



‘ येथे बहुतांचे हित ’

**MARATHWADA MITRA MANDAL'S**

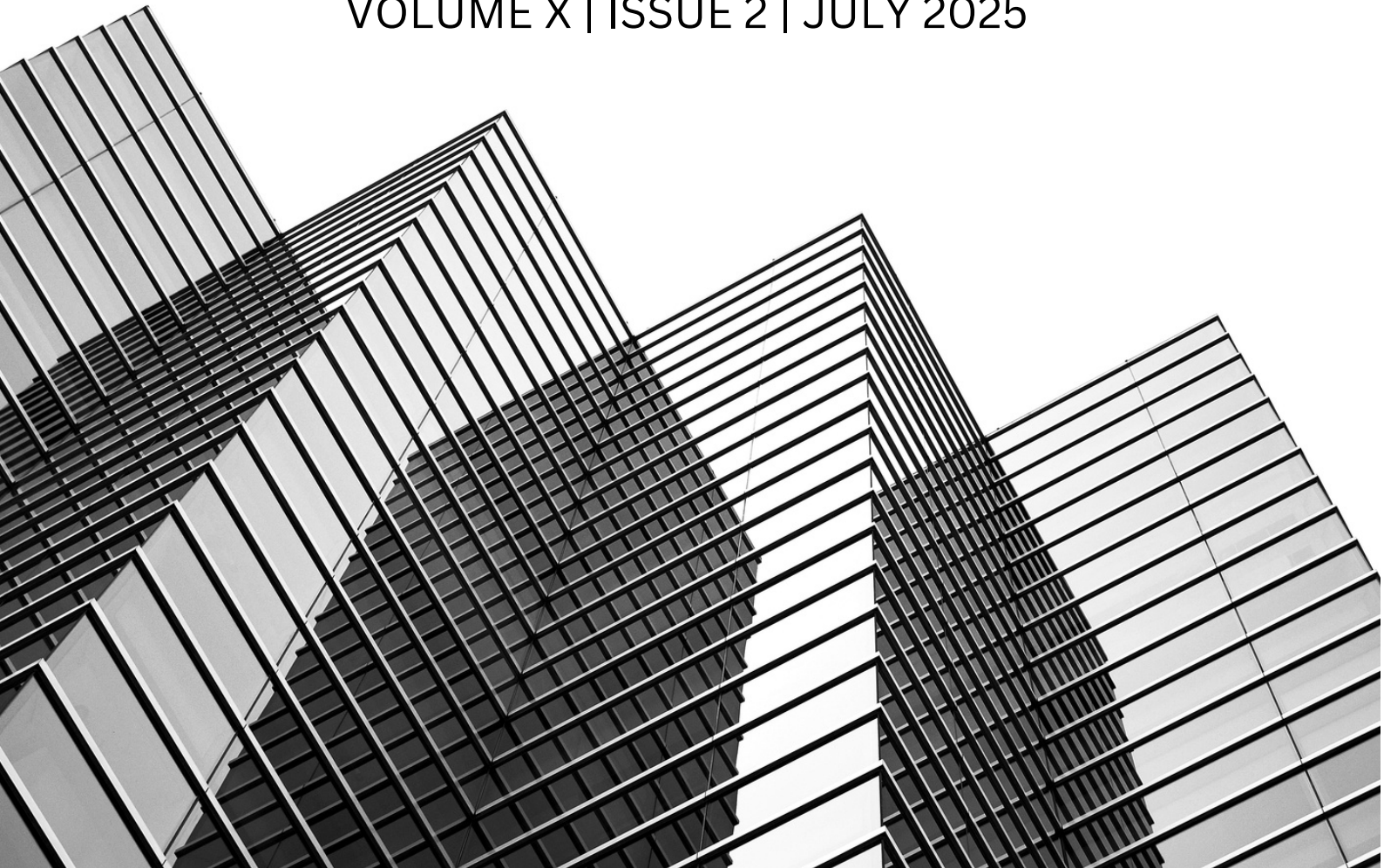
**COLLEGE OF ENGINEERING**

**AN AUTONOMOUS INSTITUTE**

**DEPARTMENT OF ELECTRONICS AND  
TELECOMMUNICATION ENGINEERING**

**IMPULSE**

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# MESSAGE FROM HOD



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**DR. A. S. BHATLAWANDE (SOLANKE)**  
**HEAD OF DEPARTMENT**  
**ELECTRONICS AND TELECOMMUNICATION**  
**ENGINEERING**

