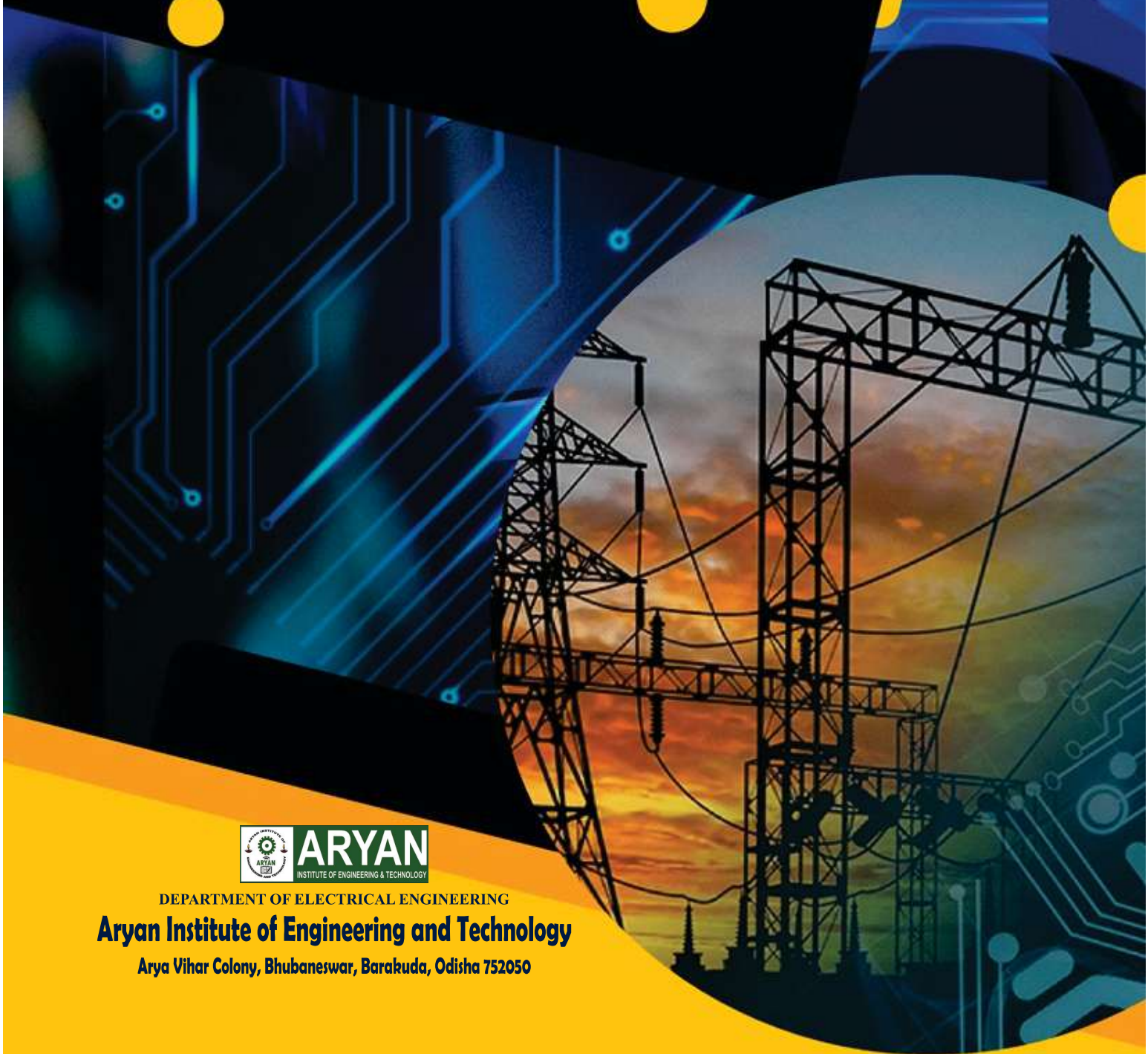
ELECTRICA

VOL-14, ISSUE-1
JANUARY 2026



ARYAN
INSTITUTE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF ELECTRICAL ENGINEERING
Aryan Institute of Engineering and Technology
Arya Vihar Colony, Bhubaneswar, Barakuda, Odisha 752050

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ABOUT THE INSTITUTE

Established in the year 2009, Aryan Institute of Engineering and Technology (AIET) is one of the premier engineering colleges in the self-financing category of engineering education in eastern India. It is situated at temple city Bhubaneswar, Odisha and is a constituent member of Aryan Educational Trust. The institute is approved by the All India Council for Technical Education (AICTE) under the Ministry of Human Resource Development, Government of India; recognized by the Government of Odisha; and affiliated with Biju Patnaik University of Technology (BPUT), Rourkela, Odisha.

AIET aims to create disciplined and trained young citizens in the field of engineering and technology for holistic and national growth. The college is committed towards enabling secure employment for its students at the end of their four-year engineering degree course. (The NAAC accreditation in the year 2018 vouches for the college's determination and dedication for a sustainable learning environment). The academic fraternity of AIET is a unique blend of faculty with industry and academic experience. This group of facilitators work with a purpose of importing quality education in the field of technical education to the aspiring students. Affordable fee structure along with approachable location in the smart city of Bhubaneswar makes it a preferred destination for aspiring students and parents.

AIET serves as a deep of knowledge for students pursuing program ranging from diploma to B.Tech courses equipped with an excellent infrastructure for academics, co-curricular and extracurricular activities. AIET secured its compliance certificate for ISO 9001:2015 QMS standards from the prestigious INNOVATIVE SYSTEMCERT PVT. LTD Accredited by EGAC, a member of International Accreditation Forum, Ghaziabad, Up, India

VISION AND MISSION OF THE INSTITUTE

Vision

- To become a leading engineering institution of the state by impacting quality technical education at affordable costs to create skilled and motivated engineers to serve the technological requirements of society in different ways.

Mission

AIET will strive continuously to

- To impart contemporary technical education and skills to students of different socio-economic background.
- To equip students with analytical learning and real life problem solving.
- To make learning a continuous endeavour compatible with market needs.
- To promote the spirit of leadership, entrepreneurship, innovation and ethics

ABOUT THE DEPARTMENT

The Department of Electrical was established in the year 2009. It aims at producing qualified engineers in the areas of electrical machine, power electronics, control system, power system, and instrumentation. The field of Electrical and Electronics is advancing at a very rapid pace. Power electronics has taken the centre stage in every area be it power systems, control systems, power quality, etc. The department is well equipped with a group of highly qualified and dynamic teachers. It boasts of laboratory facility to be one of the best in the state. The students are encouraged and motivated to take up challenging projects. Summer training, industrial visit and projects are carefully planned for the students to remain updated with the technology trend. Seminars and short courses are regularly organized to update the students with the latest in the education and industry trends.

