ELECTRI.CT

"Where Ideas Flow Without Resistance"

11th Edition

AUGUST - 2024

DR. HOMI BHABHA

As we celebrate the 11th Edition of ELECTRI.CT, it is fitting to honour Dr. Homi Jehangir Bhabha, an inspiring figure in Indian science. Born on October 30, 1909, in Mumbai, Dr. Bhabha was a brilliant and charming student who studied at Cambridge University under the guidance of Niels Bohr.

Dr. Bhabha's vision extended beyond research; he was instrumental in establishing India's nuclear program. In 1945, as World War II drew to a close, Dr. Bhabha returned to India with a vision of harnessing nuclear energy for peaceful purposes. He recognized the potential of nuclear science to transform India's technological landscape and played a pivotal role in establishing the Indian nuclear program. In 1948, he founded the Atomic Energy Commission of India and played a crucial role in setting up the Bhabha Atomic Research Centre (BARC). His leadership and foresight helped India develop nuclear technology for peaceful purposes, positioning the country as a key player in global science.

Dr. Bhabha's legacy is a testament to his dedication and innovation. On this 78th Independence Day, India has developed state-of-the-art nuclear energy, which wouldn't have been possible without the strong foundation and legacy of Dr Homi Bhabha. His work not only advanced nuclear science but also inspired future generations of scientists. As we reflect on his contributions, we reaffirm our commitment to scientific excellence and the pursuit of knowledge, honouring a true pioneer of modern science.

LEGACY OF ELECTRI.CT

ELECTRI.CT, launched in, 2018, began as a student-led initiative within the Electrical Engineering Department. This bi-annual magazine, published on Republic Day and Independence Day, started as a simple record of departmental achievements, events, and visits. Over time, it has evolved into a showcase of a diverse range of student skills, including graphic design, content writing, and innovative game creation.

ELECTRI.CT has garnered recognition from the NBA team for its quality and impact. The magazine's success is also attributed to the unwavering support and guidance from esteemed faculty members and respected HODs, who have played a crucial role in its growth. Each new batch of students builds upon the legacy, passing down the responsibility of curating and contributing to this publication.

As ELECTRI.CT continues to grow, the magazine remains dedicated to being comprehensive, creative, and captivating, reflecting the dynamic and evolving talents of the students. With each edition, it aims to inspire, inform, and engage the community, celebrating the collective achievements and innovative spirit of the Electrical Engineering Department.

CONTENTS

Vision

- To foster learning environment for electrical engineering education having high technical skills, ethical values and overall global competence.

Mission

- Better employability, startups and entrepreneurship.
- A professional career with essential technical and managerial skills.
- Collaboration with industry through Research & Innovation.
- Other avenues for higher education.
- Adapting to change in technology and apply the same for the benefit of society at large.

Principal's Desk

"Science Is Discovering The Essential Truths About What Exists In The Universe, Engineering Is About Creating Things That Never Existed."

- Elon Musk

Dear Readers,

It is a pleasure to greet you on Independence Day. I am thankful for your constant support, love, and concern towards the college which helps us to carry forward the mission of spreading value-based knowledge to one and all.

I congratulate the Department of Electrical Engineering for coming up with the 11th issue of the magazine ELECTRI.CT and wish them success in continuing this endeavour.

The department now offers a program for Working Professionals as per AICTE norms besides the regular UG and PG programs. I am very happy to share that the department has a successful startup with CELER. EED, LDCE has a training center in collaboration with BOSCH. The objective of this center is to train the institute students as part of their curriculum during laboratory hours. It shall also cater to training for neighbouring degree and diploma institutes' students. The training shall be imparted to provide the students with gainful employment or encourage them to become entrepreneurs for a sustained livelihood.

LDCE not only has a vibrant campus, it also has a stellar alumni network across the globe, who are our pride and a strong industry connect. I am confident that together, we will continue to make strides towards a brighter future.

As we raise our flags in honour of our nation, let us also raise our aspirations, aiming higher and reaching further.

Happy Independence Day,

Jay Hind !!!

Dr. N. N. Bhuptani

H.O.D.’s Talk

Dear Readers,
Wishing You A Joyous Independence Day!

I gladly present the 11th edition of our department magazine ELECTRI.CT. I am delighted to share that we now have a UG program with a minor/major course in Electric Vehicles, a PG program with a specialization in Power Systems, and also Electric Vehicle Technology. This year we have introduced a new program for Working Professionals which will further strengthen our industry connect. Many of our faculty members have participated in industrial training programs and also published papers in reputed journals.

An exciting milestone during this term was the establishment of a cutting-edge training center in our department with the BOSCH India Foundation. The addition of this laboratory is set to significantly enhance the infrastructure of our department.

The department witnessed a surge in startup activities. Furthermore, our interactions with alumni and industry professionals have been substantial, resulting in a noteworthy achievement of 131 placement offers for our students graduating in 2024 with the highest package being around 19LPA. The new placement season has commenced on an optimistic note and I hope to share equally good information in the next issue for the graduating batch of 2025.

The credit for these accomplishments goes to the dedicated efforts of our hardworking faculty and students. We are immensely grateful for the unwavering support from all our stakeholders.

Together, let us continue to uphold the legacy of our legendary department and institute.

Warm Regards,

Dr. Jyoti Iyer

Faculty Insights

“I’m Not Lazy, I’m On Energy Saving Mode.”
—Electrical Engineer

Happy Independence Day!
We are immensely happy to present the 11th edition of our department magazine “Electri.CT - where ideas flow without resistance”.
We wish our graduating batch of 2024 the very best for a happy and bright future. At the onset of the new term, we welcomed the newly admitted first-year students on behalf of the Electrical Department Family.
The department offers a UG program with minor/major courses in Electric Vehicles. Our PG program also offers a specialization in Electric Vehicle Technology. This is in keeping with the thrust the government policies have in the sector. Further, we now offer a program for Working Professionals too which helps us liaise with the industry. We have a training center in collaboration with BOSCH which is of immense use to our students. Our alumni have generously contributed to upgrading our infrastructure and have also been helping with repairing and maintaining our lab equipment.
We always strive to make our newsletters more than just newsletters by being informative and using them as a platform to showcase the multifaceted talent of our students and faculty. Having said that, we are open to any ideas that will help us improve our newsletter. We would like to thank all the students and faculty who have contributed to the newsletter. We appreciate the student editorial team who have done a commendable job. Kudos to you boys and girls!
Once again, Team Electri.CT values your contribution and looks forward to your continuous support in the coming issues.