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Dear Readers,  
It gives me great pleasure to present this edition of the Electronics and Telecommunication Engineering Department Newsletter for the academic year 2024–25. This newsletter highlights the remarkable achievements, academic initiatives, and vibrant activities undertaken by our students and faculty throughout the year

Our department continues to uphold its commitment to academic excellence, practical learning, and holistic student development. Through guest lectures, expert sessions, workshops, industrial visits, and faculty development programs, we strive to bridge the gap between industry and academia while nurturing innovation and technical competence among our students.

Our faculty have made noteworthy contributions through funded projects, patents, and impactful research publications. Our students have excelled in technical competitions, cultural events, sports, and national-level platforms, bringing pride to the department. We are also pleased with the strong placement performance of our final-year students, reflecting the quality of education and training at MMCOE.

I extend my sincere appreciation to all faculty members, students, industry partners, and contributors whose continued efforts have shaped this newsletter. Their unwavering enthusiasm and commitment reflect the true spirit of growth and progress within our department.

Let us continue to work together with renewed energy, innovation, and purpose as we strive to prepare our students to become confident engineers, responsible citizens, and future leaders capable of addressing global challenges.

Warm regards,  
Head of Department  
Electronics and Telecommunication  
Engineering

# Marathwada Mitra Mandal's **COLLEGE OF ENGINEERING** Karvenagar, Pune-52

## Department of Electronics & Telecommunication Engineering

**Vision:** To achieve excellence in Electronics and Telecommunication Engineering by creating competent and skilled graduates for the welfare of society.

**Mission:**

- Facilitate students with necessary academic preparations in Electronics and Telecommunication Engineering for higher pursuits
- Inculcate team spirit through technical & extension activities
- Promote creativity, innovation and research culture in faculty & students for meeting global challenges
- Create Ethical and Social Professionals in the field of Electronics and Telecommunication Engineering