Vision

- To be a leader in the field of electrical engineering education and training by creating graduates who are globally competent, successful in their chosen fields of endeavour, engaged in innovative research and entrepreneurship, and deeply committed to social advancement.

Mission

- M1: To impart the fundamentals of electrical engineering so that students may develop new products and solutions to solve issues in the real world.
- M2: To enable students to pursue a prosperous career in the cognitive electrical engineering professions and to become ethical technologists.
- M3: Through continuous improvement of faculty and lab facilities, to strive for excellence in academics and research works by developing a rich electrical engineering based research centre for industrial growth of the nation.

ELECTRICA

Chairperson's Message

Dr. Madhumita Parida
Chairperson
AIET, Bhubaneswar

Today's technical world is expanding at the speed of thought and has opened numerous options of excellence. Perfection and quality in educational field enhances one's ability to formulate new ideas & look beyond the obvious which is necessary to succeed in today's technical era. I am gratified to know that the Department of Electrical Engineering is bringing out the first issue of their technical magazine "ELECTRICA" of this academic year (2023-2024). This magazine is providing great space for the faculty and students to pen down their innovative ideas, imagination and perceptions to show case their creativity. So, I take the opportunity to congratulate the Department of EE and its editorial team to successful release of this issue.

Director's Message

Mrs. Sasmita Parida
Director
AIET, Bhubaneswar

It is a noble task on the part of the Department of Electrical Engineering to once again make it with their frequent issue "ELECTRICA". I wish that this technical magazine establishes to be a flint to fire the enthusiasm and excite their minds for many intrusive innovations among the students and inspire passion among the members of the faculty of Electrical Engineering committee. My greeting to the editorial board and department of EE.

Principal's Message

Prof. (Dr.) Dillip Ku. Biswal
Principal
AIET, Bhubaneswar

It gives me immense pleasure to note that, department of EE has been publishing their bi-annual magazine "ELECTRICA" and I am sure this will provide an opportunity for the faculty and students to share their knowledge and beacon the information about various issues and activities that are being taking place in the department. I look forward for more activities and achievements for the department to march towards excellence in the future. I would like to thank all teaching, supporting staff and our beloved students for their active participation in publishing this magazine. My special compliments and congratulation to the editorial team of the department for their consistent effort in publishing this magazine

Dean Academic's Message

Prof. (Dr.) P K Swain
Dean Academics
AIET, Bhubaneswar

I am glad to know that the Department of Electrical Engineering is bringing out its technical magazine "ELECTRICA" which will mount creativity in the minds of the students as well as the staff members. The release of this spectacular first issue of ELECTRICA has added value to their constant efforts. Through this message, I wish them "All the very Best" for their future endeavors to and hope the students of EE bring more achievements to the college on the whole.

HOD's Message

Prof. (Dr.) P C Nayak
HOD EE
AIET, Bhubaneswar

I feel privileged in presenting the first issue of departmental magazine "ELECTRICA" once again successful for this academic year 2023-24. This magazine is intended to bring out the unseen fictitious talents among the students and the faculty and also to inculcate leadership skills among them. I'm confident that it will inspire the students who aspire to be poets and writers and push their imaginations to explore new avenues. I acknowledge my gratitude to our principal for their continuous support to prepare these issues of magazine. I extend my sincere thanks to the editorial team for their constant effort and support in bringing out the magazine in the present form.

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FACULTY CORNER

VEHICLE MONITORING BASED ON LI-FI TECHNOLOGY

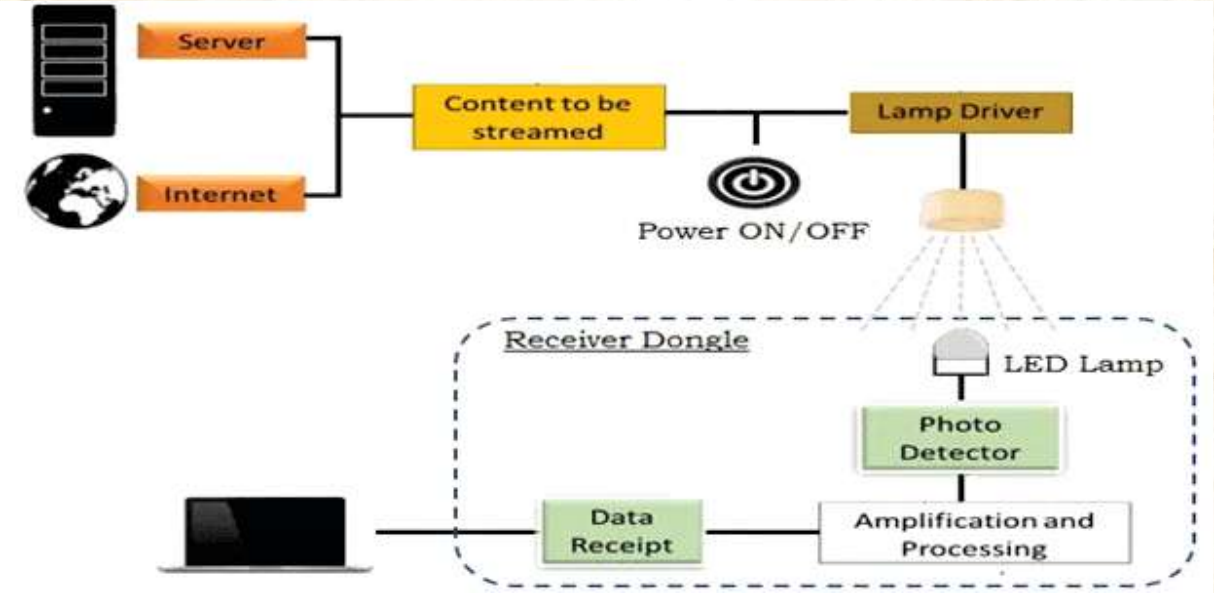


Figure 1. Structure of LIFI Technology

Now a day, traffic accident detection is becoming one of the interesting fields due to its tremendous application in intelligent transportation systems. Main causes behind these road accidents are lack of unskilled drivers, consuming alcohol while driving, over speed, sleep while driving. Plenty of solutions have been applied to prevent these road accidents. But most of them were failed to prevent this. In this work we present an advanced accident detection using LIFI technology.

Light-Fidelity (Li-Fi) technology can be used to monitor vehicles and improve road safety by enabling real-time communication between vehicles and other connected devices:

- Secure: Li-Fi uses light waves that are confined to specific areas and cannot penetrate solid objects, making it highly secure against cyber threats.
- Reliable: Li-Fi offers reliable and low-latency communication.
- High data rates: Li-Fi can send data at very high rates.
- Low cost: Li-Fi can help cut down on the cost of building new infrastructure.

