**LENDI**
Autonomous

**Institute of Engineering & Technology**

**NBA** NATIONAL BOARD OF ACCREDITATION

ACCREDITED WITH GRADE **A** NAAC

# NATIONAL LEVEL STUDENT TECHNICAL SYMPOSIUM

## LAKSHYA 2023

### MARCH 17

## Department of Electrical and electronics Engineering

I have not failed. I've just found 10,000 ways that won't work.

~ Thomas edison

## Chief Patrons

Shri. P. Madhusudhana Rao, Chairman

Shri. P.Srinivasa Rao, Vice Chairman

Shri. K. Siva Rama Krishna, Secretary

## Patron

Dr. V.V. Rama Reddy, Principal

## Convener

Dr. K.Subbaramaiah, HOD, EEE

## Co-convener

Dr. B.V.S. Acharyulu

# Message from Chairman's Desk



It gives me an immense pleasure to note that the Department of EEE is organizing a National level Student Technical symposium on 17th March, 2023. I am sure this event will draw talent from all the students' fraternity and create a great learning experience for all participants. Lendi believes in value-based education and allows engineers in strengthening the society ethically. Since its inception is striving hard to meet this goal and I wish, this event would also add value to the Institution's vision. I appreciate the efforts undertaken by the Department of EEE in the organization of this event and hope this event will be an improvement of high standards.

**Sri. P.Madhusudana Rao, Chairman**

# Message from Vice Chairman's Desk



Learning is a process, which extends beyond classrooms. In an effort to widen our horizon, it is necessary to take part in events where different perspectives meet and ignite, resulting in fresher and more innovative outcomes. This Student Technical symposium is no doubt a platform to exchange the ever-expanding styles and strategies in the field of their study to benefit the students of the coming generations. Livelihood in the society is not only through jobs, but it is also a pleasure for an engineer when he creates more jobs through entrepreneurship. For having that exposure, he would use this kind of conventions. I also congratulate the Head of the Department, his team and students for their efforts in organizing this event.

**Sri. P.Srinivasa Rao, Vice chairman**

# Message from Secretary Desk



Lendi has carved a niche in the field of education in its region. Its quest for knowledge and pursuit of excellence has led to becoming one of the most sought-after education destinations. The Institution has been home for many academic and literary events, which have enlightened student's faculty and educationists in their respective areas. This National level Student Technical symposium organized by the Department of EEE is an attempt to assemble the student creativity and ideas in the field. I appreciate the efforts taken by Department of EEE, faculty members and students for the success and I wish them all the best.

Sri. K.Siva Rama Krishna, Secretary

# Message from Principal Desk



Technical symposia are a kind of platforms offering to the student community where many emerging and innovative minds gather at one place to share their ideas. Enormous research is continuously supported to the engineering sectors in order to find solutions to many complex issues involved. Nowadays the core engineering is becoming more and more popular due to the advancements in Electric vehicle and Artificial Intelligence. Hence, the students and researchers are so much attracted to make the success of "Make in India". There are so many possibilities of the future scopes for the students of EEE to grow up with different startup programmes. Besides, many public sector undertakings are recruiting the engineers for the successful operation and maintenance of the industries based on GATE score. I hope this symposium will bring all the expectations of the participants and wishing a great success.

## Message from HOD's Desk



This event is targeted towards students to share innovative ideas, issues, recent trends and future directions in the fields of electrical and electronics engineering. I am pleased to note that students from various Institutes/ Universities are presenting their papers on current aspects control Systems and applications, Power Electronics Drives and Electromechanical Energy Conversion, Power System Technology, Applied Technologies in Renewable Energy and Smart Grids, Technological Developments in Energy Management. I am sure that this technical symposium would greatly benefit students. I take this opportunity to wish you all a great success in the national level student technical symposium.