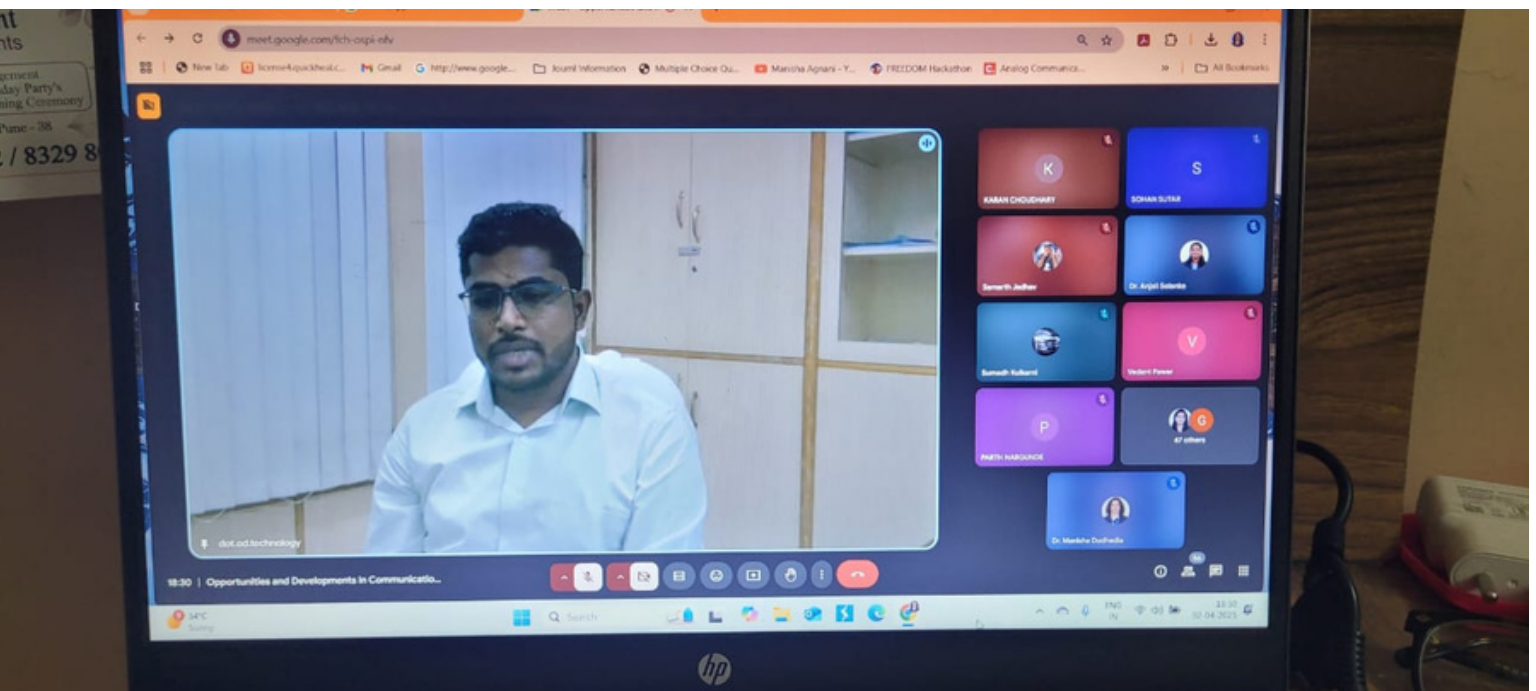
**Program Specific Outcomes (PSOs):**

Graduates of the program will be able to,

- PSO1: Design and develop Embedded systems to provide solutions in the field of Electronics and Telecommunication Engineering.
- PSO2: Apply and analyse Communication Engineering fundamentals in the field of wired and wireless communications and networking.
- PSO3: Apply cutting-edge technology in Robotics and Internet of Things.

# GUEST LECTURES

Expert Lecture by Mr. Yuvraj Biradar, Junior Telecom Officer, DoT, Bhubaneswar, Odisha LSA, Ministry of Communications, Government of India, on “Opportunities and Developments in Communication Domain” on 02nd April 2025 for TE and BE EnTC students.



# GUEST LECTURES

Expert Guest Lecture was conducted by E&TC Department, MMCOE, Pune on 4th April 2025. Ms. Trupti Parate, Software Engineer, Amdocs LLP was the Resource person.

It was conducted at MMCOE, AC 304, 3rd floor, under the guidance of our principal Dr. Vijay N Gohakar Sir, HOD E&TC - Dr. A.S. Bhatlawande. The event was coordinated by Prof. Pallavi Wadkar and Dr. Neeta Thune.

The session was extremely useful to SE Students. Detailed guidance was given by Industry Experts. The Practical approach/ examples given to students will help them to develop interest in the subject. Many new terminologies suggested by expert helped students to understand the subject conceptually.



# GUEST LECTURES

Mr. Siddheshwar Bagbande, Network Engineer at Mastercard, Pune, delivered an expert session on the topic “Job Opportunities in Network Security” on 15 April 2025.

The session proved to be highly informative and beneficial for the students, offering valuable guidance on how to prepare for careers in network security and the competencies required to excel in this domain.