Happy Reading!

Research & Develpoment

Name of the Faculty	Title of the Paper	Name of Journal / Conference
Dr. K.P. Badgujar	An Overview of Techniques for Detecting Mechanical Anomalies	Transactions of the Indian National Academy Engineering, Springer
	Circuit Model Development for Induction Motor Windings using Key Phase Value of Frequency Response	6th Global Power, Energy and Communication Conference (GPECOM), Budapest, Hungary, 2024
Dr. K. A. Bhatt	Controlled single-phase auto-reclosing technique for shunt reactor compensated	International Journal of Ambient Energy, Taylor & Francis
	Real-Time Implementation of Controlled Energization of Coupled Power Transformer Using Multi-Stepped PIR, Part-1 & Part-2	Journal of Institute of Engineers, Series B
	An Approach to Improve Power System Resiliency in Grid-Connected Wind Turbine Generator Power Systems	Journal-WSEAS Transactions on Circuits and Systems
Prof. S.M. Patel Prof. M.I Siddiqui Prof. N.V. Sinha	Insight on the Application of Deep Learning Based Thermal Image Processing Methods in Electrical System Anomaly Detection and their Comparative Analysis	SSRG International Journal of Electrical and Electronics Engineering

Research & Develpoment

Name of the Faculty	Title of the Paper	Name of Journal / Conference
Prof. L.K. Katariya Dr. V.K. Prajapati Prof. R.J. Patel Dr. C.D. Upadhyay	Statistical Comparative Study of FACTS Devices in PSS Improvement	Educational Administration: Theory and Practice
Prof. M.I. Siddiqui Prof. D.R. Patel Prof. S. M. Patel Prof. V.M. Dholakiya	A Novel Integrated Switching Strategy for Reliable Starting of Two Terminal MMC HVDC Transmission System	Journal of Electrical Systems
Prof. V.M. Dholakiya	Identification of an Appropriate Operating Strategy under ABT for Frequency Regulation in a Non Linear Multisource Power System Linked Through a Hybrid AC/DC Tie-Line	Journal of Operation and Automation in Power Engineering (JOAPE)
	Impact of ABT-based control strategies on ALFC and AVR in DFIG-integrated interconnected power systems	e-Prime - Advances in Electrical Engineering, Electronics and Energy (Elsevier)
Dr. Jiten K Chavda	An efficient hybrid approach-based design of photovoltaic fed grid integrated wireless electric vehicle battery charger	Optim Control Appl Meth. 2024;1-24. (Wiley) E-SCI, DOI: 10.1002/oca.3137

Research & Develpoment

- **Prof. K.B. Kela :**

Professor K.B. Kela from the Electrical Engineering Department has made a significant contribution to the book "Reliability Analysis of Modern Power Systems," published by John Wiley & Sons, Inc. in association with IEEE Press. His research published in the form of 2 Chapters 13 and 14, is titled "Reliability Enhancement of Electrical Distribution Systems Considering Active Distributed Generations" and "Reliability Enhancement Strategy for Electrical Distribution Systems Considering Reward and Penalty," respectively. This book is set to be indexed in Scopus and WoS databases.

Recently Professor K.B. Kela also wrote a research article on the topic "Power Supply Accuracy". He explains the concept of Power Supply Accuracy and the factors affecting it. Accuracy in DC programmable power supplies is influenced by several factors. Display accuracy measures the precision of the output voltage, considering component tolerances and expressed as a percentage of the full scale or set voltage. Load regulation describes how well the power supply maintains a stable output under varying loads and should be factored into the overall accuracy. Stability indicates the allowed voltage variation over time due to factors like component tolerances and temperature changes, and differs from drift, which is measured over longer periods. Noise, including high-frequency voltage spikes and ripple, affects output quality and results from AC to DC conversion inefficiencies and external interferences. Remote sensing improves accuracy by measuring voltage at the load rather than at the power supply's output to account for voltage drops in leads. Proper wiring practices, such as using shielded twisted-pair wires and keeping leads short, are essential to minimize errors and noise. High accuracy in power supplies is crucial for precise testing and requires careful consideration of these factors.

Faculty Achievements

LDCE feels overwhelmed and proud to have such extraordinary faculties who could obtain marvellous results which requires a lot of Research and Development, great efforts, dedication and hard work. Appreciating it and with all the joy in our hearts let’s go through the various milestones achieved by our beloved faculties.

- **Dr. M.C. Chudasama and Prof. M.G. Patel :**

Both professors delivered outstanding efforts, resulting in the registration of a patent on January 30, 2024, for an invention titled “Planetary Geared Brushless DC Motor (BLDC) Powered Ceiling Fan.” Understanding the technical details of the patent may be challenging, and some readers might only grasp the concept of the "ceiling fan". Have you ever considered a simple upgrade to your lifestyle or interiors that can increase efficiency, use less power, and reduce electricity bills? Or simply experience less disturbance while you’re fast asleep under a fan? In the simplest terms, that is what the benefits of the patent were about.

Not only the above-mentioned achievement but they also brilliantly registered another patent for an invention entitled “Indirectly Heated Powder Filled Cathode for Electric Gun”. The question likely arises: “What exactly is an electric gun?” It is a device to produce a narrow stream of electrons from a heated cathode. It is a really important invention as far as it’s concerned to science and technology along with LDCE’s aspiration to learn and grow together.