Dr.K.Subbaramaiah, HOD, EEE

## Message from Co-convener's Desk



Seminars, Workshops and Technical Symposia are conducted in the department regularly to keep the faculty and students updated with latest developments in various technologies. The students in the department are moulded into competent electrical engineering professionals, to face the challenges of the POWER sector. Thus, the EEE Dept is developing enviously by leaps and bounds.  I take this opportunity to wish a great success in the national level student technical symposium.

Dr. B.V.S. Acharyulu

# About the Department

Department of Electrical & Electronics engineering is started in the year 2008 with a present intake of 120. The department is heading with an objective to develop industry ready engineers while meeting local industry needs. The department is an integral part of Lendi Institute of Engineering & Technology, Vizianagaram. Since inception the department has well experienced and committed faculty, who continuously strive for the benefit of the students and their career development. The strength of the department is its laboratory facilities besides good infrastructure. Department of EEE also has a dedicated R&D / Projects lab to carry research activities by the students and faculty. To enhance industry-institution interaction, the department has signed MOUs with reputed organizations. Faculty of the department continuously encourage/drive students to involve in industrial visits, internships and also provides various training programs to enhance the technical skills of the students.

## VISION

To be a hub for imparting knowledge, skills, and behaviour for exemplary contributions in the field of Electrical and Electronics Engineering.

## MISSION

- To impart Technical Education through the state-of-the-art infrastructure facilities, laboratories and instruction.
- To inculcate industry-oriented learning through industrial visits, internships, projects at Industries, MOUs, to make students' technically skills oriented.
- Creating conducive environment for higher education, employment and entrepreneurship through quality education, professional skills and research.
- To promote societal commitment among students by inculcating moral and ethical values.

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

**PEO1:** Graduates shall have strong foundation in core and allied Electrical and Electronics Engineering, in sciences and mathematics, to become globally competent in designing, modeling and critical problem solving.

**PEO2:** Graduates shall involve in research activities in the field of electrical and electronics engineering through lifelong learning and provide solutions to engineering problems for sustainable development of society.

**PEO3:** Graduates shall have good communication skills and socio-ethical values for getting employment or higher studies by excelling in competitive examinations and be able to work in supportive and leadership roles.

## Paper / Poster Presentation

## Solar Powered Electric Vehicle

B.Divya     S.Arun     M.Jayasree

IV/IV BTech, Department of EEE, ANITS, Visakhapatnam

**Abstract:**

Greenhouse gas emission from transportation is one of the major environmental issues and its emission rate is increasing at faster rate. So, solar power for transportation can solve this problem. "The aim of proposed work is to contribute a technology that supports Green energy". This type of vehicle would be suited to replace traditional combustion engines for every day transport activities. The use of solar energy to power the vehicle allows for more applicability, and a means of using green energy. Moreover, the rise in the price of oil issues can be resolved. The overall objective of the project is to design an efficient solar powered electric vehicle with range= 50-60 km/full charge, which dramatically reduce the amount of CO2 produced by the vehicles and reduce the demand for fuel.

## IOT based smart shopping system

K. Dhanasai     K.Kaushik     M.Chandu

IV/IV BTech, NIST, Berhampur

**Abstract:**

Now a days most of the people like to shop and go to shopping malls to purchase their daily needs. By seeing a huge crowd in the shopping malls mainly in the billing counters this feels the customer unhappy and makes them switch to another malls. to solve this issue, Smart Shopping trolly based on IoT is proposed in which Radio Frequency Identification (RFID) sensors, NODEMCU with inbuilt WIFI module, RFID reader,16*2 I2C display and billing website are used. Radio Frequency Identification (RFID) technology uses radio waves to identify items. In shopping malls each item associated with RFID card and RFID reader module is installed in trolly which reads the products details. After this, each product details will be shown in the webserver. Once the customer enters the IP address in any website, then he/she can acquire their product details and overall amount of the products through their smart phones. The total info rmation sends through wirelessly to the customers smart phone and details displayed in the trolly. This prototype is developed to diminish the waiting time of the customers in billing counter. This makes shopping process simple for both owner and customers.

