



R. C. PATEL
INSTITUTE OF TECHNOLOGY, SHIRPUR

An Autonomous Institute

RCPIT-ELECTRICAL

NEWSLETTER

June - November 2023



DIRECTOR'S MESSAGE

Dear Students,

We stand at the threshold of a technological revolution, and as aspiring Electrical Engineers, you are positioned to be its architects. Your journey toward excellence begins with unwavering commitment to mastering the fundamentals—from electrical systems and power engineering to cutting-edge electronics. Cultivate your analytical thinking and problem-solving abilities, for these will be your greatest assets. Embrace every learning opportunity our institution offers, stay curious, and maintain your discipline. Your dedication today will shape tomorrow's innovations and create meaningful change for society.



Dr. Jayantrao Patil

HOD'S MESSAGE

Dear Readers,

It gives me immense pleasure to present this edition of our Electrical Engineering Department Newsletter. Within these pages, you'll discover the remarkable achievements, technical initiatives, and innovative projects that reflect the dedication of our talented students and committed faculty members. Our department remains steadfast in its mission to deliver quality education complemented by practical learning experiences and industry-relevant training. I extend my heartfelt appreciation to our editorial team for their excellent work. Together, let us continue our journey of learning, innovation, and collective growth.



Dr. Shailaja Patil

EDITORIAL BOARD MESSAGE

Dear Readers,

We are pleased to present this edition of the Electrical Engineering Department Newsletter, showcasing the dynamic events and initiatives that have shaped our department recently. Beyond documenting our regular academic achievements, this issue provides an in-depth look at the diverse activities that define our commitment to excellence. You'll find stories of academic rigor complemented by hands-on learning experiences, innovative projects, and intellectual pursuits across technical, co-curricular, and extracurricular domains. Our students have embraced opportunities ranging from innovation challenges and technical competitions to workshops, industrial visits, and skill-enhancement programs. Meanwhile, our faculty have enriched their expertise through FDPs, specialized workshops, guest lectures, hackathons, and research collaborations. We trust this edition captures the vibrant spirit and collective progress of our department.



Prof. Krunal Gandhi

EDITORIAL BOARD STUDENT MEMBER



Rutuja Mali



Arti Patil



Anjali Marathe

VISION & MISSION OF THE DEPARTMENT

VISION

To produce competent Electrical Engineers committed to innovation, sustainability, and service to society.

MISSION

M1: Deliver innovative, interactive learning fostering excellence in Electrical Engineering and emerging technologies.

M2: Cultivate scientific inquiry, ethical responsibility, and interdisciplinary collaboration to address energy, automation, and societal challenges.

M3: Empower diverse students with skills for employment, entrepreneurship, and research, nurturing professionalism and lifelong learning.

ABOUT THE DEPARTMENT

The Department of Electrical Engineering at R. C. Patel Institute of Technology (RCPIT), Shirpur was established in June 2012 under the umbrella of The Shirpur Education Society. In a relatively short span, the department has built a strong reputation for its academic excellence, placement success, and student-centric approach.

With a dedicated and experienced faculty team, the department offers specialized knowledge in areas such as Power Quality, Electrical Machines, Power Electronics, Electrical Drives, and Power Systems. The department follows a project-based learning approach, encouraging students to apply theoretical concepts in practical scenarios, thus ensuring they are well-prepared for industry and research.

Electrical Engineering, being a core branch, plays a vital role in the technological and economic growth of the country. The department's curriculum provides a deep foundation in control systems, power generation, high voltage engineering, electrical machines, and circuit analysis, with a strong emphasis on adaptability to emerging technologies.

DEPARTMENT'S ACTIVITIES



Workshop on Industrial Approach In Electrical & Electronics

One week hands on practice electronics workshop "Industrial Approach in Electrical & Electronics" workshop was organized to impart practical experience and bridge the gap between theoretical knowledge and its application. The workshop, held from 01/09/2023 to 06/09/2023, was conducted by Mr. Sanjay Chaudhari of the Electronics Study Centre, Nashik. Attendees gained invaluable hands-on experience, real-world insights, and skills necessary for success in the industrial landscape.