Faculty Achievements

• Prof. J.K. Chavda :

One of our talented and dynamic expert faculties, Prof. J.K. Chavda, participated in the All-India Civil Service BEST PHYSIQUE Tournament held under the auspicious Central Civil Services Cultural and Sports Board, New Delhi. He marked his participation under the 85 – 90 kg category held from the 18th to the 22nd of March in the year 2024. Not only did he participate in the tournament but with great enthusiasm he also represented the Gujarat secretariat team. Along with experience, one should always remember life is a tournament you'll either win or you'll learn something and encounter the unexpected.

• Prof. T.R. Patel :

From January to March 2024, NPTEL – IIT Madras offered a MOOC-based course on EV Vehicle Dynamics and Electric Motor Drives. Our esteemed Prof. T.R. Patel completed the course and was awarded a silver medal certification, achieving the distinction of being in the top 1% of performers.

• Prof. H.N Raval :

Prof. H.N. Raval received the award as Institute Level Coordinator from GTU for Institute Level Best NSS unit. With constant efforts, kindness, and thoughts of service and fire for change in the hearts, the NSS unit of LDCE has made it here and will carry on its glorious deeds with the support and help of all the volunteers, students, and faculties.

Student Achievements

- **Shubhangi Shukla :**

Shubhangi Shukla, currently a 5th-semester Electrical Engineering student, achieved a remarkable milestone by representing Paraguay as a delegate to UNESCO at the Asian Youth Model United Nations in Kuala Lumpur, Malaysia. Competing with 600 delegates from across the globe, Shubhangi's selection is a testament to her exceptional abilities and dedication. Out of these, only 25 were from India, making her achievement particularly notable. Her participation underscored her outstanding diplomatic skills and commitment to global discourse, reflecting great credit on her and her country.

Furthermore, she also emerged as one of the top 31 semi-finalists in Gujarat for the “Speak for India” debate competition, organized by Federal Bank and the Divya Bhaskar Group. After successfully advancing through the regional, zonal, and quarterfinal rounds in Ahmedabad, her achievement stands out..

- **Kashish Tanna :**

Kashish Tanna, a 3rd-semester electrical engineering student, was nominated as an MP to attend the State Youth Parliament on behalf of the NSS unit at LDCE. The Gujarat Youth Parliament took place at Mahatma Mandir, Gandhinagar, on March 9, 2024. Kashish represented GTU after successfully advancing through three rounds of selection: college level, university level, and zonal level.

Student Achievements

- **Sameer Bhatti :**

Final year Electrical Engineering students' team has been shortlisted for Ideation proposal (in Maze Solving Robot category) from Level I to Level II (Proof of Concept) in ROBOFEST GUJARAT 4.0 program, India’s biggest Robotics Competition for ROBOFEST 4.0. They had participated in the DD National ROBOCON and secured a place among the top 12 in India. The team consisting of Bhatti Mahammadsamir, Maharshi Sanjaykumar Patel, Heta Rajyaguru, and Hiteshree Pindoria with constant guidance from mentor Professor Mihir Vasavda sir achieved this feat.

- **Shikhar Mishra :**

Shikhar Mishra, a 1st semester student of Electrical Engineering Department has achieved 3rd zonal rank and 6th inter zonal rank. His achievemnet is particularly notable as he has been selected among top six players of GTU to represent the university at national level in AIU tournament

- **Forum Vaghela & Team :**

The dynamic team from the 1st semester of the Electrical Engineering department secured first place in the "Project Prodigy" competition at the 'IGNITE 2K24' event organized by PMI Gujarat and the Student Club of LDCE. They successfully navigated two challenging rounds that tested both their project-building and PowerPoint skills. The team members were Forum Vaghela, Priya Patel, Dhwanit Chauhan, and Dhruv Kadia.

Visits

- **SOLANCE Visit :**

With over four decades in the battery industry, SOLANCE INDUSTRIES specializes in the manufacturing of SMF and VRLA batteries. On March 2nd, 2024, the Electrical Engineering Department organized a rewarding visit to SOLANCE Industries, located in Bavla, Gujarat. The visit was attended by 15 third-year students and faculty members Dr. Mitesh Priyadarshi and Dr. Chetan Upadhyaya. The visit aimed to provide practical insights into the application of electrical engineering principles. Upon arrival, the group was welcomed by the staff and given a comprehensive tour of the facility, including the production floor, research and development labs, and control systems department. This hands-on exposure allowed students to witness first hand the integration of modern technology and automation in industrial processes. The visit featured a detailed technical presentation by senior engineers, highlighting key projects and advancements in areas like smart grid technologies and power management systems. The interactive Q&A session offered students the opportunity to engage with industry professionals, gaining valuable advice and insights into career opportunities. Overall, the visit was an invaluable experience, enhancing students' theoretical knowledge with real-world applications and inspiring them for their future careers in electrical engineering.

- **Adani Visit :**

On April 2nd and 3rd, 2024, a remarkable group of 96 participants, including 92 third-year electrical engineering students and 4 esteemed faculty members—Rachna Patel Ma'am, Tejas Patel Sir, Mitul Patel Sir, and Gaurang Buch Sir— set on a two-day visit to the Adani

Visits

Group’s state-of-the-art facilities located at Mundra Port, Gujarat: India’s largest commercial port. This immersive two-day experience offered the students a rare opportunity to explore the inner workings of one of India's most significant maritime hubs.
The visit was meticulously organized, featuring comprehensive tours across various working units. This visit to Adani Port offered a comprehensive view of how modern ports function as vital cogs in the global supply chain. From witnessing the advanced technology used in cargo handling to understanding the broader economic and environmental impacts, the experience was both educational and impressive. The respected faculty members played a crucial role, guiding the students through the experience with insightful discussions and reflections. This visit not only enhanced the students' academic knowledge but also provided them with a profound understanding of real-world industry applications.