# Hybrid Electric Vehicles (Hev's)

G.Tagore prasanth          B.Kesava rao

II/IV BTech, Department of EEE, AITAM, Tekkali

**Abstract:**

Hybrid electric vehicles (HEVs) are a type of vehicle that combines an internal combustion engine with an electric motor and battery pack. This allows for improved fuel efficiency and reduced emissions compared to traditional gasoline-powered vehicles. HEVs use regenerative braking to recharge the battery while driving, and some models can also run solely on electric power for short distances. The design and implementation of HEVs involve complex systems engineering, including power electronics, control algorithms, and energy management strategies. As technology continues to advance, HEVs are becoming increasingly popular as a sustainable transportation option with the potential to reduce dependence on fossil fuels and mitigate climate change.

# Any Time Medical Services (ATM's)

E.Uma Maheswar rao

GVP college of Engineering, Visakhapatnam

**Abstract:**

Nearly 32% deaths are increased in India, due to lack of medical resources. India is a developing country even through so many deaths are occurring due to these basic needs of every person. Mainly these are essential in rural areas and the people who are living on hills and hill station areas. These persons are habituated their lives in that particular area. They were not aware of some basic needs also and if someone's health is not Good, they have to travel some long distance to come for treatment and medicines. In this I would like to show how it works and how it is helpful to others and also, we can see features inside this ATM's.

# Battery Management Systems in Electric Vehicles: Issues and Challenges

A.V.S. Gayatri

III/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

The battery management system (BMS) is a critical component of electric vehicles. The purpose of the BMS is to guarantee safe and reliable battery operation and to achieve this, state monitoring and evaluation, charge control, and cell balancing are functionalities that have been implemented in BMS. Recently, electric vehicle (EV) technology has received massive attention worldwide due to its improved performance efficiency and significant contributions to addressing carbon emission problems but the effectiveness of EVs can be affected due to battery health degradation and performance deterioration with lifespan. Therefore, an advanced and smart battery management technology is essential for accurate state estimation, charge balancing, thermal management, and fault diagnosis in enhancing safety and reliability as well as optimizing an EV's performance effectively. This paper addresses about issues and challenges in battery management system in electrical vehicles.

# Hydrogen Fuel Cell Electric Vehicle

Ahmad Ali

IV/IV BTech, Department of EEE, AITAM, Tekkali

**Abstract:**

FCEV is a type of electric vehicle that use hydrogen as a fuel. Unlike combustion and EV. Hydrogen is used to generate power to the electric motor using a chemical reaction. The fuel cell is an electrochemical device that converts chemical energy into electrical energy. Fuel cell technology offers the opportunity of creating environmentally friendly power supply and energy to run the motor vehicles. Although this technology is being explored for rockets and other transport vehicles, it looks set to have the greatest impact on automobiles in the future.

# Paper Batteries and their Recycling Technology

K. Divya

III/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract**:

During recent years, emissions reduction has been tightened worldwide. Therefore, there is an increasing demand for electric vehicles (EVs) that can meet emission requirements. The growing number of new EVs increases the consumption of raw materials during production. Simultaneously, the number of used EVs and subsequently retired lithium-ion batteries (LIBs) that need to be disposed of is also increasing. According to the current approaches, the recycling process technology appears to be one of the most promising solutions for the End-of-Life (EOL) LIBs—recycling and reusing of waste materials would reduce raw materials production and environmental burden. According to this performed literature review, 263 publications about "Recycling of Lithium-ion Batteries from Electric Vehicles" were classified into five sections: Recycling Processes, Battery Composition, Environmental Impact, Economic Evaluation, and Recycling & Rest. The whole work reviews the current-state of publications dedicated to recycling LIBs from EVs in the techno-environmental-economic summary. This paper covers the first part of the review work; it is devoted to the recycling technology processes and points out the main study fields in recycling that were found during this work.

