating in “Machine Learning” Master Class,	Pantech Pro Labs India PVT. Ltd	19th -23rd, APRIL, 2021.
16.	One day participating in the National Webinar on “Fostering Research Culture in Higher Education Institutes”	Internal Quality Assurance Cell (IQAC) of SIES College of Arts, Science and Commerce, Sion West,	17 th April 2021.
17.	One day Virtual Symposium on “Recent Technological Advancement in Wide/Ultra-Wide Bandgap Semiconductor Materials, Devices and Applications”	Birla Institute of Technology & Science, Pilani, Pilani Campus-333031, Rajasthan, India,	10th April 2021.

18.	One day Participated in the UGC Sponsored “Online Webinar on Disaster Management Post Covid”	UGC – Human Resource Development Centre (HRDC), Gujarat University, Ahmadabad,	3 rd march 2021
19.	One day Participated in the UGC Sponsored “Online Webinar on Education & MOOCs”	UGC – Human Resource Development Centre (HRDC), Gujarat University, Ahmadabad,	26th Feb 2021
20.	One day Participated in the UGC Sponsored “Online Webinar on Ethics & Research”	UGC – Human Resource Development Centre (HRDC), Gujarat University, Ahmadabad,	24th Feb 2021.
21.	Three days Participated Faculty development program offline mode on “System Design using Raspberry Pi” Organized by	Department of Computer Science, of Fergusson College Pune,	25th, 28th and 29th Jan 2021.
22.	Three days Participated Faculty development program online mode on “Data Science with python programming”	Smt. Kashibai Walchand College (art and Science), Sangali,	12th June to 14th June 2020.
23.	Five days Participated Training program on “Internet of Things and its application in industry”,	IERA Institute of technology, Navi Mumbai and B & R Automation PVT. Ltd. Pune,	8th to 12th June 2020.
24.	One day Attending National Webinar on “Intellectual Property Rights”	Chemistry in collaboration with IQAC of SIES College of Arts, Science & Commerce (Autonomous)	6th June, 2020
25.	Two days Participated International webinar on “Innovative Research Trends in Green Electronics and Allied Technology”,	Department of Electronic Science TC. College of Art, Science, and Commerce Baramati, Pune India.	2nd and 3rd march 2021.
26.	Five days Participated Online “Linux OS Workshop: A practical Approach towards learning OS Concepts”,	Department of Mathematics, of Fergusson College Pune,	8th June to 12th June 2020

27.	Two days Attend workshop on Machine Learning and AI.	Bombay, IIT	15-16 Feb 2020.
28.	One day Industrial visit and Study Tour to Precision Automation & Robotics India (PARI) Company Visit at Khandala, Tal, Dhangarwadi, Maharashtra 412801 with	M.Sc. Electronic Science students, Fergusson College, Pune	8th February 2020.
29.	One day Study tour PARI Company Visit with students.	Shirval	2019
30.	Two days Participated in the Demo on “Internet of things (IoT)” Conducted by Mr. Shivkumar from Benchmark	Fergusson College, Pune	April 2018.
31.	One day Visited a student internship company (project)	Techno friend Pvt. Ltd.	April 2018
32.	Two days Participated Demo on “Internet of things (IoT)” Conducted by Mr. Shivkumar from Benchmark	Fergusson College, Pune	April 2017.
33.	One day Attending board of studies meeting for syllabus framing workshop for T.Y.B. Sc Autonomy syllabus on.	Fergusson College, Pune	Dec 2017
34.	One day Participated in workshop “The Internet of Things”	Fergusson College, Pune	Dec 2017
35.	One day workshop on “DSO “	Fergusson College,	Dec 2017
36.	Three day Participated in State Level Workshop on “Development of Mechatronics Systems using Arduino” (A Project Based Learning Approach)	PICT, Pune	August 2017
37.	One day Inaugural lecture by Prof. Jayant Khedkar on “Importance of Electronics”	Fergusson College, Pune	August 2017