- **IPR Visit :**

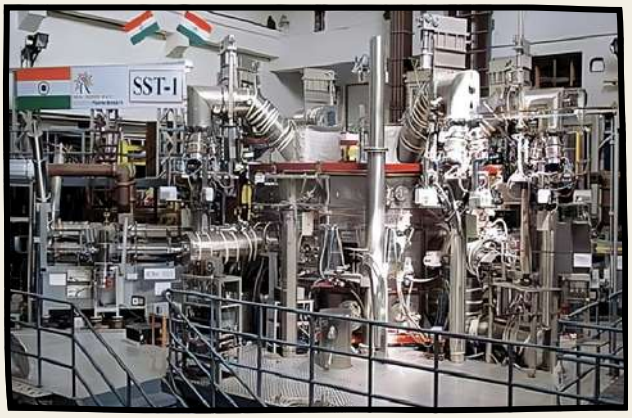
The Electrical Engineering Department and IEI: The Student Chapter organised a visit to the Institute of Plasma Research (IPR) in Gandhinagar, Gujarat on 8th April and 9th April 2024 for the 1st-year and 2nd-year Electrical Engineering students from LDCE. Faculties of the EED, Professor Dr. Kunal Bhatt, and Professor Mihir Vasavda accompanied the students. Led by their guide, Gattu Ramesh Babu, of the outreach team, IPR, the visit encompassed a comprehensive exploration of plasma, its applications, and cutting-edge research in the field.

Visits

The visit began with an informative lecture by Gattu Ramesh Babu on plasma, covering its basic concepts, significance, and applications. Plasma, the most common state of matter in the universe, was explained in the context of tokamaks—a type of device used to confine plasma with magnetic fields. Students learned about India's indigenous tokamaks, ADITYA-U and SST-1, and witnessed demonstrations of plasma applications, including the Tesla Coil, Plasma Ladder, and Plasma Globe. They also toured the 132kV substation that powers the Institute for Plasma Research (IPR), gaining insight into its infrastructure and control systems. The highlight was visiting ADITYA-U, India's first nuclear fusion tokamak, and SST-1, a medium-sized tokamak designed for steady-state operation with superconducting magnets. The visit offered Electrical Engineering students a comprehensive view of plasma research and technology, enhancing their academic experience and inspiring further exploration in this field. Special thanks to Gattu Ramesh Babu and IPR for their guidance and facilitation.

ADITYA-U

SST-1



Events

- **Republic Day 2024 :**

To recognize and celebrate the 75th Republic Day of India, LDCE also organized a patriotic celebration. Numerous events were held throughout the event, including marches led by GISF guards, NSS volunteers, and NCC cadets as well as cultural performances. Dr Vishwas Amin, executive director of the Indian Red Cross Society, and JCO Subedar B. Jayesh were the chief guests of the occasion and were welcomed by former Principal Major Dr C.S. Sanghvi sir (ANO). Two student anchors from the Electrical Engineering department, Nishant Chauhan and Anjali Mishra, facilitated the event easily and enthusiastically. Those in the audience sang the national song as the flag was raised and fluttered in the brilliant sky. The crowd then saw the NCC cadets and NSS volunteers' parade. Wise words from the Chief Guests and our respected principal sir numerous acts demonstrating their love and respect for the nation followed it. Everyone present on the occasion also took an oath and pledged to be an ideal citizen and a responsible individual ready to serve the nation. The oath was led by Electrical Engineering Professor HN Raval sir, on behalf of NSS. The EED students also displayed their artistic abilities. Arundhati Shreejita was in a singing ensemble, and Neha Chaudhary performed a semi-classical patriotic dance routine. Everyone in attendance, including the visitors, was captivated by their performances. Winners of the elocution competition organised by NSS were also facilitated with prizes. All three winners were first-year electrical engineering students. Copies of the 10th issue of ELECTRI.CT were initially examined by our visitors at its introduction. This magazine serves as a showcase for the abilities of the team's graphic designers, content finders, and other students in addition to documenting the accomplishments and activities of the electrical department.

Events

- **IEI Orientation :**

The Institute of Engineering Club: The Student Chapter in India, a pivotal departmental club of the Electrical Department at LDCE, operates under the Association of Electrical and Electronics Engineers (AEEE). The club organized a program on the 21st of February 2024, aimed at enhancing the practical skills of engineering students within the department. Coordinated by Professor Dr. Kunal Bhatt, the event featured various activities designed to foster collaboration and enthusiasm to join this club among students. By providing a platform for knowledge exchange and skill enhancement, the Institute of Engineering Club significantly contributes to the holistic growth of students, preparing them for successful careers in the engineering field. Prof. Dr. Kunal Bhatt had conversations with the students and enrolled them in the Club. The enthusiastic participation and positive feedback from attendees highlighted the event's success, reinforcing the importance of such initiatives in our academic journey. This initiative not only strengthened the club's role in student development but also contributed to building a vibrant engineering community at LDCE.

- **Arduino Empower: Blynk Server & IoT Integration Workshop :**

The Arduino Empower: Blynk Server & IoT Integration Workshop held on February 23, 2024, at Chanakya Hall, LDCE, was an engaging event to introduce participants to the fundamentals of Arduino and the Internet of Things (IoT).

Events

The workshop began with an Introduction to Arduino, where participants learned about the platform's capabilities and applications. This was followed by a Demonstration and Hands-on Session-1, where a sample Arduino was passed among the participants, allowing them to interact with Arduino boards, fostering a hands-on learning experience. Next, the "Introduction to IoT segment" highlighted the significance of IoT in modern technology, emphasizing its applications in various fields. The workshop concluded with a demonstration and a hands-on session 2, providing further practical insights into integrating Blynk with Arduino for IoT solutions. Additionally, the senior students prepared four IoT models and explained them to every participant in detail. The presenters: Vaibhav Pandya, Gaurav Pal, Sneha Patel, Deepak Adwani, Raj Thawani, Prince Goswami, and Shailendra Gupta, effectively guided participants through both theoretical and practical aspects, ensuring a comprehensive understanding of the subject. This workshop not only equipped participants with essential skills but also inspired them to explore the vast possibilities within the IoT domain.