# GUEST LECTURES

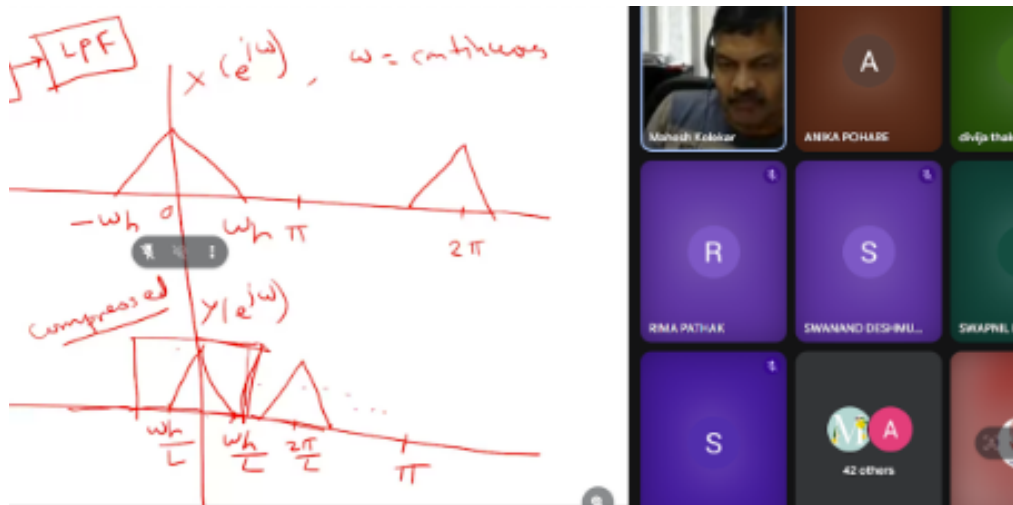
Mr. Vaibhav Pathrikar, Entrepreneur and Freelancing Trainer from Pune, delivered an expert session on “Closed Loop Feedback Controllers for Industry Applications” on 16 April 2025.

. The session provided students with valuable insights into industrial practices and motivated them to explore advanced control engineering technologies.



# GUEST LECTURES

Dr Maheshkumar Hanmant Kolekar, Associate Professor, Electrical Engineering Department and IIT Patna, Bihta, Patna -801103 delivered an expert session on “Applications of Fourier Transform”, on 17/04/2025.



# GUEST LECTURES

Mr. Rohit Pawar delivered an expert session on “Simulation of Power Electronics Application of Power Devices and Circuits” on 16 April 2025.

The session offered students practical insights into real-time problem-solving, circuit optimization, and the implementation of power devices in industrial and renewable energy systems, greatly enhancing their conceptual and technical knowledge.



# GUEST LECTURES

Mr. Sudhir Panditrao, Founder & Managing Director, SAN Techno Mentors Pvt. Ltd delivered an expert session on “Be a “SMART Engineer” for Building Long Term Career” on 19/04/2025



# BETA ACTIVITIES

## Event: Social Activity - Garbage Collection

Event Date: 4th February 2025

On 4th February 2025, the Student Association BETA (Biasing Energy To Achieve) of MMCOE organized a community service event at Vandevi Tekdi, Karve Nagar, focused on environmental conservation through a cleanliness drive.

Over 20 BETA members participated, equipped with cleaning tools, gloves, and trash bags. Volunteers were divided into teams to collect litter—mainly plastic waste—along pathways leading to the Vandevi temple. The initiative emphasized proper waste disposal and pollution reduction.

In addition to cleaning, participants also engaged with visitors to spread awareness about the environmental impact of littering and the importance of maintaining clean public spaces. The activity saw participation from local residents as well, fostering a sense of collective responsibility.

The drive resulted in a visibly cleaner Tekdi, promoted teamwork among students, and reinforced the value of community action. The event concluded with strong enthusiasm to continue similar efforts in the future, marking it as a meaningful step towards environmental preservation.



# PARENT-TEACHER MEET

The Department of E&TC conducted a Parent-Teacher Meeting on 8th March 2025 for Sem II (AY 2024-25). Students were felicitated for their achievements in academics and co-/extracurricular activities.

Dr. A. S. Bhatlawande (HoD) presented departmental activities, result analysis, and student club events. Parents interacted with faculty to discuss their ward's progress.

T&P Coordinator Mr. Anup Dakre briefed parents on training and placement efforts. Queries regarding exams, practicals, internships, and academics were addressed by the HoD and Vice Principal Ms. S. N. Deshmukh.

The meeting was coordinated by Ms. H. N. Burande and Ms. S. S. Tavse, with around 50 parents in attendance.