# Smart Helmet for Hazardous Event Detection in Mining Industry

N.Hari

SITAM College of Engineering, Vizianagaram

**Abstract:**

The coal mining industry is very important for the nation's economy. The need for coal is high nowadays. Nowadays thousands of workers lost their lives due to mining accidents and most of the deaths are occurring in developed countries like India. Keeping this in mind, we designed a helmet for the safety of mining workers. In our system, we detect the dangerous gases in the underground area and Bluetooth wireless technology is used for transferring collected values. The sensors are connected to a micro controller which detects the value and send signal to the receiver which is connected to the smart mobile.
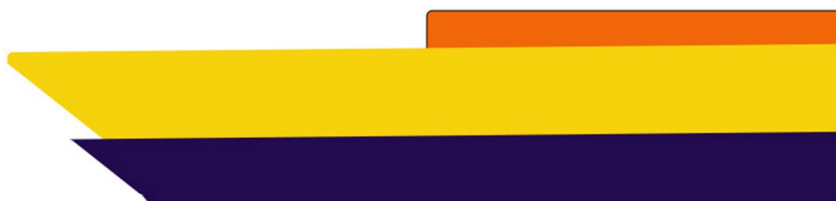
# Simulation Of Electric Vehicle Charging Solution

MD Abdul Musavir   Kendayala Sri Vardhan   Sanka Shyam Sunder   Arjun Vaibhav

IV/IV BTech, Bharat Institute of Engineering and Technology, RangaReddy

**Abstract:**

During the recent decade, the automobile industry is booming with the evolution of Electric Vehicle (EV). Battery charging system plays a major role in the development of EVs. Charging of EV battery from the grid increases its load demand. This leads to propose a Photo Voltaic (PV) array based off-board EV battery charging system in this study. Irrespective of solar irradiations, the EV battery is to be charged constantly which is achieved by employing a backup battery bank in addition to the PV array. Using the SEPIC converter and three-phase bidirectional DC–DC converter, the proposed system is capable of charging the EV battery during both sunshine hours and non-sunshine hours. During peak sunshine hours, the backup battery gets charged along with the EV battery and during non-sunshine hours, the backup battery supports the charging of EV battery. The proposed charging system is simulated using Simulink in the MATLAB software.

# Quantum Computers

P. Varshitha   R. Niharika

II/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

Quantum computing is a modern way of computing that is based on the science of quantum mechanics and its unbelievable phenomena. It is a beautiful combination of physics, mathematics, computer science and information theory. It provides high computational power, less energy consumption and exponential speed over classical computers by controlling the behaviour of small physical objects i.e., microscopic particles like atoms, electrons, photons, etc. Here, we present an introduction to the fundamental concepts and some ideas of quantum computing. This paper starts with the origin of traditional computing and discusses all the improvements and transformations that have been done due to their limitations until now. Then it moves on to the basic working of quantum computing and the quantum properties it follows like superposition, entanglement and interference. Small-scale quantum computers are being developed recently. This development is heading towards a great future due to their high potential capabilities and advancements in ongoing research. This information helps us in understanding the possible challenges in developing exotic and competitive technology. It will also give us an insight into the ongoing progress in this field.

# Footstep Power generation using PIEZO-ELECTRIC transducers

D. Bhushan Rao     Subhrakant Pradan

II/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

Nowadays, electricity has become a need of every human, and the demand for electricity increases day by day. Usually, ambient vibration transforms into electric energy that can be used to power other devices. The use of piezo-electric crystal is to produce electric output from surrounding vibrations These materials have the ability to absorb mechanical energy from their surroundings. This generation needs lots of electric power for their different operations. There are various ways to generate electricity.