- **Bosch Artisan Training Centre and Classroom Inauguration :**

Bosch Rexroth India Foundation signed an MOU with LDCE during Vibrant Gujarat 2024. This collaboration marks the establishment of a state-of-the-art Artisan Training Centre and a classroom in the Electrical Department of LDCE. The lab and the classroom were officially inaugurated on February 28, 2024, at the Chanakya Hall of the Electrical Department. This facility is a key initiative to strengthen the link between industry and academia, offering significant benefits for students. It is equipped with wave generators, oscilloscopes, safety tools and many more machinery useful for making skilled artisans

and electrical and electronics engineers. Bosch Rexroth Team inaugurated the new classroom and the training centre along with the respected Principal of LDCE, Dr Nilay Bhuptani sir, and H.O.D of the Electrical Department. The inauguration ceremony was hosted by two student anchors: Kashish Tanna and Nishant Chauhan of the 2nd semester. The Bosch Rexroth team interacted with the students from all years of the Electrical Engineering Department. The student team is highly appreciated for their enthusiastic participation and management in making this event successful.

- **Thalassemia Check Up :**

LDCE, NSS unit of LDCE, Alumni Association, NCC unit LDCE in collaboration with the Indian Red Cross Society organized a free Thalassemia check-up camp on the 18th of April, 2024 in LDCE, aiming to raise awareness about this genetic blood disorder. Prof. H. N. Raval was the coordinator for the Thalassemia check-up camp. The check-up included various diagnostic tests such as complete blood count (CBC), haemoglobin electrophoresis, and genetic testing to identify different types of Thalassemia. Students as well as faculty members were provided with detailed explanations about the disorder, its inheritance patterns, and management options. Counselling sessions were also conducted to address concerns and provide support to the students affected by Thalassemia. The event not only focused on early detection but also emphasized the importance of genetic counselling for at-risk individuals. By offering these services, our department is dedicated to promoting health education and proactive healthcare practices within the community, ultimately contributing to the well-being of individuals with Thalassemia.

Events

- **Blood Donation :**

NSS LDCE, Alumni Association, and NCC LDCE jointly organised a Blood donation camp in collaboration with LIONS CLUB, and Medicity Hospital on the 19th of April 2024 which was a resounding success, embodying the spirit of compassion and community support. With the ever-increasing demand for blood in the blood banks of hospitals, this event proved to be fulfilling that need. A total of 6 faculty members and 14 students from the EED, did the noble cause of donating blood. ELECTRI.CT appreciates them for their selfless practice. They highlighted the importance of collective action in addressing healthcare needs. Prof. H. N. Raval's leadership and dedication as the coordinator played a crucial role in the success of the event. His efforts in mobilizing volunteers, creating awareness, and ensuring the necessary logistics were in place were highly commendable. Overall, the Blood donation program in our department exemplified the values of empathy, solidarity, and altruism, leaving a lasting impression on both donors and recipients.

- **Design Engineering Projects 6th Semester :**

Senior electrical engineering students of 6th semester showcased their design engineering projects on 20th April, 2024. These projects present technical skills and innovative thinking. The projects focused on solving a wide variety of problems. The students explained, showed and run their working models of the projects for the visitors. Their faculty coordinators also provided constant support and

Events

guidance through out their project journey. The projects aimed at integrated various technologies to optimize energy consumption, reduce costs, and minimize environmental impact. Their solution not only demonstrated technical proficiency but also addressed real-world issues, such as energy efficiency and sustainability. This project exhibition was lauded for its practical impact and creativity, setting a high standard for future engineering design projects.

- **Orientation of the 2024-28 Batch :**

On 27th June, an orientation program was organized for newly admitted students at the Electrical Engineering Department of LDCE. The entire event was organized by the enthusiastic involvement of 2nd and 3rd-year students and with the dedicated involvement of respected faculty coordinators, Vijay Prajapati sir and Vihang Dholaki sir. The event was successfully hosted by two student anchors Manan Trivedi and Neha Chaudhary. Through a detailed presentation, the freshmen were made aware of the EED, various clubs and societies of the college, the innovative research and development in which department is involved as well the placement details. They were also given a tour of the department and the whole college by the orientation team which organised the program. The unwavering contribution done by Kashish Tanna, Gopi Rajodiya, Fiza Mansuri, and Tiya Parmar ran the registration desk commendably. Engaging decoration work, fun activities, departmental presentation, and assembly & management of sound systems became possible through valuable contributions by Sujan Juneja, Arpana Kumawat, Aditya Singh, Sarjan Gajjar, Aditya Rupadiya, Izhan Mansuri, Dipak Pawar, Shanti Makwana, and Aryan Shukla. Student coordinators Rishabh Virani and Susmita Mallick worked meticulously for accomplishment of the event.

IMPULSE - 2024

Impulse is the annual sports tournament of L.D. of College of Engineering. It covers a wide variety of sports and games. Be it team, or solo; the games challenge not only the physical strength of students but also their mental and strategic skills.

Power Lifting

Sub category : Boys(60-70)kg
Harshil got gold in powerlifting.

Power Lifting

Sub category : Boys(80-90)kg
Prashant got golden glory in powerlifting.

Athletics

Gurneet clinched the gold with a stellar performance in girls 100 meters race.

Athletics

Gurneet clinched the gold with a stellar performance in Girls 200-meters race.

Athletics

Miral clinched the gold with stellar performance in girls 400 meters race.

Athletics

Electrical department's girls team culminated the 4 X 100 meter relay race with gold.