Advanced features: Li-Fi can facilitate real-time traffic updates, high-definition video streaming, and augmented reality applications.

In the LIFI receiver, ultrasonic sensor has been connected which helps to detect the distance with the other vehicle. From the photovoltaic cell, the light received from the transmitter side gives information about the vehicle's driving state whether he/she has been drowsy else there any problem with the car.

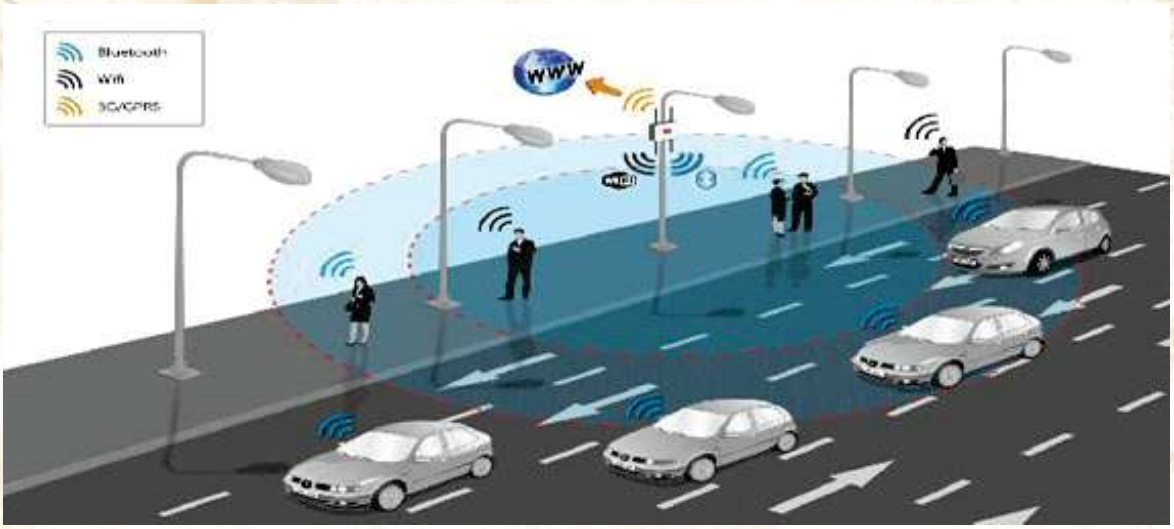


Figure 2. LIFI application in Transportation

Here's how Li-Fi technology can be used for vehicle monitoring:

- Data transmission: Li-Fi uses light-emitting diode (LED) bulbs to send data through the light spectrum.
- Data recording: The data is recorded in an SD card or Blackbox in real time.
- Data upload: The data can be uploaded to the cloud using the local network.
- Speed control: The receiver section contains a solar panel to perceive the original signal. When the receiver receives the signals from the transmitter, the speed is displayed on the LCD and the motor is controlled.

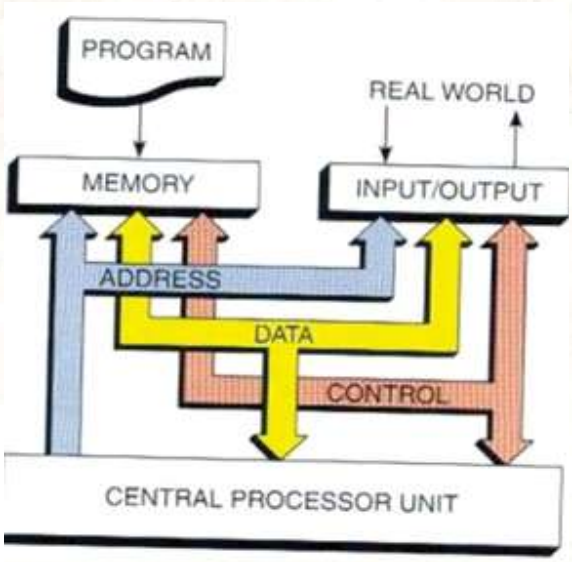
This work provides an intelligent system for accident prevention and detection for human life safety. That prevention part has various sensors like eye blink sensor, alcohol sensor and ultrasonic sensor. If the sensor detects whether the rider consumes alcohol or the distance between two vehicles is low then it sends that information to another vehicle which is going in front it. So that they can be alert. And if the driver is sleeping while driving means then the eye blink sensor detects it and gives an alert to the driver.

Dr. Pratap Chandra Nayak

Hod EE

Aiet, Bhubaneswar

PLC HANDBOOK: A PRACTICAL GUIDE



Programmable Logic Controller (PLC) is a special computer device used in industrial control systems. Due to its robust construction, exceptional functional features like sequential control, counters and timers, ease of programming, reliable controlling capabilities and ease of hardware usage – this PLC is used as more than a special-purpose digital computer in industries as well as in other control-system areas. Most of the industries abbreviate these devices as "PC" but it is also used for personal computers; due to this, many manufacturers named these devices as PLCs. The programmable logic controller is used not only for industrial purpose but also in civil applications such as washing machine, elevators working and traffic signals control. Different types of PLCs from a vast number of manufacturers are available in today's market. Therefore, in the following paragraphs, let us study about programmable logic controller's basics, principles and applications.

Principle of Programmable Logic Controller:

A programmable logic controller is used for continuously monitoring the input values from sensors and produces the outputs for the operation of actuators based on the program. Every PLC system comprises these three modules:

- CPU module
- Power supply module
- One or more I/O module

A CPU module consists of central processor and its memory. The processor is responsible for performing all the necessary computations and processing of data by accepting the inputs and producing the appropriate outputs.

Power Supply Module:

This module supplies the required power to the whole system by converting the available AC power to DC power required for the CPU and I/O modules. The 5V DC output drives the computer circuitry.

I/O Modules:

The input and out modules of the programmable logic controller are used to connect the sensors and actuators to the system to sense the various parameters such as temperature, pressure and flow, etc. These I/O modules are of two types: digital or analog.

Communication Interface Modules:

These are intelligent I/O modules which transfers the information between a CPU and communication network These communication modules are used for communicating with other PLC's and computers, which are placed at remote place or far-off locate.

The program in the CPU of programmable logic controller consists of operating system and user programs. The purpose of the operating system with CPU is to deal with the tasks and operations of the PLC such as starting and stopping operations, storage area and communication management, etc. A user program is used by the user for finishing and controlling the tasks in automation.