# STUDENT ACHIEVEMENT

| Name of the Student                                                                                                                                                                                                                           | Event                            | Level      | Details                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------|--------------------------------------------------------------|
| Pinak Sapre                                                                                                                                                                                                                                   | Swarbhaskar                      | State      | 1 <sup>st</sup> rank                                         |
| Siddhi Kulkarni, Mahesh Kakad, Adwait Kedari                                                                                                                                                                                                  | Avinya 2k25, IEEE Flagship Event | National   | 2nd Runner Up                                                |
| Avishkar More                                                                                                                                                                                                                                 | Quest by JSPM RSCOE, Pune        | State      | 1st Runner Up                                                |
| Prajakta Wanjale, Eshwari Durgade, Vaishnavi Phadtare, Disha Jedhe, Siddhi Gandigude, Om Barve, Archita Kulkarni, Eeshanee Kulkarni, Neel Salunke, Onkar MEngde, Pushkar Ubhe, Aditya Jadhav, Jidnyesh Jagtap, Sai Pawar                      | E&TC Project Competition         | Department | Best Project Awards                                          |
| Pushkar Ubhe, Sa Pawar, Aditya Jadhav, Sushrut Satbhai, Diya Bajaj, Soham Chiplunkar, Shreyash Malode, Shravani Abhyankar, Chaitali Deshpande, Chinmay Sathe, Adwait Kedari, Disha Zate, Dhaval Desai, Aary Joshi, Piyush Patel, Aniket Yadav | DD Robocon 2025                  | National   | AIR 1 in Stage 1 and 93/100 in Stage 2 of Remote Evaluations |

# STUDENT ACHIEVEMENT

| Name of the Student                                              | Event                                       | Level      | Details                   |
|------------------------------------------------------------------|---------------------------------------------|------------|---------------------------|
| Sahil Badambe, Prathamsh Date, Amitodhan Chinchkhede, Rohit Naik | IETE Project Competition                    | Department | Best Project Group, MMCOE |
| Anjali Bhajne                                                    | Elevate Volleyball Tournament by PICT, Pune | City       | 1st rank                  |
| Diksha Ambure                                                    | Elevate Volleyball Tournament by PICT, Pune | City       | 1 <sup>st</sup> Rank      |
| Siddhant Kadam                                                   | Sppu Pune City Kabaddi                      | City       | 2 <sup>ND</sup> rANK      |
| Sahil Ambrale                                                    | Football, Ensemble 2k25                     | College    | Runner Up                 |
| Mansi Dalbhajan                                                  | Volleyball, Ensemble 2k25                   | College    | Runner Up                 |
| Mansi Dalbhajan                                                  | Tug of War, Ensemble 2k25                   | College    | Winner                    |

# LIST OF TOPPERS

## BE TOPPERS

| Name of the Student     | Rank | SGPA |
|-------------------------|------|------|
| Doshi Prachiti Prashant | I    | 9.36 |
| Kulkarni Aditya Manoj   | II   | 9.25 |
| Wanjale Prajakta Sopan  | III  | 9.04 |

## TE TOPPERS

| Name of the Student    | Rank | SGPA |
|------------------------|------|------|
| Pingale Sakshi Sandeep | I    | 9.71 |
| Sankpal Arpita Pramod  | II   | 9.62 |
| Sathe Chinmay Sachin   | III  | 9.57 |

## SE TOPPERS

| Name of the Student      | Rank | SGPA |
|--------------------------|------|------|
| Prapte Shreeya Prasanna  | I    | 9.59 |
| Fuke Prathamesh Surendra | II   | 9.43 |
| Kothawade Harsh Mahesh   | III  | 9.39 |

# INDUSTRIAL VISITS

## Giant Metrewave Radio Telescope, Narayangaon, Pune

Date: 28<sup>th</sup> February, 2025

Class: TE & BE

Purpose: This visit was planned for the students, to showcase the world's most powerful telescope operating at low radio frequencies under Mobile Computing and Fiber Optic Communication Courses.