Alumni Talk on Microservices architecture design using java springboot

Electrical Engineering Department, RCPIT, Shirpur organized an Alumni Talk on "Microservices architecture design using java springboot" on 26th August 2023 by Mr. Jayraj Pawar. The objective of an alumni talk is to have a comprehensive understanding of microservices architecture, its implementation using Java Spring Boot, and its significance in the contemporary software development landscape.





Alumni Talk on Emerging Technologies in Electrical Engineering

Electrical Engineering Department, RCPIT, Shirpur organized an Alumni Talk on "Emerging Technologies in Electrical Engineering" on 26th August 2023 by Mr. Govind Salunke. The objective of an alumni talk is to enlighten current electrical engineering students about the latest advancements and trends shaping the field. By exploring cutting-edge technologies such as renewable energy, Internet of Things (IoT), artificial intelligence (AI), and electric vehicles.

The Sustainable Energy Solutions Hackathon-2023

The Energy Club of the Department of Electrical Engineering organized the Sustainable Energy Solutions Hackathon in 2023, which took place on October 26th and 27th. The event brought together 50 participants from diverse interdisciplinary fields, all working towards developing sustainable energy solutions. Ten teams were formed, each engaging in intensive coding and prototyping sessions with the guidance of experts.



On the final day of the hackathon, October 27th, teams presented their innovative solutions and competed for recognition and awards. The event was a success, with ten impactful projects being produced. Winning projects, including the Power Complaint Tracking, Monitoring and Resolving Systems, and Energy from Agriculture Waste, demonstrated both creativity and feasibility in addressing sustainable energy challenges.

STAFF ACHIEVEMENT

Mr. Yogesh Kalidas Kirange

Paper Title - Electric Vehicle Charging Station Performance And Impact On Electrical Distribution Networks

Journal - European Chemical Bulletin

Paper Title - Study on Growth of Electric Vehicles in India: A Review

Conference - IEEE Bombay Section 2023-3rd Asian Conference on Innovation in Technology

Paper Title - Precision Tuning of PID Controller Parameters for Dynamic Stability Enhancement in GPSS-SMIB Systems: The HB-PSO Optimization Approach

Conference - ASCIS 2023 - 2nd International Springer Conference on Advancement in Smart Computing & Information Security

Workshop Title - Recent Trends in Renewable Energy Source

Conducted By - JSPMs, Rajarshi Sahu COC, Pune

Mr. Rupesh Shantaram Patil

Paper Title - Electric Vehicle Charging Station Performance And Impact On Electrical Distribution Networks

Journal - European Chemical Bulletin

Paper Title - Study on Growth of Electric Vehicles in India: A Review

Conference - IEEE Bombay Section 2023-3rd Asian Conference on Innovation in Technology

Workshop Title - Recent Trends in Renewable Energy Source

Conducted By - JSPMs, Rajarshi Sahu COC, Pune

Mr. Sachin Yashwant Sayais

Paper Title - Electric Vehicle Charging Station Performance And Impact On Electrical Distribution Networks

Journal - European Chemical Bulletin

Workshop Title - Recent Trends in Renewable Energy Source

Conducted By - JSPMs, Rajarshi Sahu COC, Pune

Mr. Krunalkumar Jitendrakumar Gandhi

Paper Title - Electric Vehicle Charging Station Performance And Impact On Electrical Distribution Networks

Journal - European Chemical Bulletin

Paper Title - Smart Energy Meter: A Comprehensive Survey on Maintaining Power Consumption and Customer Requirement