Dr. Sunita Pahadsingh
Associate Professor
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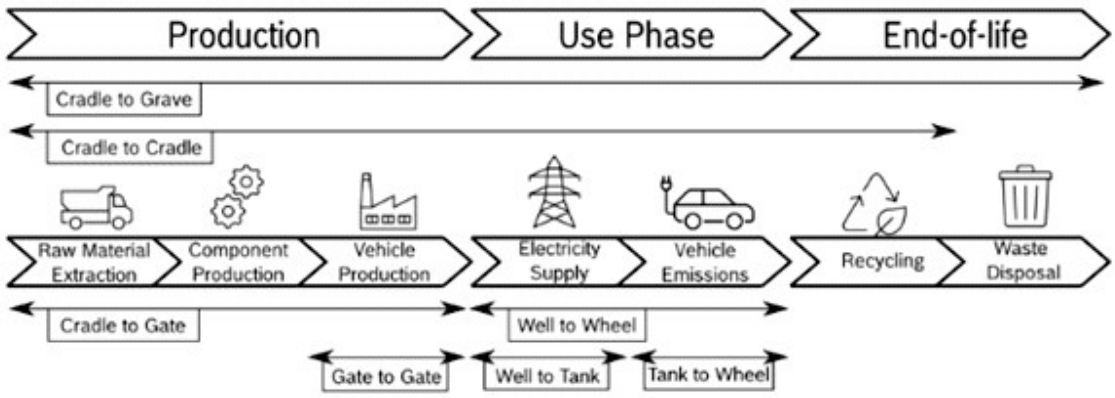
CIRCULAR PM-ASSISTED SYNRM FOR EV APPLICATIONS

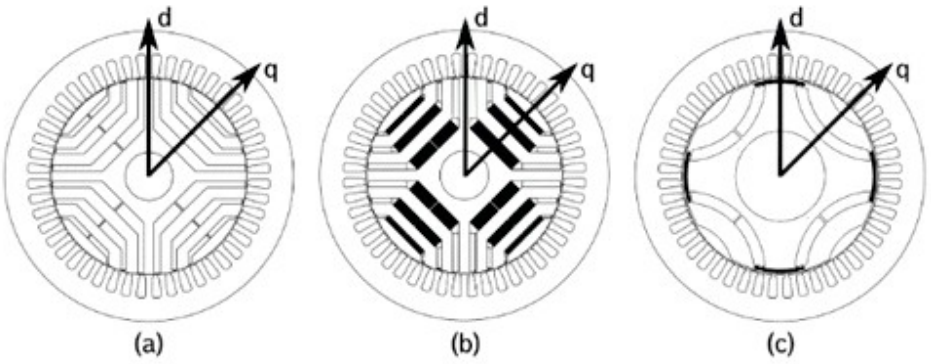


Visual representation of the life cycle assessment of an electric vehicle based on

The transition toward sustainable mobility has intensified research into electrical machine designs that balance high performance with reduced environmental impact. The paper titled Circular Economy Aspects of Permanent Magnet-Assisted Synchronous Reluctance Machine Design for Electric Vehicle Applications: A Review focuses on how machine design can support circular economy principles while meeting the demanding requirements of modern electric propulsion systems. Electrical machines are critical components in transportation electrification, and their material composition, efficiency, and lifecycle characteristics significantly influence sustainability outcomes.

Permanent magnet-assisted synchronous reluctance machines combine the advantages of synchronous reluctance operation with limited use of permanent magnets. This hybrid configuration enables high torque density and efficiency while reducing dependence on rare-earth materials. From a circular economy perspective, minimizing rare-earth magnet usage is essential due to their environmental impact, supply chain constraints, and challenges in recycling. By optimizing magnet placement and quantity, these machines achieve comparable performance to conventional permanent magnet machines with lower material intensity.

The review emphasizes design strategies that enhance material efficiency, recyclability, and lifecycle sustainability. Rotor topology optimization plays a key role in improving reluctance torque contribution, allowing designers to rely less on permanent magnets. This approach not only reduces material costs but also simplifies end-of-life processing. Machines designed with modular components and standardized materials facilitate disassembly, reuse, and recycling, aligning with circular economy objectives.



A 2D cross-section of (**a**) SynRM , (**b**) PMASynRMand (**c**) FI-PMASynRM topologies.

Another important aspect discussed is energy efficiency during operation. High-efficiency electrical machines reduce overall energy consumption, which lowers indirect environmental impacts associated with electricity generation. Permanent magnet-assisted synchronous reluctance machines demonstrate favorable efficiency characteristics across a wide operating range, making them suitable for applications that require frequent speed and load variations. Improved thermal performance also extends machine lifespan, reducing the need for frequent replacements and conserving resources.

Manufacturing considerations further influence circularity. Simplified rotor structures and reduced magnet content enable more sustainable manufacturing processes with lower energy and material waste. Additionally, advances in digital design tools and optimization algorithms allow engineers to evaluate environmental performance alongside electromagnetic and mechanical criteria during the design stage.

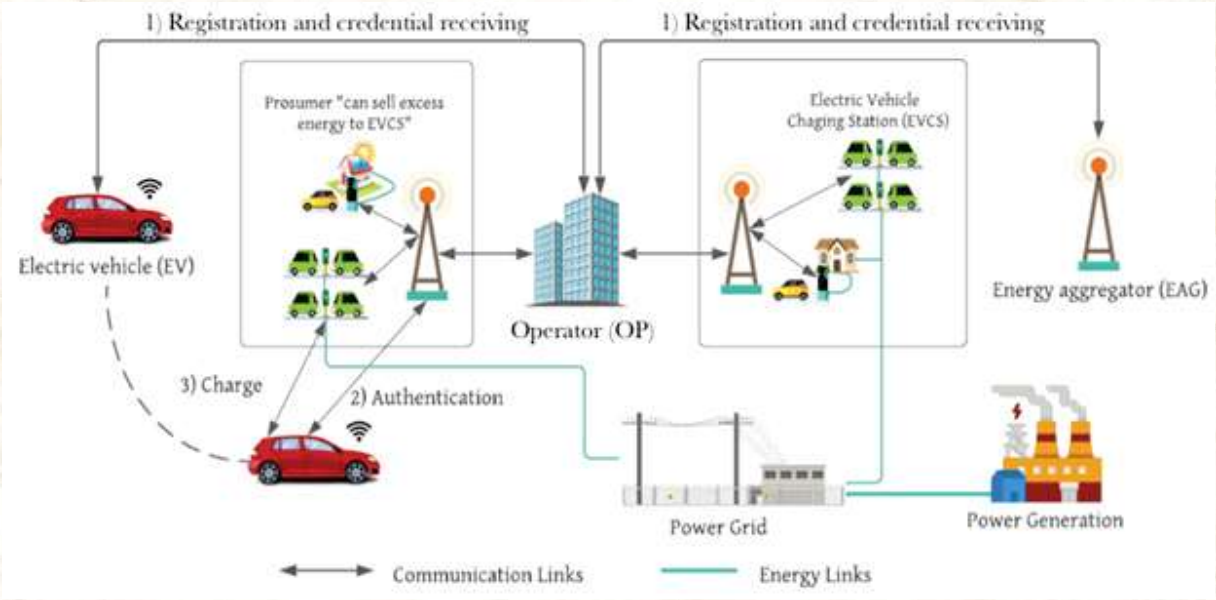
In conclusion, permanent magnet-assisted synchronous reluctance machine design offers a promising pathway toward sustainable electrical drive systems. By integrating circular economy principles into material selection, structural design, and lifecycle planning, these machines support both performance and environmental goals. Their development reflects a broader shift in electrical engineering toward solutions that prioritize efficiency, resource conservation, and long-term sustainability.