# Power generation through ocean waves

S.Manasa

III/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

From decades, Earth is reminding humans to find better ways to produce power rather than burning fossil fuels which would result in the emission of harmful gases into the environment. The world energy consumption is expected to increase substantially in the next decade and if the same negligence towards the environment continues, there will be a day when no clean air would be available. Traditional practices of producing energy, regularly reminds us the serious threat they pose to the environment. Thus, there is a need to produce independent and clean electricity. Wave energy can be observed as a possible clean energy resource which can be exploited for power generation purposes. While this method is relatively new and economically competitive, there is a growing trend towards it, which is gaining interest from government and industries. A vital feature of these waves is that they have the highest energy density when compared to other renewable energy resources.

# Project Expo

## Accident alerting system using wireless network sensors

P. Varshitha D. Rajasekhar S. Manasa N. Sai Navya

II/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

Deaths due to traffic accidents became a major problem that expenses governments billions of Pounds. In case of highway accidents, acknowledgment to the proper authorities is highly needed. The main objective of this paper is to create a Real Time Traffic Accident Warning System (RTTAWS) using Wireless Sensor Network (WSN) and Radio-Frequency Identification (RFID) Technologies. This paper explains the hardware prototype setup for RTTAWS, the algorithms used, the advantages and the limitations of the entire system. Also the configuration of the setup and application software is elaborated. Sensors installed in a vehicle detect the accident's location, the vehicle's speed just before the accident and the number of passengers in the vehicle. The sensors then send an alert signal to a monitoring station. The monitoring station, in turn, tracks the location where the accident has occurred and directs casualty alert to the authorities concerned.

## Underwater electrical vehicle (Missile launcher)

V.D.K.S.R..Rajesh R. Hemalatha  P. Venkata Lakshmi  P. Haripriya  T. Harshini
V.Dhanraj

II/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

Future underwater vehicles will be increasingly called upon to work in cluttered environments and to interact with their surroundings. These vehicles will need sensors that work efficiently at short range and be highly manoeuvrable ((of an aircraft, vehicle, or ship) able to be easily moved or steered while in motion) at low speed. To obtain insights into principles and mechanisms of low-speed operation in cluttered environments. We also discuss prototypes of the sensing and propulsion systems of the fish with a view to providing alternative approaches for underwater vehicle design where high manoeuvrability in geometrically complex environments is needed.

# E- waste to electric power supply

P. Dana Lakshmi    P. Poojitha    P. Seema devi   M.Sahithi

II/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

Now a days a more rational waste management stream is considered necessary due to the environmental, economic and social demand. The willingness for the minimization of the accumulated waste and the increased energy demand led to the development of the third-generation waste management systems. Such systems are the waste to energy facilities which are considered friendly for the environmental and society. Moreover, it is included a detail research on which is the optimum waste to energy technology between combustion, gasification and anaerobic digestion .the effect of comparison between the pre mentioned alternative s created a software program helping the decision makers and engineers to select the optimum technology in mechanical ,financing and environmental terms.

# Bluetooth Home Automation (IOT)

S. Sai Chandana   Y. Likitha    N. Tarakeswari    T.Nandhini

II/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

This project works demonstrates a system that can be integrated as a single portable Unit and allows one to wirelessly control lights, fans and an audio/visual equipment, motors, etc.. and turn on or off any appliances. The system is portable and constructed in a way that is easy to install, run and maintain. This wireless smart home automation system allows one to control household appliances. The overall system is controlled from an android application which is connected with Bluetooth module HC05.

# Dual axis Solar Tracking System

J. Hema K. Swetha Ch. Sai Brunda D. Sahithi
II/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

Solar power is the fastest growing means of renewable energy. The project is designed and implemented using simple dual axis solar tracker system. In order to maximize energy generation from sun, it is necessary to introduce solar tracking system into solar power system. A dual axis tracker can increase energy by tracking sunrays from switching solar panel in various directions. This solar panel can rotate in all directions. This dual axis solar tracker project can also be used to sense weather, and it will be displayed on LCD. This system is powered by Arduino, consists of servo motor, stepper motor, rain drop sensor, temperature and humidity sensor and LCD. The main objective of this research is whether a static solar panel is better than solar tracker.