# INDUSTRY SPONSORED PROJECTS

Total 30 projects were sponsored from industries.

|    | PROJECT TITLE                                                                                             | DOMAIN                            | NAME OF INDUSTRY            |
|----|-----------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------|
| 1  | Integration of Biomax N Access 10 Pro Data to Cimco MDC, Cloud Storage, and Android Dashboard Development | Embedded & automation             | Digitech                    |
| 2  | Dynamic Light bending for headlight                                                                       | Embedded & automation             | Vishwas Vaidya Consultancy  |
| 3  | IoT-Driven Virtual Energy Manager for Optimized Savings                                                   | Communication & Signal Processing | Reliable Autotech           |
| 4  | Solar Powered charger/Inverter                                                                            | Electronic Material & Devices     | Brose                       |
| 5  | Traffic managment System                                                                                  | Communication & Signal Processing | Aashay measurements pvt ltd |
| 6  | Vehicle to Vehicle Communication                                                                          | Communication & Signal Processing | Linked LOOP                 |
| 7  | Size based counting of objects on a conveyor belt using PLC .                                             | Embedded & Automation             | B&R Open Automation         |
| 8  | Development of Drone Surveillance system                                                                  | Embedded & Automation             | Flybase                     |
| 9  | Grading System of Drumsticks using Image Processing                                                       | Embedded & Automation             | B&R Automations             |
| 10 | Remaining Life Prediction of a Filament Brake Lamp                                                        | Electronic Material & Devices     | Vishwas Vaidya Consultancy  |

# INDUSTRY SPONSORED PROJECTS

|    | PROJECT TITLE                                                    | DOMAIN                            | NAME OF INDUSTRY           |
|----|------------------------------------------------------------------|-----------------------------------|----------------------------|
| 11 | Profi-Bus Communication Protocol Conversion to Ethernet          | Communication & Signal Processing | Athena Automation          |
| 12 | Frugal Innovations in Automotive Headlight Systems               | Electronic Material & Devices     | Vishwas Vaidya Consultancy |
| 13 | IoT Enabled PCB Testing Jig                                      | Communication & Signal Processing | S2R2 Technologies          |
| 14 | Protocol conversion                                              | Communication & Signal Processing | Athena Automation          |
| 15 | Digital Transformation of Conventional Water Meter using ESP-Cam | Communication & Signal Processing | Tronix365                  |
| 16 | Testing setup for BHEL make IGBT Power Module                    | Electronic Material & Devices     | Indian Railways (POH BSL)  |
| 17 | Setting up Opensource RF Simulation Platform                     | Communication & Signal Processing | Bedrocks Microwave         |
| 18 | FPGA implementation of power efficient decoder design for SRAM   | VLSI & chip Design                | CoreEL                     |
| 19 | RF Based Electronic Product Designing and Simulation             | Communication & Signal Processing | Cyronics Instruments       |
| 20 | Electronic control of filament Based Lamp for life Enhancement   | Electronic Material & Devices     | Vishwas Vaidya Consultancy |

# INDUSTRY SPONSORED PROJECTS

|    | PROJECT TITLE                                        | DOMAIN                            | NAME OF INDUSTRY           |
|----|------------------------------------------------------|-----------------------------------|----------------------------|
| 21 | Comfort and Convenience Electronic Control Unit      | Embedded & automation             | Exergy Solutions           |
| 22 | Dynamo Based Battery Charging Bicycle                | Electronic Material & Devices     | Vishwas Vaidya Consultancy |
| 23 | VLSI Implementation for disease detection.           | VLSI & chip Design                | Core EL Technologies       |
| 24 | Customised PCB Designing for Inverter                | Embedded & automation             | Exergy Solutions           |
| 25 | Flood monitoring system                              | Embedded & automation             | Akshay Measurement System  |
| 26 | RF Based Electronic Product Designing and Simulation | Communication & Signal Processing | Cyronics Instruments       |
| 27 | Automatic rain sensing convertable shelter           | Embedded & automation             | Electronica Pvt. Ltd       |
| 28 | Solar Wireless Electric vehicle Charging system      | Embedded & automation             | Surya Logics               |
| 29 | Dual Mode Autonomous Teracopter                      | Embedded & automation             | Bharat Forge               |
| 30 | Solar based Battery Charger                          | Electronic Material & Devices     | Whizkeys                   |