Er. Ajit Kumar Panda

Asst.Professor

Aiet, Bbsr

ECQV-BASED LIGHTWEIGHT REVOCABLE AUTHENTICATION PROTOCOL FOR EV CHARGING



Electric vehicles are increasingly seen as a key part of sustainable transportation efforts worldwide. As they become more popular, challenges associated with charging infrastructure also grow. A particularly important issue is ensuring that vehicles can access charging stations securely and privately, without exposing sensitive information to unauthorized parties. Charging systems must establish trust between the vehicle and the service provider to prevent data misuse and protect user privacy while maintaining efficient operation.

Many existing charging systems lack robust authentication and privacy protections. In current setups, when an electric vehicle connects to a charger or energy aggregator, sensitive data such as vehicle identity, location information, battery status, and energy usage details may be exchanged in ways that can be intercepted or misused. This can lead to privacy breaches and potential threats to both users and the charging infrastructure itself. Attacks such as impersonation, replay attacks, and man-in-the-middle intrusions are possible if the authentication process is weak or poorly designed.

To address these challenges, researchers have proposed a secure and privacy-preserving authentication protocol specifically tailored for electric vehicle charging environments. The essence of this protocol is to enable mutual trust between electric vehicles and charging entities while maintaining anonymity for users..In the proposed system, electric vehicles and charging aggregators first register with a trusted central authority, which provides them with secure credentials. These credentials allow vehicles and aggregators to authenticate each other before energy transfer begins. The protocol also supports a re-authentication mechanism, allowing vehicles that have already been authenticated within a defined timeframe to reconnect quickly without repeating the full authentication process. This reduces the time and computational requirements needed for subsequent charging sessions.

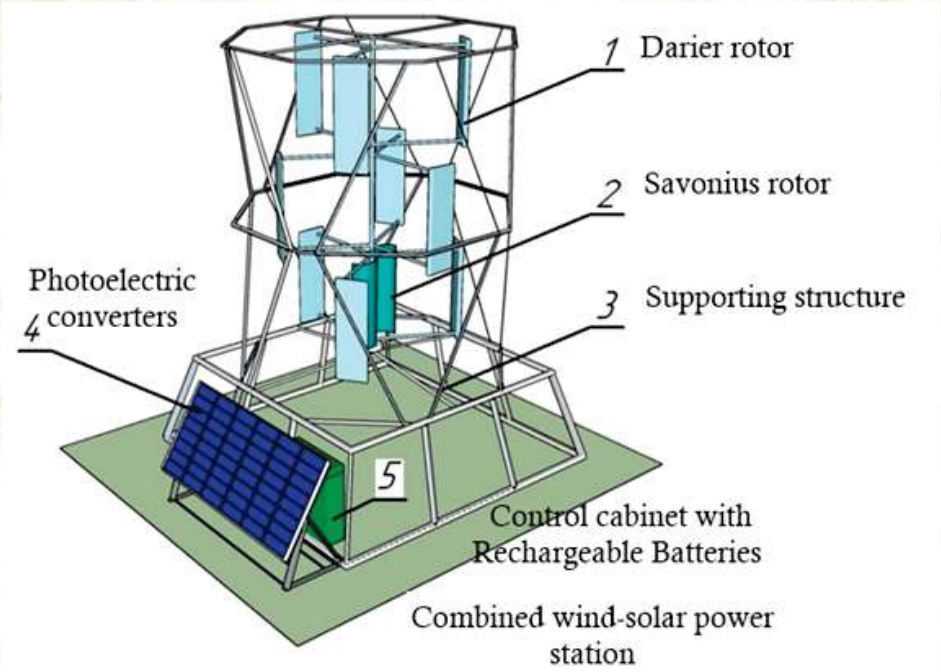
The security design also includes mechanisms to revoke access if credentials are compromised or when devices are decommissioned. This ensures that a compromised vehicle or aggregator cannot continue to access the charging network once it has been removed from the trusted list. Overall, this secure authentication approach enhances user privacy and trust while maintaining high levels of system performance and efficiency.By improving how electric vehicles interact with charging infrastructure, this work contributes significantly to broader efforts in green energy and sustainable transportation systems. As electric mobility continues to expand, robust security and privacy frameworks will be essential to protect users and support resilient energy networks.