Athletics

Electrical department's boys team culminated the 4 X 400 meter relay race with gold

Athletics

Electrical department's girls relay team got the 4 X 400 meter relay race with golden

Mini Marathon

Miral took the a brilliant victory and a well deserved gold medal

Kho Kho

Electrical department's boys kho-kho team culminate the game with golden triumph

Kho Kho

Electrical department's girls kho-kho team got gold

Hand Ball

Electrical department's boys handball team culminate the game with golden triumph

IMPULSE - 2024

Lawn Tennis

Madhav and Niket accomplished silver streak in men's lawn tennis doubles

Arm Wrestling

Sub category : Boys(61-70kg) Aditya Rupadiya earned silver in arm wrestling

Athletics

Devika secured the silver medal in 400 meters girls race

Athletics

Miral secured the silver medal in 200-meters Girls race

Athletics

Miral secured the silver medal in 100 meters girls race

Mini Marathon

Pranay finishes strong with a silver medal

Tug Of War

Electrical dept. men's tug of war team got silver

Kabaddi

Electrical dept. men's kabaddi team got silver

Kabaddi

Electrical dept. women's kabaddi team got silver

Table Tennis

Shubhangi and Akshat finishes strong with bronze in duo table tennis

Athletics

Devika earned the bronze medal in 100 meters girls race

Athletics

Darshan took the bronze medal in 100 meters boys race

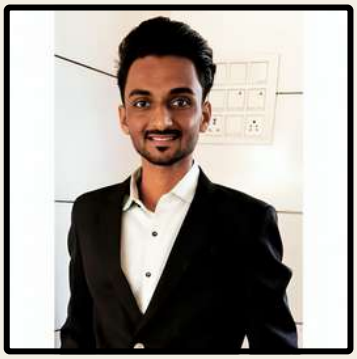
Tug of war

Electrical dept. Women's Tug of War team culminated the game with shining bronze medal

Placement Details

Sr. No.	Name Of Company	Package (LPA)	No. Of Student
1	TORRENT POWER	4.25	2
2	GODREJ INDUSTRIES LTD.	5	1
3	OPTIMIZED SOLUTION	4	1
4	DEEPAK GROUP	4.25	3
5	MICRON	13.17	1
6	LINDE	5	1
7	PSP PROJECTS	2.4	3
8	AMULFED DAIRY	7.9--9	8
9	HONDA	8.5	1
10	HITACHI ENERGY	6	4
11	ADANI GROUP	6.5	24
12	WELSPUN CORP	4.25	4
13	HONDA	8.5	1
14	TBEA ENERGY	4.5	3
15	GFL	3	2
16	ENERTECH	3	1
17	RELIANCE	7.5	1
18	GNFC	18.68	4

Leading Placement Stories



Jignesh Vala
(M.E. EED, LDCE)

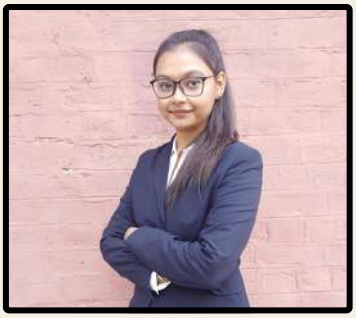
At LDCE Jignesh Vala has distinguished himself as an exceptional student in the Electrical Department, securing placement with a remarkable package of more than 17 LPA. Currently pursuing his post graduation, Jignesh has demonstrated a profound commitment to his studies and a deep interest in teaching. His extensive industrial experience further enriches his understanding of the field.

Jignesh strongly advocates the value of books in education, suggesting that students should rely primarily on them for learning. He believes that books provide the most comprehensive and reliable knowledge, emphasizing that other resources should be secondary. His achievements and philosophy highlight the critical role of focused, book-based study and hands-on experience in attaining success. He believes that hard work and smart work both contribute to your success. His passionate behaviour and hardworking nature helped him throughout his academia.

In addition to his impressive achievements, Jignesh Vala's dedication and expertise have earned him a notable recognition: he has been selected by ISRO to pursue his dissertation work as a part of his post graduation program. This accolade not only underscores his technical prowess but also reflects his commitment to pushing the boundaries of innovation and contributing to significant advancements in research. His successful project selection by such a prestigious organization further exemplifies his ability to apply his knowledge and skills to impactful and cutting-edge initiatives.

Leading Placement Stories

Urmi Shah
(B.E. EED, LDCE)



Urmi Shah has achieved one of the most prestigious placements of 2024 in the Electrical Engineering department, a testament to her exceptional academic and extracurricular prowess. During her college years, Urmi stood out as a remarkably bright student, consistently demonstrating a keen understanding of complex electrical concepts. Her aptitude tests were remarkable, reflecting her deep technical knowledge and analytical skills. Beyond academics, she was actively involved in various college clubs, showcasing her leadership and management abilities, which significantly contributed to her overall development. She was even the graphic designer for ELECTRI.CT for the 8th and the 9th edition. She was one of the TPOs as well.

In addition to her technical expertise, Urmi's extensive involvement in college clubs honed her management and communication skills, proving invaluable during her placement process. Her impressive performance in the interview and HR rounds highlighted her well-rounded capabilities, seamlessly blending logical proficiency with strong interpersonal skills. Her journey through college exemplifies a balanced blend of intellect and practical experience, setting a high standard for future graduates in the field.

Bhakti Tank
(B.E. EED, LDCE)

Bhakti Tank has recently achieved a remarkable milestone by securing one of the highest placements in the electrical department, reflecting her exceptional academic and professional journey.

Bhakti's journey offers valuable lessons for aspiring engineers and professionals. In a highly competitive world, standing out is crucial. She emphasizes the importance of showcasing unique skills and experiences that set you apart from others. Furthermore, she advises that authenticity is key in interviews. Being genuine and true to oneself not only helps in presenting one's capabilities more effectively but also aligns better with potential employers' expectations.Bhakti Tank's story is a compelling example of how dedication, leadership, and technical expertise can converge to create outstanding achievements. Her career trajectory serves as an inspiration to many, illustrating that with the right mix of skills and attitude, one can achieve remarkable success in the field of engineering.

Top Scorers

AULUCK PUNITSINGH
SPI - 9.76
(SEM - 1) (230280109007)

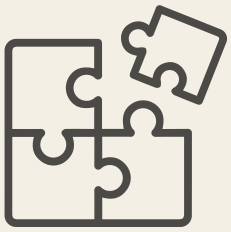
TANDEL DHEERKUMAR
SPI - 8.91
(SEM - 3) (220280109137)

PANDIT DIPNARAYAN
SPI - 9.22
(SEM - 5) (220280109020)

BHATT OM
SPI - 9.08
(SEM - 7) (200280109020)

JOSHI MANASWINI
SPI - 9.08
(SEM - 7) (200280109041)

Games



Logic Gate Puzzle
The Security System

Imagine you are designing a simple security system for a house. The system has the following components:

1. **Door Sensor (D)** : Outputs 1 if the door is open, 0 if the door is closed.
2. **Window Sensor (W)** : Outputs 1 if the window is open, 0 if the window is closed.
3. **Motion Sensor (M)**: Outputs 1 if motion is detected inside the house, 0 if no motion is detected.