# FUNDED PROJECTS

|    | FACULTY<br>NAME       | NAME OF THE<br>PROJECT                              | FUNDING<br>AGENCY                     | SANCTION<br>YEAR |
|----|-----------------------|-----------------------------------------------------|---------------------------------------|------------------|
| 1. | Prof. Vishal<br>Bhope | Vision Based object<br>sorting robot<br>manipulator | La Foundation<br>Dassault<br>Systemes | March, 2025      |
| 2. | E&TC<br>Department    | Advanced Power<br>Electronics Lab                   | Four Front<br>Technologies,<br>Pune   | March, 2025      |

# LIST OF PATENTS

| Sr. No. | Year | Name of Faculty                                                                                                            | Patent Title                                                                                                 | Status    |
|---------|------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------|
| 1       | 2024 | Mrs.Pallavi D. Wadkar                                                                                                      | AIR POLLUTANT REMOVAL CHAMBER                                                                                | Published |
| 2       | 2024 | Dr.G.S.Gawande                                                                                                             | AN AUTOMATIC AIR CONDITIONER TEMPERATURE CONTROLLER SYSTEM                                                   | Published |
| 3       | 2024 | Dr.G.S.Gawande                                                                                                             | SENSOR BASED AUTOMATIC WASTE SEGREGATOR                                                                      | Published |
| 4       | 2025 | Dr. A.S. Bhatlawande                                                                                                       | VEHICLE TO VEHICLE COMMUNICATION SYSTEM FOR ENHANCED SAFETY                                                  | Published |
| 5       | 2025 | Dr. Mayuri T. Deshmukh                                                                                                     | EPILEPSY MONITORING DEVICE                                                                                   | Published |
| 6       | 2025 | Mr. Kunal S. kulkarni                                                                                                      | A SYSTEM FOR CONTROLLING AND MANAGEMENT OF CULTIVATION                                                       | Published |
| 7       | 2025 | Dr. A.B.Kanwade                                                                                                            | SMART CATTLE CART                                                                                            | Published |
| 8       | 2025 | Mr. Atharva Chaudhari , Mr. Pawan Kale, Dr. Mayuri Deshmukh, Ms. Disha Parkhi , Dr. Anjali Bhatlawande, Ms. Swati Deshmukh | SENSOR BASED SYSTEM FOR IMPROVING THE EFFICIENCY OF SOLAR WATER HEATING ASSISTING IN COLD-WATER CONSERVATION | Published |

# FACULTY PUBLICATIONS

| Sr. No. | Name of Faculty         | Title of Publication / Activity                                                                          | Organized / Published By                                                               |
|---------|-------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1       | Ms. Rajeshwari Malekar  | Knowledge-based heuristic optimisation technique for mm-wave 5G antenna                                  | International Journal of Electronics, Volume 112, 2025.                                |
| 3       | Dr. M. T. Deshmukh      | Towards Intelligent Food Safety: Machine Learning Approaches for Aflatoxin Detection and Risk Predictio  | International Journal on Trends in Food Science and Technology                         |
| 2       | Ms. M. R. Pangaonkar    | Medical Image Scalar for Portable Medical Devices                                                        | International Conference on AI ML-Applications for Engineering and Technology          |
| 4       | Mr. P. D. Kale          | Towards Intelligent Food Safety: Machine Learning Approaches for Aflatoxin Detection and Risk Prediction | International Journal on Trends in Food Science and Technology                         |
| 5       | Hemlata Makarand Jadhav | IoT Based Air, Water, and Soil Monitoring System for Pomegranate Farming                                 | System for Pomegranate Farming<br>International Journal of Annals of Agri-Bio Research |