Dr. Krushna Keshab Baral

Professor, EE

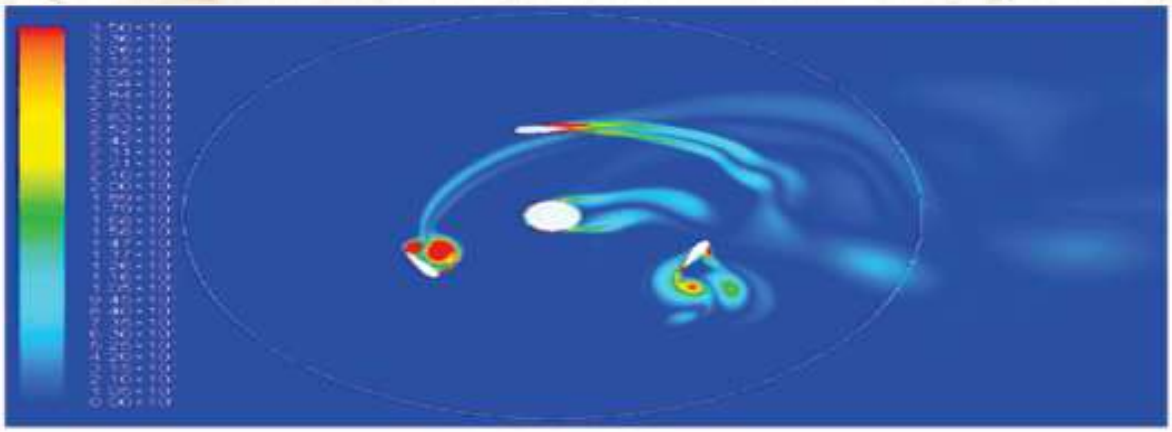
AIET, Bhubaneswar

PARAMETRIC OPTIMIZATION OF HYBRID RENEWABLE SYSTEMS



The global transition toward sustainable power systems have driven significant innovations in green energy solutions. One such advancement lies in the development of hybrid renewable power plants that combine multiple energy sources to deliver reliable, clean electricity, especially in urban environments. Traditionally, power supply for cities has depended on centralized fossil-fuel plants, but this approach is increasingly seen as unsustainable due to environmental impacts and rising energy demands. Innovative electrical engineering designs now propose autonomous distributed systems powered by both wind and solar energy, offering a more efficient and environmentally friendly alternative suitable for smart cities.

A key feature of these hybrid systems is the integration of wind turbines with photovoltaic arrays on a shared support structure. This design not only optimizes space but also creates synergistic benefits that improve overall energy output. For example, wind flow generated by the turbine enhances heat dissipation from solar panels, which increases their efficiency by preventing overheating. This collaborative effect enables the hybrid plant to harness energy more effectively than when wind and solar installations operate independently. Engineers use advanced simulation tools to optimize the physical and electrical parameters of these systems, ensuring they deliver consistent and robust power output.



Velocity map in the turbine's cross section at 10 m/s of wind speed.

In a practical implementation of this concept, specialists designed a combined wind-solar plant featuring a vertical-axis wind rotor and strategically positioned photovoltaic modules. Through aerodynamic modeling, the optimal blade angle for the wind turbine was identified, which maximizes its capability to capture kinetic energy from the wind. Simultaneously, the tilt of the solar panels was adjusted based on geographic location to receive maximum solar irradiance throughout the year. Together, these enhancements enable the hybrid installation to deliver a stable and continuous energy supply, reducing the dependency on back-up fossil-fuel sources.

Such innovations are critically important for smart city development, where energy reliability, efficiency, and sustainability are paramount. Hybrid renewable systems can adapt to varying weather conditions and are particularly effective in distributed generation scenarios. Electrical engineers play a central role in developing these technologies, from conceptual design and simulation to implementation and optimization. Through their expertise in power systems, control strategies, and energy conversion techniques, they are paving the way for resilient, clean, and intelligent energy networks that meet the needs of modern urban environments.

Mr. Satyaprasad Mohapatra

Assistant Professor

AIET, Bhubaneswar

STUDENTS CORNER

SMART E-LOCK FOR INDUSTRY ORIENTED TRANSPORTATION

Nowadays Internet of Things (IOT) technology plays a vital role in all aspects of human's life. Lock system is one of those aspect that has been impacted by the massive Development of IOT. At present thefts from good carrying vehicles are a major problem Faced by the owners, for example, on the way to the destination the vehicles carrying goods are stolen by unknown person is the major problem faced by the owners. Hence, there is a need for effective and secure locks in goods carrying container trucks. This lock system which is applied in goods carrying vehicles will help to reduce theft rate. It also involves smart phone app, cloud, web application, RESTful API, hardware with GPS and GPRS and actuators.

Imagine a world where fleet managers have instant access to their vehicle's location, speed, and the surrounding environmental conditions. Thanks to IoT devices like smart sensors and location trackers, this is now a reality. These devices are strategically placed across transportation networks, collecting real-time data with immediate insights into vehicles and infrastructure. This real-time monitoring allows for swift adjustments to routes and schedules based on current traffic conditions, weather changes, and other factors. IoT sensors continuously monitor the health of vehicles and infrastructure components, spotting potential issues before they become serious problems. This proactive approach helps minimize unexpected breakdowns and cuts down on maintenance costs. IoT facilitates seamless connectivity between various components of the transportation system. Vehicles, infrastructure, and central control systems are all interconnected, facilitating efficient data exchange and coordination. This connectivity supports vehicle-to-everything (V2X) communication, where vehicles communicate with each other and with roadside infrastructure. Additionally, connected vehicles can share data with traffic management centers, enabling intelligent transportation systems with effective incident response.

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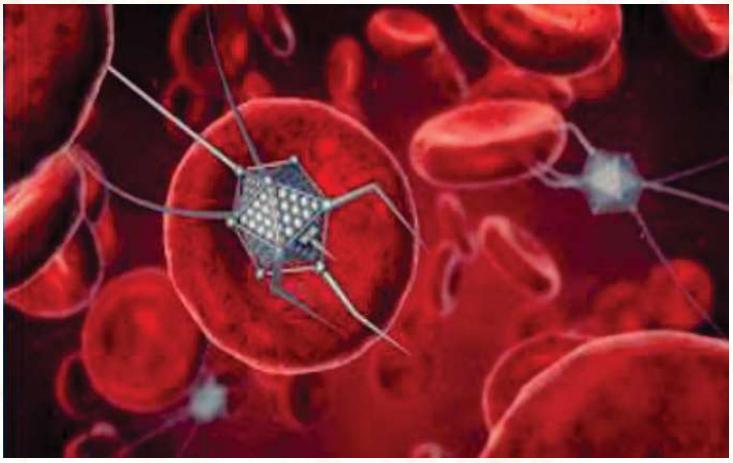
SAY GOODBYE TO PILLS NANO ROBOTS CAN CURE



Nano-robots are a promising area of research that could revolutionize medicine and improve the ability to prevent, detect, and treat illness. Nano-robots are tiny machines that can be used for a variety of medical purposes, including: Cancer treatment, Aneurysm repair, Blood clotting, Disease diagnosis and Detoxification.

Nano robots can move autonomously and are driven by either exogenous power (magnetic fields, light, acoustic fields, or electric fields) or endogenous power (chemical reaction energy). While Nano robots are a promising area of research, there is still a lot of work to be done before they can be used on a widespread scale in clinical settings.

Nano robots will be able to repair damaged or diseased tissues. The circulatory system is the natural path for these devices and the Nano robots will pass through the blood stream to the area of defect. They attach themselves to specific cells, such as cancer cells and report the position and structure of these tissues. A creative methodology in the use of these devices to fight cancer involves using silicon Nano machines with a thin coating of gold and light in the near infrared spectrum. Light in the 700-1000 nanometer range will pass through the tissue and reaches the defective cell. When this infrared light strikes the particular type of Nano robot, the device gets hot due to the oscillation of the metal's electrons in response to the light. Using an MRI, the Nano robot is specifically placed in the cancerous region, and then the light causes the devices to heat to 131 degrees Fahrenheit which destroys the cancerous cells but doesn't damage surrounding tissues these Nano robots can cure any disease without affecting any other cells or tissues. The robot detects the cause of your fever, travels to the appropriate system and provides a dose of medicine directly to the infected area. Each person is going to have a Nano robot in his body which is going to monitor human body system.