Journal - International Journal of Advance Studies and Growth Evaluation

Workshop Title - Role of IOT in Smart Systems and Infrastructure

Conducted By - OP Jindal University, Raigarh

Workshop Title - Recent Trends in Renewable Energy Source

Conducted By - JSPMs, Rajarshi Sahu COC, Pune

Mr Nilesh Suresh Mahajan

Paper Title - Electric Vehicle Charging Station Performance And Impact On Electrical Distribution Networks

Journal - European Chemical Bulletin

Paper Title - A Rational Cooperative Foraging Based Grey Wolf Optimizer

Conference - International Conference on Information System and Management Science (ISMS 2023)

Workshop Title - Sustainable Technologies & Energy Management of Hybrid Microgrid

Conducted By - National Institute of Technology Rourkela

Mr. Nadeem Akhtar

Workshop Title - 21st Century Skills for Teachers

Conducted By - Maulana Azad National Urdu University

Workshop Title - Artificial Intelligence (AI) in Education

Conducted By - Maulana Azad National Urdu University

Mr. Amit Mahire

Workshop Title - Outcome Based Education

Conducted By - SNJB's sau.Kantabai Bhavarlaji Jain college of engineering, chandwad

PATENT

Paper Title – Electric Vehicle Battery Fault Diagnosis Method and Device base on Artificial Intelligence

Published by –

Mr Yogesh Kalidas Kirange

Mr. Krunalkumar Jitendrakumar Gandhi

Mr Nilesh Suresh Mahajan

Mr. Sachin Yashwant Sayais

Mr Rupesh Shantaram Patil

Dr. Vijay Shrinath Patil

STUDENT ACHIEVEMENT

Maharashtra State Innovation Challenge 2023

Karanke Mohit Bharat, Yash Sashikant Mahajan, and Yash Dagadu Patil teamed up to showcase their innovation at the Maharashtra State Innovation Challenge 2023. Their project focused on the development of a new generation hydro power plant, which is a promising solution for clean energy production. The judges were impressed with their innovative idea and awarded the team with a cash prize of Rs. 1,00,000/- and a Certificate, recognizing their hard work and contribution to the field of sustainable energy.



Sushil Wankhede, Amol Pawar, Yogesh Mali

Paper Title - Smart Energy Meter: A Comprehensive Survey on Maintaining Power Consumption and Customer Requirement

Journal - International Journal of Advance Studies and Growth Evaluation

Shweta Salunkhe, Gaurav Girase, Jayesh Chaudhari, Neha Magare, Akansha B. Awachare

Paper Title - Enhancing Power Quality in Textile Industry: A Holistic Investigation of VFD Fed Induction Motor Drives

Journal - THE INDIAN JOURNAL OF TECHNICAL EDUCATION

Shirpur Education Society's

R. C. Patel Institute of Technology, Shirpur

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NEWSLETTER

December 2023 – May 2024



DIRECTOR'S MESSAGE

Dear Students,

The rapid evolution of technology demands engineers who are both skilled and adaptable. As you progress through your Electrical Engineering studies, remember that strong fundamentals are your foundation for success. Dedicate yourself to understanding electrical systems, power distribution, electronics, and emerging technologies thoroughly. Take full advantage of the practical training, workshops, and industry interactions we provide. Consistent effort, coupled with genuine curiosity, will prepare you not just for careers, but for leadership roles where you can make substantial contributions to society and the engineering profession.



Dr. Jayantrao Patil

HOD'S MESSAGE

Dear Readers,

Welcome to the newest edition of our departmental newsletter. This publication highlights the accomplishments, technical activities, and innovative contributions of our students and faculty. Our commitment to academic excellence through quality education, practical training, and industry alignment remains unwavering. I commend the editorial team for compiling this edition and encourage our entire community to maintain the momentum of continuous learning and innovation. Together, we move forward.