38.	One day Teachers training workshop on “MATLAB interfacing with IOT” was organized This program was organized by Prowiz systems.	Fergusson College, Pune	July 2017
39.	One day faculty training program under DBT star on” ARM Microcontroller”	Fergusson College, Pune	April 2017
40.	Two days’ workshop under DBT star on” RF IC Design”	Fergusson College, Pune	March2017.
41.	Two days’ workshop under DBT star on” RFIC Design” by Renuka Wekhande from SM Technologies	Fergusson College, Pune	March 2017
42.	One day syllabus framing workshop for M.Sc. -II Autonomy syllabus	Fergusson College, Pune	Feb 2017
43.	One day workshop on “Calibration of Sensor”	University of pune	Aug 2015
44.	Eight days “Teachers training Programme under UGC-CPE-Model for Arts and Science Teachers (MAST) Programme”	Fergusson College, Pune	Nov to Dec 2014
45.	Two days “National Conference on Advances int Electronics and its Interdisciplinary Application “	Fergusson College, Pune	September 2014
46.	One day “Robotics Workshop”	Fergusson College.	September 2014
47.	Two days “Research planning and Technical paper writing under faculty Training program “	Fergusson College, Pune	Jan 2014
48.	Two days “Participation in Training program on nuvoton numicro ARM cortex-Mo and its Application”	University of Pune and SPEED	Jan 2014
49.	One day “Preparation and implementation” of M.Sc.-Part-II	Fergusson College, Pune	Feb 2014

	Electronic Science Syllabus as per choice-based credit system”		
50.	Two days “India Edu Services training”	University of Pune and SPEED	April 2013
51.	One day “Preparation and implementation of M.Sc. Part-1 Electronic Science syllabus as per Choice Based Credit System	Fergusson College, Pune University of pune	Feb2013
52.	One day workshop on “Embedded systems “(AVR)	Protus System, Pune	Oct2012
53.	Two days workshop on “Embedded Robotics “	University of Pune	Oct 2012
54.	One day workshops on “Panel Discussion on Research methodology”.	Fergusson College, Pune	March 2012
55.	Three days National level Workshop on “Wave theory and Antenna”	Modern College, Pune	Feb 2012
56.	Two days State level Workshop on “Digital system design using VHDL on CPLD board”.	Modern College, Pune	Feb 2012
57.	One day Training on Designing with Xilinx 7-series families	Fergusson College, Pune	Feb 2012
58.	One day Teaching Methodology for MATLAB and C	Fergusson College, Pune	Jan 2011
59.	Fifteen days Embedded Product Development by SAN Techo Mentoos Pvt. Ltd.	Training, Fergusson College	Sept 2010
60.	One day Physics and Technology of Sensor	15 th National level Seminar	March 2010
61.	One day T. Y B.Sc. (Electronic Science) “syllabus framing Microcontroller and power Electronic	Fergusson College	Nov 2009.
62.	Two days PLC Workshop	Fergusson College	March 2008

Events Organized / Coordinated:

Sr. No	Name of the Guest Lecture/ Organized /co-ordinate etc.:	Name of Organizing College	Nature of Contribution	Dates
1.	One week organized online Summer School / Workshop on “Current Trends in Transdisciplinary Electronic Systems”	Electronic Science Department, Fergusson College, Pune	Team member	From 18 th to 23 rd July 2022
2.	Organized online guest lecture on” IC Fabrication Technology” by Dr. (Ms) S. A. Gangal,	Fergusson College, Pune	Coordinator	23 rd March 2021
3.	Online mode “BASICS OF RASPBERRY PI”	Department of Electronic Science, M.Sc. Electronic Science, Fergusson College (Autonomous)	Team Member	15 th June 2020
4.	Organized and co-ordinate “project Exhibition”	Fergusson College, Pune	Coordinator	11 th April 2018.
5.	Organized guest lecture on “Communication Protocols” on under College with Excellence (CE)	Fergusson College, Pune	Coordinator	March 2018
6.	Organized guest lecture on “Quantum Mechanics” on under College with Excellence (CE)	Fergusson College, Pune	Coordinator	5 th January 2018
7.	Organized “Live Project demonstrations” Under “Electronics Hobby Club”	Fergusson College, Pune	Coordinator	August 2017

	Activity by B.Sc. and M.Sc. students			
8.	Organized Guest lecture on “Embedded System and Communication Protocols” for M.Sc. I by Mr. Sridhar Dudam	Fergusson College, Pune	Coordinator	March 2017

Additional skills/Activities

- Participated Recruitment drive for KPIT Pvt. Ltd
- A team member of Annual College Magazine Report till 2019.
- Organized various workshop / Guest Lecture under DBT (Dept. of Biotechnology),
- CPE (College with potential for Excellence) and CE (College of Excellence) scheme for M.Sc. Students Successfully completed sanctioned projects under DBT schemes.
- HACKATHON team member.
- Member of Time table committee for PG (Electronic Science) till date.

Course Content Developed

- Implementing Semester wise Practical course booklet for Msc-1 and M.Sc.- 2.

Consultancy Services

- Team member of KPIT Consultancy.