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IMPACT OF ELECTRICAL ENGINEERING IN DIGITALIZATION

Today's world is world of high technology starting from most complex rocket science including AI robots. Our country India which is developing country is digitalization in the Sector of electrical machinery, electronic manufacturing, high speed internet, broadband highway etc. The electrification of Indian rail network was increasing day by day and in future we have high speed bullet train which get more electricity to run in high speed, the electrification of airports in India was also increasing day by day and in future we have more airports to run this airport in future we want more electricity. In future we have ROBOTS and there also we need electricity and In India the quantity of homes, buildings, and hospitals, super markets etc are increasing where we need more electricity. In this all field the hand of "ELECTRICAL ENGINEERING" is INVALUABLE. Electrical Engineering is the main force behind the digital India, make in India and the power ministry focus on three things one is the village electrification, second one is household electrification and umbrella program for 24×7 power supply. For the continuous supply of power to the smart cities, rails networks, airports, etc. is very essential to have strong and smart transmission and distribution systems. The Indian government has started "MAKE IN INDIA" plan and it is a way ahead. MAKE IN INDIA was launched in 25 September 2014 with objective of job creation, skill enhancement and transform India into global design and manufacturing hub. Now India is the 4th largest wind power capacity in the world and its capacity stands at 34 GW, 6th largest solar power capacity in the world and its capacity stands at 22 GW and 7th largest producer of hydroelectric power in the world and its capacity at 44,594 MW Biomass power is the installed in India which produces 8.1 GW power as in November 2017. The total power generation in India is 70 GW in 2017-2018. The Indian government has set target of adding 175 GW power in the country by 2022! After the surveying of all this above information we found that in future ELECTRICAL ENGINEERING is much more helpful for MAKE IN INDIA AND DIGITAL INDIA POGRAM.

Abinash Sethy
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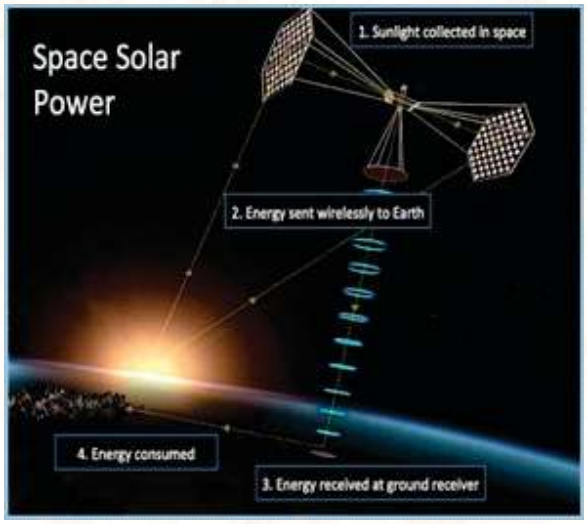
TRANSMITTING SOLAR POWER WIRELESSLY FROM SPACE



The Japanese Space Agency (JAXA)'s Space Solar Power Systems (SSPS) aims at transmitting energy from orbiting solar panels by 2030. On 12 March, Mitsubishi Heavy Industries Ltd (MHI) successfully conducted a ground demonstration test of "wireless power transmission", a technology that will serve as the basis for the SSPS. In the test, 10kW of electricity was successfully transmitted via a microwave unit. Power reception was confirmed at a receiver located 500 metres away. LED lights on the receiver confirmed 17 the transmission. This marks a new milestone in transmission distance and power load (enough to power a set of conventional kitchen appliances). Potentially, a solar battery in orbit (36,000km above earth) could generate power that would then be transmitted to earth via microwave/laser, without relying on cables. JAXA anticipates that this new technology could become a mainstay energy source that will simultaneously solve both environmental and energy issues on earth. The estimated lifecycle carbon dioxide emission for the operational SSPS indicates that it is almost the same as from nuclear power system and much less than fossil fuel power system, JAXA claims on its website. Countries such as India, China and Japan are investing heavily in these technologies right now.

Space based solar power (SBSP) has the potential to provide a reliable, clean, and continuous source of energy. Some companies and organizations involved in SBSP include:

- Space Solar: Has developed a 360° wireless power transmission system called HARRIER.
- Caltech: Has demonstrated wireless power transfer in space.
- Northrop Grumman Corporation: Provided funding to help develop the technology.

The frequencies used for SBSP are non-ionizing, which means they don't create chemical change. The system also has various levels of control and safety.

AVIJIT MOHANTY
Regd. No. : 2401320283
2nd Year, EE, AIET, BBSR

STORY

THE BROKEN VIOLIN

Arjun had always loved music. Since childhood, his violin had been his closest companion. Whenever life felt heavy, the soft strings comforted him. But his parents believed engineering was the only path to a secure future, so his dream of becoming a musician was quietly locked away. College life felt dull and mechanical. Arjun attended lectures, completed assignments, and prepared for exams, but his heart wasn't in it. His grades slowly slipped, and his once-bright smile faded. The violin lay broken inside his cupboard, just like his confidence. One evening, while wandering around campus, Arjun heard faint music drifting from the auditorium. Curious, he stepped inside and found the college music club rehearsing. The familiar sound awakened something deep within him. That night, he repaired his old violin and began practicing secretly. Slowly, music returned to his life. He started performing at small college events. With music back, his focus improved, and his academic performance surprisingly picked up. His confidence grew, and so did his happiness. During the annual cultural fest, Arjun performed a soulful solo. The hall fell silent, and then thunderous applause followed. His parents, sitting in the front row, finally understood his passion. That day, Arjun learned that sometimes, broken dreams only wait for courage to be repaired.

MAMINA NAIK
Regd. No. : 2201320160
4th Year, EE, AIET, BBSR

THE MIDNIGHT CODER

When the hostel lights went off at 11 PM, Rohit's world came alive. While his roommates slept, he opened his laptop and started coding. Lines of logic, algorithms, and ideas filled his screen until dawn. Rohit came from a modest family. His father ran a small repair shop, and every rupee mattered. Determined not to burden his parents, Rohit began freelancing online. At first, he struggled, facing repeated rejections. But he learned from every failure and improved his skills. One night, he noticed how new students often got lost on campus. This sparked an idea. He built a simple campus navigation app using his coding knowledge. The app became popular within weeks. Students praised its usefulness, and teachers appreciated his innovation. Soon, local startups approached him for projects. Rohit earned enough to support his education and help his family. More importantly, he gained confidence. While others saw only his tired eyes in class, few knew about the sleepless nights that built his success. Rohit proved that silent effort, repeated daily, creates extraordinary results.