Dr. Shailaja Patil

EDITORIAL BOARD MESSAGE

Dear Readers,

Welcome to an exciting edition of our departmental newsletter that chronicles months filled with learning, innovation, and growth. This issue goes beyond celebrating academic milestones to showcase the rich tapestry of activities that define our Electrical Engineering community. From students tackling innovation challenges and excelling in technical competitions to participating in transformative workshops and industry interactions, the energy has been extraordinary. Our faculty too have been equally engaged, participating in professional development programs, conducting research, organizing hackathons, and hosting thought-provoking guest lectures. Every page of this newsletter reflects the dedication, curiosity, and collaborative spirit that drives our department forward.



Prof. Krunal Gandhi

EDITORIAL BOARD STUDENT MEMBER



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DEPARTMENT'S ACTIVITIES



CONVERGES'24 - "WASTE TO WATT" AND "ELECTROTOY"

The Department of Electrical Engineering recently participated in the "Converges'24" national-level technical event hosted by the R. C. Patel Institute of Technology, Shirpur. As a part of this event, the students of the electrical engineering department organized two fascinating events - "Waste to Watt" and "Electrotoy". These events aimed to showcase innovative solutions for waste management and introduce the participants to the world of electrical toys. The event was a grand success and received an overwhelming response from the students and faculty alike.

Expert Talk on Automation Solution of Wipro PARI

The Department of Electrical Engineering has recently organized a highly informative and engaging expert talk on "Automation Solution of Wipro PARI", which took place on February 15th, 2024. The event featured two distinguished speakers: Mr. Ajit Kulkarni, the Head of Field Service at Wipro PARI, and Mr. Kunal Jadhav, the HR Manager of Recruitment. The main objective of this talk was to provide students with an in-depth understanding of Wipro PARI's cutting-edge automation solution while inspiring and motivating them.



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Alumni Talk on Scope of Data Engineers

On the 20th of February 2024, the Department of Electrical Engineering organized an alumni talk on "scope of data engineers" to inform, inspire, and empower individuals keen on pursuing a career in data engineering. Tushar Sagar Sharma, a Data Engineer at Datametica in Pune, presented the talk. The talk focused on highlighting the scope, opportunities, and pathways within the field of data engineering, providing valuable insights and guidance to those interested in this exciting and rapidly growing field.

Alumni Talk on Recent Trends in Electrical Automation (PLC & Robotics)

Electrical Engineering Department, RCPIT, Shirpur, organized an Alumni Talk on "Recent Trends in Electrical Automation (PLC & Robotics)" on 27th February 2024 by Mr. Krushna Nimba Baviskar. The alumni talk on Recent Trends in Electrical Automation (PLC & Robotics) aims to provide insights into the latest advancements in PLC and robotics technology, fostering knowledge exchange and networking and inspiring current students to explore innovative applications and career opportunities in the field.





Alumni Talk on Exploring PLC Drives and SCADA

On the 18th of March 2024, the Department of Electrical Engineering organized an alumni talk on "Exploring PLC Drives and SCADA" to inform, inspire, and empower individuals keen on pursuing a career in data engineering. Gaurav Wani, an Automation & Electrical Engineer at Fox Solutions in Nashik, presented the talk. The aim of the talk is to create a valuable learning experience that empowers students to excel in their careers, leverage emerging technologies, and contribute to the ongoing evolution of PLC drives and SCADA systems.

STAFF ACHIEVEMENT

Mr. Yogesh Kalidas Kirange

Paper Title - Enhancing Power Quality in Textile Industry: A Holistic Investigation of VFD induction Motor Drives

Journal - IJTE Journal

Paper Title - Smart Energy Meter: A Comprehensive Survey on Maintaining Power Consumption and Customer Requirement

Journal - International Journal of Advance Studies and Growth Evaluation

Paper Title - Optimization of PID controller parameters for an SMIB system using a hybrid butterfly particle swarm optimization approach

Journal - International Journal of Advanced Technology and Engineering Exploration

Paper Title - Innovative Approach to Enhance Stability: Neural Network Control and Aquila Optimization Integration in Single Machine Infinite Bus Systems

Journal - Advance Technology in Innovation

Paper Title - Performance and Impact of Electric Vehicle Charging Station Electrical Distribution Networks

Journal - ISTEOnline

Paper Title - Advancements in Power System Stability: FOPID Control Optimization using Harris Hawk Algorithms in SMIB Systems.