The system uses the following logic gates:

- **AND Gate** : Outputs 1 if both inputs are 1, otherwise outputs 0.
- **OR Gate** : Outputs 1 if at least one input is 1, otherwise outputs 0.
- **NOT Gate** : Output is the opposite of the input (1 becomes 0, 0 becomes 1).

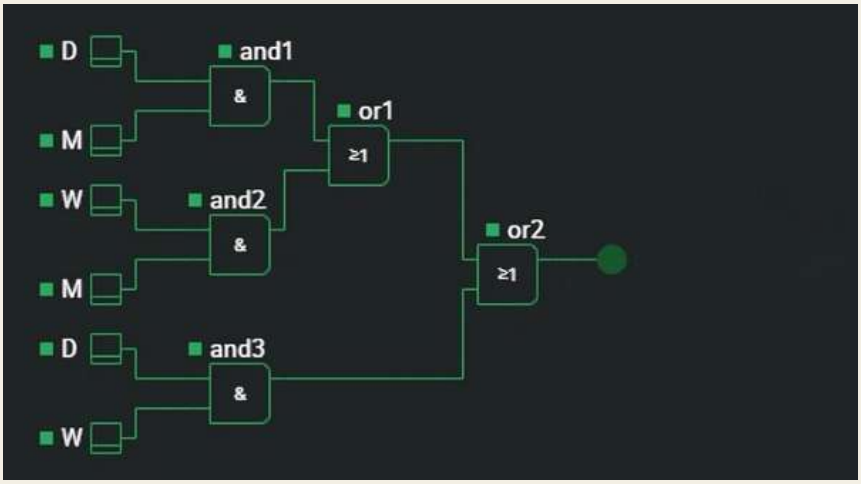
The security alarm (A) should sound if:
1. The door is open **and** the motion sensor detects movement **or**
2. The window is open **and** the motion sensor detects movement **or**
3. Both the door **and** the window are open.

The logic circuit for the alarm is designed as follows:

1. The output of the Door Sensor (D) and the Motion Sensor (M) are fed into an
AND Gate (AND1).

Games

2. The output of the Window Sensor (W) and the Motion Sensor (M) are fed into another
AND Gate (AND2).
3. The outputs of AND1 and AND2 are fed into an OR Gate (OR1).
4. The outputs of the Door Sensor (D) and the Window Sensor (W) are fed into a third
AND Gate (AND3).
5. The outputs of OR1 and AND3 are fed into a final OR Gate (OR2), which produces
the alarm output (A).



TASK :

GIVEN THE INPUTS FROM THE SENSORS, DETERMINE THE OUTPUT OF THE ALARM (A) . USE THE FOLLOWING TABLE TO FILL THE OUTOUT.

Door(D)	Window(W)	Motion(M)	AND1	AND2	AND3	OR1	Alarm(A)
0	0	0	0	0	0	0	
0	0	1	0	0	0	0	
0	1	0	0	0	0	0	
0	1	1	0	1	0	1	
1	0	0	0	0	0	0	
1	0	1	1	0	0	1	
1	1	0	0	0	1	0	
1	1	1	1	1	1	1	

Creative Corner

Miral Varsani
Semester-3

Kesar Kaliya
Semester-3

Harsh Chauhan
Semester-3

Meet Prajapati
Semester-1

Hemali Chaudhary
Semester-3

Ayushi Zankat
Semester-3

“ ધન્ય ધરા છે LD ”

છે વિદ્યાર્થીના પડકારાથી ખમકારા કરતી LD,
સદાય સામે હરિ હરિ ને ખમ્મા કરતી LD,
સદા હસતી આગળ વધતી ધન્ય ધરા છે LD.

વિદ્યાર્થી ના ધબકાર થી જે હરદમ સિંહફાળ ભરતી,
એ ઇન્સાન ને ઈજનેર બનાવતી વિશેષ ગળથુંથી પાતી,
સદા હસતી આગળ વધતી ધન્ય ધરા છે LD.

વિદ્યાર્થીનો કલરવ ગાજે, કલરવ થી સિંહનાદ ગરજતી,
Hostel ના હાંકોટાથી એ રોજ ધબકતી રહેતી,
સદા હસતી આગળ વધતી ધન્ય ધરા છે LD.

ભણવા સાથે Event, રમત ને startupને અગ્રિમતા આપતી,
બધા Talent ની દાદ આપી ખુદને વિશ્વસ્તરીય બનાવતી,
સદા હસતી આગળ વધતી ધન્ય ધરા છે LD.

જ્યારે તકલીફ આવી રબડીની ચા ની ચૂસકી લીધી,
મેં અહીંના ઝાડ પાન અને વનરાઈ ને મારી બધી વાતું કીધી,
સદા હસતી આગળ વધતી ધન્ય ધરા છે LD.

છે ભવ્ય ભૂત , ભાવિ ઉજ્જવળ ને વર્તમાન વિદુષી,
કીર્તિને વરેલી ,નામના મળેલી ને ખ્યાતિ જેની સલામું ભરતી,
સદા હસતી આગળ વધતી ધન્ય ધરા છે LD.

લખ્યા થાક્યો હાથ LD કોલેજ ની પ્રશસ્તિ,
તોય ન આવ્યો પાર એવી મહિમાની છે ભરતી,
સદા હસતી આગળ વધતી ધન્ય ધરા છે LD.