# Obstacles avoiding by Using Ultrasonic Sensor

B.Sravani    M.Sai Lakshmi    M.Sai Lalitha
II/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

The main aim of this project is to avoid accidents even though the driver is careless. By placing the ultrasonic sensor Infront of vehicles it sense an ultrasonic pulse out at 40 Khz, which travels through the air and if there is an obstacle or an object, it will bounce back to the sensor . By calculating the travel time and speed of sound, the distance can be calculated and then it starts taking action towards the input given. An ultrasonic sensor is used to finds any obstacle ahead of it and sends a command to the microcontroller. Depending upon the input signal received, the microcontroller change the direction of the robot by actuating the motors which are interfaced to it through a motor drive. As the name indicates ultrasonic sensor measure the distance by using ultrasonic waves. The sensor head emits an ultrasonic wave and receives the wave reflected back from the target. Ultrasonic sensors measure the distance to the target by measuring time between the emission and reception. Ultrasonic sensors can measure the distance and detect the presence of the object without making physical contact. They do so by producing and monitoring an ultrasonic eco. Depending on the sensor and object properties, the effective range in air is between a few centimetres up to several meters. So, we are doing this project to share our idea on how to decrease accidents by using sensors. By using the sensors, we can decrease accidents rate better than before.

# Power distribution with Renewable Energy Sources

K.V. Adithya B. Jhansi Rani K. Venkatadri K. Bhavana

K.Chandra sai  K. Gayatri  K.Sri vidya  K. Rohith

II/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

Energy is essential to our society to ensure our quality of life and to underpin all other elements of our economy. Renewable energy technologies offer the promise of clean, abundant energy gathered from self-renewing resources such as the sun, wind, earth, and plants. Renewable resources currently account for about 10% of the energy consumed in the United States, most of this is from hydropower and traditional biomass sources. Wind, solar biomass, and geothermal technologies are cost-effective today in an increasing number of markets, and are making important steps to broader commercialization. For achieving growth and progress in a developing country like India, utilization of the available energy sources is of prime importance. India is endowed with vast renewable energy resources such as biomass, solar thermal, photovoltaic, wind etc. The utilization of biomass fuels is house hold cooking comprises about half of the total energy balance in India. Renewable energy resources cannot serve as the alternative to conventional energy, yet they may serve to supplement the long-term energy needs of the country. This study indicates that using renewable energy sources as a supplement to the conventional energy sources can full fill the ever-increasing demand in India.

# Smart shoe for Blind People

K . Swetha  D . Sahithi  J. Hema   Ch. Sai Brunda

II/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

Good vision is one of the gifts from God, vision enable a person to know about his surroundings. But unfortunately, millions of people are deprived of this gift. Lack of vision add to low esteem ,in visually impaired person making them conservative because they  are not able to  interact with world in a manner others do .In taking all these points in consideration a cheap ,friendly user wearing shoe is proposed that aid blind people in doing  everyday stuffs ,make them self-independent .this shoe enable both partially blind person to self-navigate in an unknown environment .The proposed shoe comes with feature such as obstacle detector sensor ,water sensor, wireless charging, GPS tracking.

# Soil Dampness Sensor Using IOT

P. Thanusri  N. Yamini  P.Bhargav

II/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

Planting a tree in an environment where the seed or the plant would not get water adequately, through natural sources like rain or ground water in its initial phases has been always a matter of concern for tree planters. This is where an autonomous moisture monitor for plants system can help. The system timely monitors the moisture level of the soil. If at the time of monitoring it comes to know that the moisture level of the soil is lower than recommended, then it will raise an audio-visual alert. Watering of plants is controlled by mobile using IOT through which it sends a SMS to the caretaker. This alert is then received by the care taker of the plant. When the care taker waters the plant the alarm goes off and the monitoring cycle continues.