ARJUN KUMAR PURTY
Regd. No. : 2401320282
2nd Year, EE, AIET, BBSR

HE PROFESSOR'S SECOND CHANCE

Professor Sen once ran a successful startup, but a sudden market crash forced him into bankruptcy. Broken and disappointed, he returned to teaching, unsure if students would respect him again. At first, his classes were met with doubt. Students whispered about his failure and questioned his credibility. But Professor Sen taught with honesty. Instead of just formulas and theories, he shared real-life lessons — mistakes he made, risks he took, and resilience he built. Gradually, students began to connect with him. His stories made concepts practical and inspiring. He encouraged students to experiment, fail, and try again. When final-year students launched successful projects under his guidance, they credited him as their mentor. Professor Sen had not just regained his confidence, but also rediscovered his purpose. He taught them that failure is not an end — it is a powerful beginning.

DIBYARANJAN BAG
Regd. No. : 2401320287
2nd Year, EE, AIET, BBSR

THE FAREWELL PROMISE

On their farewell day, a group of friends stood in the empty classroom, holding back tears. Four years of memories echoed in every corner. Before leaving, they made a promise — to meet again after ten years, no matter where life took them. Time flew. Careers, responsibilities, and distances separated them. Some became engineers, some teachers, and some entrepreneurs. Life grew busy, but the farewell promise remained alive in their hearts. Ten years later, messages started buzzing. Slowly, they gathered again in the same classroom. Wrinkles replaced youthful faces, and silence replaced laughter — but only for a moment. Soon, old jokes, memories, and emotions returned. They realized that while time changes everything, true bonds remain untouched. As they left, they promised to meet again, knowing that some connections last a lifetime.

BIBHUKALYAN SETHY
Regd. No. : 2301320250
2nd Year, EE, AIET, BBSR

POEM

ROLL NUMBERS DON'T DREAM

They call me by a number.
It is efficient.
It is clean.
It is forgettable.
The number submits assignments on time.
The number scores reasonably.
The number never asks why.
But behind it,
a human trembles.
I dream beyond syllabi,
beyond expectations written in red ink.
I imagine futures
not approved by relatives.
Exams reward memory,
not curiosity.
Attendance records bodies,
not courage.
One day,
this number will disappear from databases.
What remains
will be the risk I took
when no one was counting.

AMRITA KUMARI
Regd. No. : 2301320246
3rd Year, B Tech
AIET, BBSR

SCHOLARSHIP STUDENT

My dreams are handwritten.
Ink is cheaper than privilege.
I measure success in effort,
not inheritance.
Failure visits often,
but never overstays.
I study with borrowed confidence
and permanent determination.
I owe no one greatness—
only honesty.
If I rise,
it will not be silently.
It will echo
with every doubt I survived.

AKASH DAS
Regd. No. : 2201320150
3rd Year, EE
AIET, BBSR

THE PRESSURE WE DON'T TALK ABOUT

They say,
"These are the best years."
Then why does my chest feel heavy?
Why does success sound threatening?
Everyone expects clarity.
I am full of questions.
Failure feels public.
Fear feels personal.
Still, I wake up,
tie hope carefully,
and walk forward.
Courage isn't loud here.
It survives quietly
between expectations and effort

B SAI KUMAR
Regd. No. : 2201320153
4th Year B Tech
AIET, BBSR

GRADUATION DAY

Caps hide confusion.
Gowns hide fear.
Cameras capture courage
we borrow for a moment.
Parents clap louder
than our doubts.
The future waits—
professionally dressed,
emotionally unpredictable.
We step forward anyway.
Not ready.
Not certain.
But brave enough
to try

ANSHU KUMAR
Regd. No. : 2401320281
2nd Year, B Tech
AIET, BBSR

PHOTO GALARY

BISWAJIT JENA
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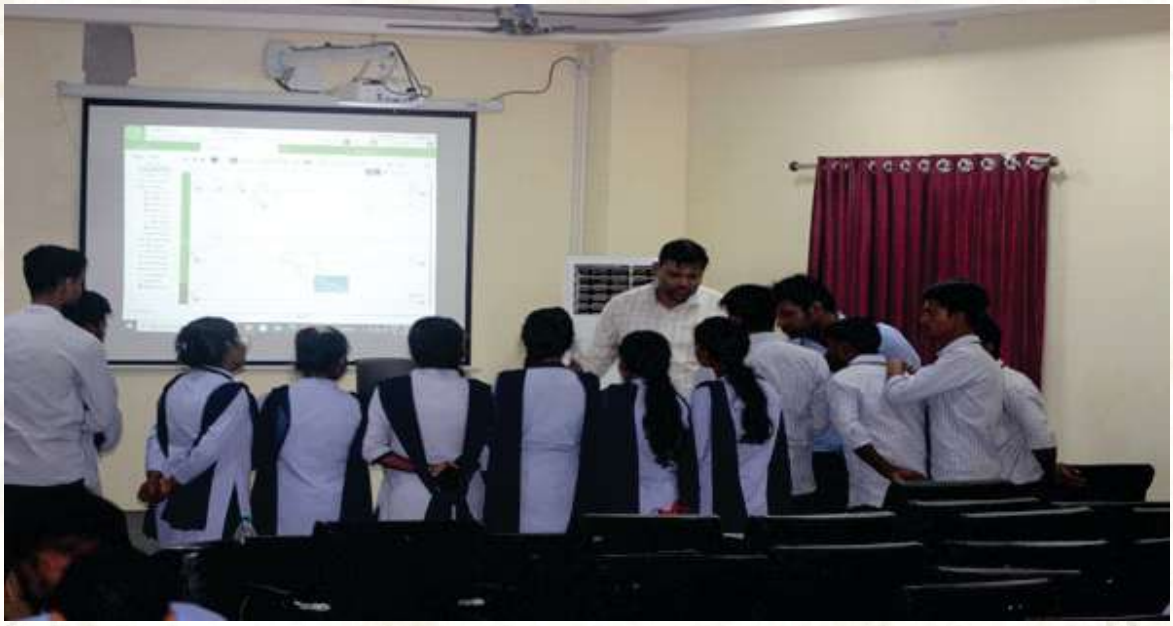
Road Safety Awareness Program 2025-26



Industrial Training Session By SDI At AIET 2025-26

Manak Mahotsav 2025-26

Fresher's Welcome Function 2025-26