| Sr. No. | Name of Faculty                                  | Title of Publication / Activity                                                                                                  | Organized / Published By                                                                                    |
|---------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 6       | Dr Hemlata Makarand Jadhav                       | Public Health Monitoring Based on Food Security Measures in Sustainable Smart City Development Using Machine Learning Techniques | International Journal of Remote Sensing in Earth Systems Sciences                                           |
| 7       | Dr Hemlata Makarand Jadhav                       | Applying Random Forest for IoT Systems in Industrial Environments                                                                | ICCCNT 2024 (IEEE Electronics Packaging Society) IIT-Mandi                                                  |
| 8       | Dr Anjali Solanke (Bhatlawande), M. R. Pangaonka | Design and implementation of cloud based women safety system with enhanced security features                                     | International Journal of Discrete Mathematical Sciences and Cryptography, Vol. 27, Issue 4, ISSN 0972-0529  |
| 9       | Dr Manisha Ajaykumar Dudhedia                    | Secured Online Payment Using Blockchain Technology                                                                               | ICIC Express Letters, Volume 18, 2024, ISSN 1881-803X, pp. 1127–1136, DOI: 10.24507/icicel.                 |
| 10      | Ms. M. L. Deorankar                              | Machine Learning Enhanced IoT Wearable Device for Monitoring and Providing Feedback on Stuttering                                | ICCMO 2024, Thailand, ISSN: 979-8-3503-6139-1                                                               |
| 11      | Ms. M. R. Pangaonkar                             | Image scaling implementation for portable medical devices in support of VLSI architecture realization                            | International Journal of Microsystems and IoT, Vol. 2(11), 2024, pp. 1317–1320, DOI: 10.5281/zenodo.1449650 |

| Sr. No. | Name of Faculty        | Title of Publication / Activity                                                   | Organized / Published By                                                 |
|---------|------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 12      | Dr. Hemlata Jadhav     | Cognitive Digital Panchayat System For Farmer Empowerment                         | International Journal of Educational Administration: Theory and Practice |
| 13      | Dr. Hemlata Jadhav     | Internet of Things and Robotics in Transforming Healthcare Services               | African Journal of Biological Sciences                                   |
| 14      | Mr Vishal Bhope        | IoT-Enabled Intelligent Traffic Lights, Autonomous Vehicle, and Parking Solutions | Journal of the Maharaja Sayajirao University of Baroda                   |
| 15      | Dr. Neeta N. Thune     | DeepCervix: Enhancing Cervical Cancer Detection through Transfer Learning         | Indonesian Journal of Electrical Engineering and Computer Science        |
| 16      | Mrs. Pallavi D. Wadkar | Effectiveness of Different ANN Models for Coagulant & Chlorine Dosage Prediction  | International Journal of Nature Environment and Pollution Technology     |
| 17      | Dr. Archana B. Kanwade | Integrated Adaptive Driver Alert System Using IoT for Road Safety                 | Journal of Information & Optimization Sciences                           |

| Sr. No. | Name of Faculty          | Title of Publication / Activity                                                                      | Organized / Published By                            |
|---------|--------------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| 18      | Dr. Archana B. Kanwade   | Seamless Connectivity in Next-Generation Networking Using Cuckoo Optimization + HMM                  | International Journal on Nanotechnology Perceptions |
| 19      | Mr. P. D. Kale           | Design and Analysis of Optimized Multiband Microstrip Planar Patch Antenna for Wireless Applications | ICAESD 2024                                         |
| 20      | Mr. P. D. Kale           | Design and Analysis of Optimized Multiband Microstrip Planar Patch Antenna for Wireless Applications | Indian Journal of Technical Education               |
| 21      | Dr. Jitendra M. Bakliwa  | Multipurpose Agricultural Robotic Vehicle – Agribot                                                  | IJSREM                                              |
| 22      | Dr. Jitendra M. Bakliwal | Botanic Monitoring of Plant Using Raspberry P                                                        | IJSREM                                              |

# PLACEMENT ACTIVITY (AY 2024-25)

- Preplacement talk by KPIT Technologies, Pune for BE students was conducted on 26th July, 2024
- Aptitude training sessions for BE students were organized from 14th-18th September, 2024

Students were placed in the following compaies in the first semester itself of the academic year 2024-25



## EDITORIAL COMMITTEE

Staff Members:- Ms. Ranjana Kedar

Student Members:- Ms. Shravani Abhyankar    Ms. Manswi Ajankar