# Smart Agricultural Using IOT

K. Sumanth Varma

III/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

Radio Detection and Ranging (RADAR), a device that can be used to monitor a distinct area continuously. It is a detection system which utilizes radio waves to decide the range, angle or velocity of objects. The presence of aircrafts, ships, spacecraft and weather formations. The main intent of this project is to help our fishermen who are caught by the neighboring country's Navy. They are getting caught while fishing near the neighboring country's border. This project helps the fishermen to escape from them by raising an alert message. The alert message will be exhibited on the shade. While seeing the alert note, they can get alerted and move away from the place immediately. The location and the distance of the object is also measured and indicated to the people. This system has an Arduino which is connected to an Ultrasonic Sensor which is attached on a DC Motor. Based on the frequency of the sensor the Buzzer Sound Will Be Produced.

# Drone with Fire Extinguisher

K. Avinash    K. Yeswanth naidu    A. Vamsi Charan    K. Divya   M. Lavanya

III/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

Nowadays, there is a growing need for flying drones with diverse capabilities for both civilian and military applications. A drone is defined as an aerial vehicle which uses aerodynamic forces to provide vehicle lift, can be recoverable or expandable, can be piloted remotely or fly autonomously, does not carry a human operator, and can carry a non-lethal or lethal payload. The flying vehicles which operate from the remote-control area are stated as Unmanned Aerial vehicle (UAV). In the way of future, the Drones have major roles. They can take the risk which the human had to take to do the critical work. The Fire fighters have to do same critical work and they have to risk their lives. So, to lower down the risk we design a Fire Fighter Drone. It is a quadcopter Drone, that design to carry the fire extinguisher ball which is a compose of powdered $CO_2$. The fire extinguisher balls are hold by gimbal, which has a lock that operate from ground station.

# Egg Incubator for Temperature Control

B. Dileep kumar

II/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

An egg incubator is a device used to artificially incubate eggs in order to hatch them. The main parts of an egg incubators include temperature control: this is the most critical part of an egg incubator, as eggs requires a constant and precise temperature control is usually achieved through the use of a thermostat, which turns the heating element on and off as needed to maintain the desired temperature.  This paper demonstrated the design, construction and performance evaluation of automated eggs incubator for poultry farmers. The aim of this research was to produce a low-cost user-friendly modern incubator to increase the production of day-old chicks for small and medium scale poultry farmers. Turning of eggs was achieved with the use of tilting trays mechanism controlled by a programmed electric motor.

# Portable Solar charging station for Electrical Vehicles

P. Naga Sai Suma    P. Mounikaa    N. Sai Naga Ramalakshmi    S. Bharathi    S. Devi

III/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

The combination of solar energy and electric vehicle (EV) charging is the key in drastically reducing our dependence on fossil fuels. Electricity comes from a variety of sources and it's crucial that electric vehicles will be powered by renewables. This project describes design of solar powered charging station for charging of electric vehicle that solves the key downside of fuel and pollution. While EV charging has traditionally been grid-based, use of solar powered chargers has emerged as an interesting opportunity. Electric vehicles that run on the electric vehicle smart charging station which is the promising alternative and environmentally sustainable solution to meet up the energy crisis. In this project, the charging station successfully developed as desired features for electric vehicle from renewable energy resources with solar panel, solar charge controller, batteries storage and DC-DC converter.

# Paralysis Patient Health Care Device

T. Sai Pavan Kumar Varma    V.Kesav Sai    M.Anil Kumar    P.Yerni Raju

III/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

We all know that the paralysis condition is a loss of muscle function in the body parts. It can affect any part of your body at any time, then probably you may won't feel the pain the affected area. Technical and Therapeutic innovations are there to improve the quality of life Our goal is to develop a device which should be easy to use and should be affordable which consists of basic health care monitoring system with nursing care. We know that these people can't able to convey their messages or needs. To overcome this, we come up with the system that helps these patients to display messages by very simple motion. This device can be designed to be mounted on the finger or to be inbuilt in their clothes. The aim is to purpose a novel device which helps disabled people. It will help them to interact with other people with minimum efforts. This device may one day improve the lives of the people with paralysis. Even though, there are so many innovative approaches for curing these people. Fortunately, the last decade has seen promising technology advances to address these concerns.