- Manan Trivedi

Builders Of Electri.CT

Nishant Chauhan
Editor in Chief

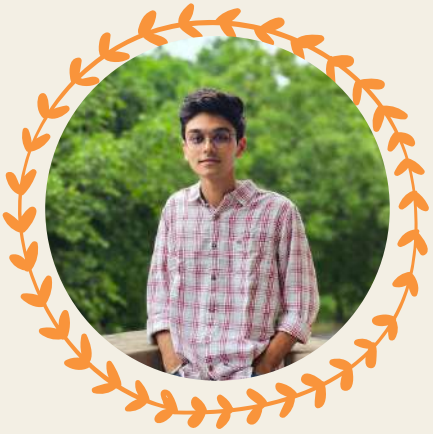
Rudra Bhatt
Managing Director

Kashish Tanna
Content Head

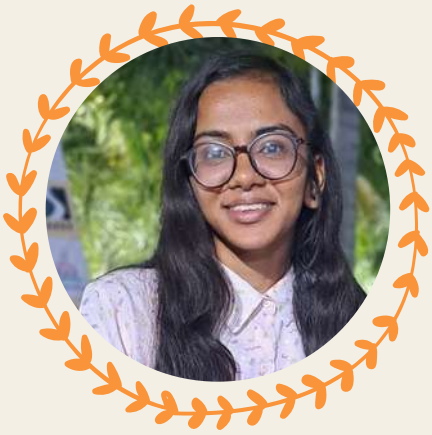
Neha Chaudhary
Graphic Designer

Dipak Pawar
Assistant Writer

Susmita Mallick
Creative Head



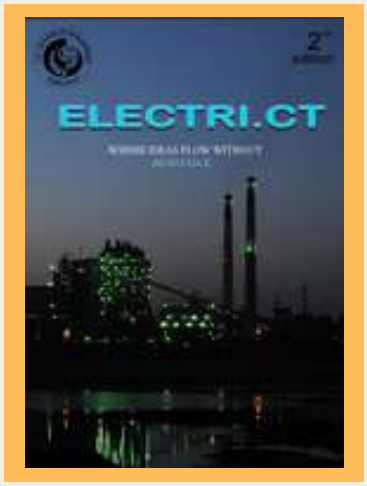
Aryan Shukla
Associate Editor

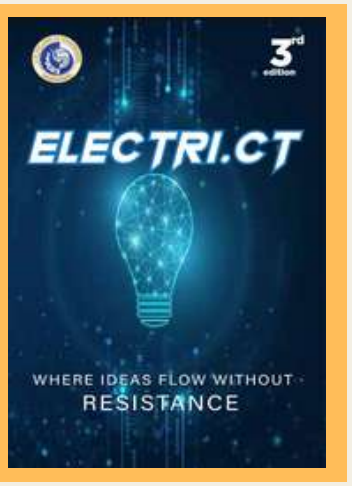


Sujan Juneja
Content Coordinator

Izhan Mansuri
Fact Checker

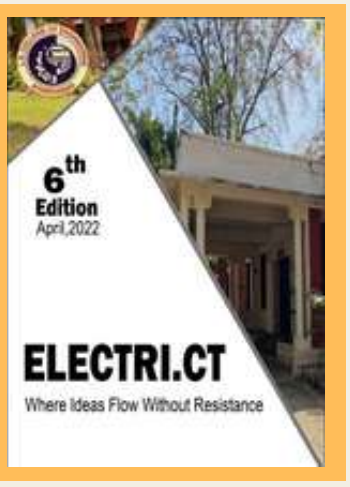
OUR ARCHIVES

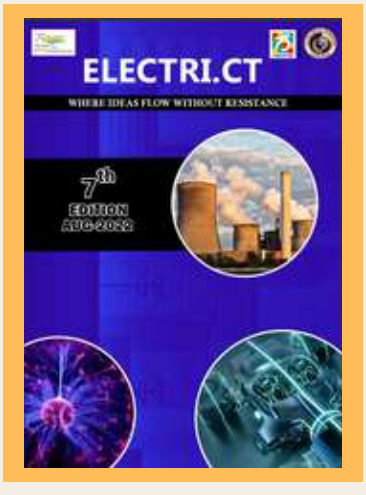


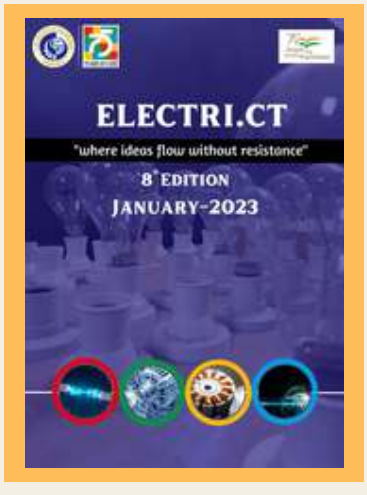


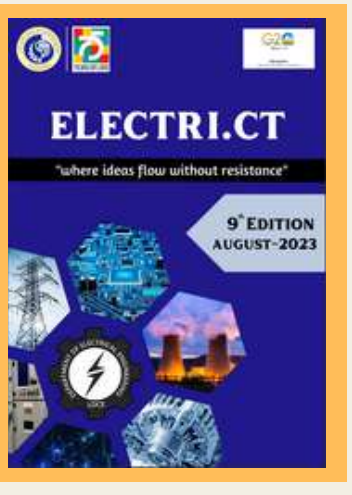
Electri.CT

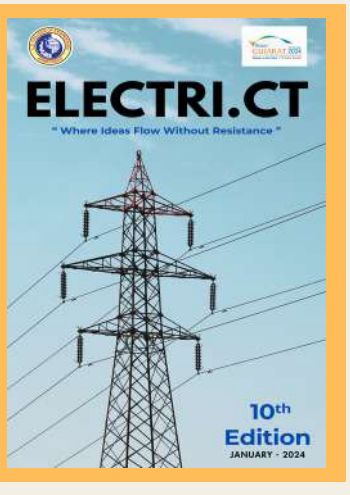
"Where Ideas Flow Without Resistance"











ELECTRICAL ENGINEERING DEPARTMENT
L.D.COLLEGE OF ENGINEERING

Ahemdabad - 380015 , GUJARAT, INDIA