Conference - 6th IEEE INTERNATIONAL CONFERENCE on "Emerging Smart Computing & Informatics" (IEEE ESCI-2024)

Title - Educational Tools for Teaching
Conducted By - NITTTR, Chennai

Mr. Rupesh Shantaram Patil

Paper Title - Performance and Impact of Electric Vehicle Charging Station Electrical Distribution Networks

Journal - ISTEOnline

Title - Educational Tools for Teaching
Conducted By - NITTTR, Chennai

Mr. Sachin Yashwant Sayais

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Title - Educational Tools for Teaching
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Mr Nilesh Suresh Mahajan

Paper Title - Performance and Impact of Electric Vehicle Charging Station Electrical Distribution Networks

Journal - ISTEOnline

Title - Educational Tools for Teaching
Conducted By - NITTTR, Chennai

Mr. Nadeem Akhtar

Title - Academic Writing for Teachers
Conducted By - Maulana Azad National Urdu University

Congratulations, Dr. Nadeem Riyaz Ansari!



We are delighted to celebrate the successful defense of your thesis, "Investigation of Remote Sensing Images Using Deep Neural Network," at SVKM's NMIMS (Deemed to be University), Mumbai. Your work represents a significant contribution to the field of remote sensing and AI, and we look forward to seeing the impact of your research in both academia and industry.

Wishing you continued success in your future endeavors!

STUDENT ACHIEVEMENT



Kamini Rajput from Second Year Electrical Engineering, R. C. Patel Institute of Technology, Shirpur, achieved a third rank in the Cad Madness event in Phoenix 2k24 held by Godavari College of Engineering and Polytechnic, Jalgaon, on 22/02/2024.

Badgujar Yukta Sunil from Second Year Electrical Engineering achieved Third rank in TechExpo of Converges'24 held at R. C. Patel Institute of Technology, Shirpur, on 17/02/2024.



Jaykumar Rajput, Kamini Rajput, Nikita Girase, and Komal Kumavat achieved First prize in Electrotoy making under Converges'24 held at R. C. Patel Institute of Technology, Shirpur, on 17/02/2024.

Ravandale Dhiraj, Sonawane Om, Waswani Sumit, Sonawane Nishant achieved Second prize in Electrotoy making under Converges'24 held at R. C. Patel Institute of Technology, Shirpur, on 17/02/2024.



Pranav Jagtap, Satpalsingh Rajput and Yash Bari achieved Third prize in Electrotoy making under Converges'24 held at R. C. Patel Institute of Technology, Shirpur, on 17/02/2024.

Jaykumar Girase from Second Year Electrical Engineering achieved second prize in the robo race held by KCES Engineering and Management College, Jalgaon.



Yukta Sunil Badgajar and Vaishnvi Vilas Patil achieved Second prize in Waste to Watt under Converges'24 held at R. C. Patel Institute of Technology, Shirpur, on 17/02/2024.

Badgajar Yukta Sunil (Second Year Electrical) and her Team representing RCPIT as a Team FORTRANS at SVNIT, Surat, had achieved Third Rank in Pathfinder competition of Mindbend 2K24 held at SVNIT, Surat.



Yashodip More(Electrical Engineering), Aashish Tirmale(E&TC), and Nayan Patil(AIML) of R. C. Patel Institute of Technology, Shirpur, won first prize in Technofest - Electrical Engineering Poster Presentation at Kalyani Charitable Trust, Late G.N. Sapkal College of Engineering, Nashik.

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