# Paralysis EV Charging Station Through Pedestal Energy

S.Rohit      P.Veni Sri Sowrya      R.Anil Kumar      M.Bharath

III/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

Day by day, the population of the country is increasing and the requirement of the power is also increasing. At the same time the wastage of energy is also increasing in many ways. So, reforming this energy back to usable form is the major solution. In this footstep power generation project, we are generating power with the help of human's footsteps; this power is then used to charge battery. The power is stored in a battery that can be used to charge a mobile phone using RFID card. This system is powered by at mega 328 microcontroller, it consists of Arduino IDE, RFID sensor, USB cable and LCD. When we power on the system, the system enters into registration mode. We can register three users. Once all the user is entered in the system then the system asks to swipe the card and connect the charger. Initially all the user is given 5 minutes of charging time as default. When we swipe the card and if the user is authorised, the system turns on for charging and will charge the Mobile phone. If the user is un-authorised then the system will display as unauthorised user, just in case if the user wants to stop the charging in midway the user needs to swipe the card again. As soon as the card is swiped again, the remaining time balance is displayed and the charging stops. In order to recharge a card, we need to press recharge button which is on the system, and then system will ask to swipe the card, once the user swipes the card, it adds more 5 minutes to the particular card of the user.

# LI-FI Highway Navigation System

V.Kesav Sai   M.Anil Kumar    V.Pavani     Y.Pragna Kumari

III/IV BTech, Department of EEE, LIET, Vizianagaram

**Abstract:**

This smart highway navigation system by using Li-Fi technology. The light fidelity technology refers to visible light communication that uses light as a medium to deliver high-speed data in a manner which is much greater than that of Wi-Fi. Over here the proposed prototype is simulated on PROTEUS 8 professional software to explore the possibilities of using LiFi in highway routing. The transmitter and receiver sections contain atmega328 which is programmed by using Arduino IDE. High intensity LEDs are used in the transmitter section for delivering high-speed data to moving vehicles. Further, in the receiver section LDR module is used to detect the signal generated by the LEDs. According to the received signal the information of present location and further diversions is displayed on the LCD installed at the receiver. Thus, this technology is more useful for automatic navigation on highways and broad-lanes.

# Under and Over Voltage Protection System Arduino

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**Abstract:**

This project presents a new design for over/under voltage (OV/UV) protection scheme using Arduino microcontroller. The protection scheme is designed to protect the solid-state transformer (SST) branch of a Future Renewable Electric Energy Delivery and Management (FREEDM) system. It is used as backup protection for the instantaneous, momentary and temporary voltage fluctuation of distribution medium voltage loop. Very simple, user-friendly software and hardware simulators are created to represent a branch of the FRREDM network with the designed OV/UV relay. A software program is formulated using c-code through Proteus software package and easily integrated to the hardware circuit. The designed microcontroller monitors the network voltage and the OV/UV relay energies in case that its value exceeds a preset limit according to IEEE 1159.

# Solar Powered Electric Vehicle

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**Abstract:**

A solar car is a vehicle that is powered entirely or partially by the energy from the sun, typically using photovoltaic (PV) cells to convert sunlight into electricity. Solar cars are designed to be energy-efficient and environmentally friendly. Solar cars have the potential to significantly reduce our dependence on fossil fuels and help moderate the negative impacts of climate change. In this project, we will explore how to use a charge controller to manage the flow of electricity generated by an array of solar panels into a battery pack. The stored energy will then be used to power a PMSM motor, which will drive the car. We will also use a motor controller to control the car's speed and direction of motion. In addition, we will cover the process of building the car's chassis and all necessary mechanical systems. Finally, we will show how to wire the electrical system onto the mechanical body of the car.

Life is and will ever remain an equation incapable of solution, but it contains certain known factors.

~ Nikola Tesla

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