2018

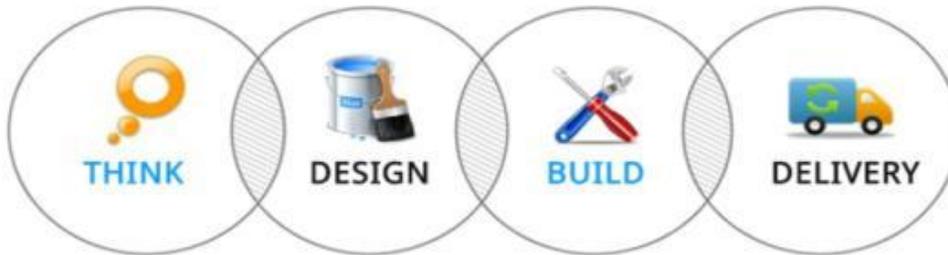# ELECTRICAL PROJECT LIST 2018-2019

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Here we provided a **ELECTRICALS AND ELECTRONICS 2018 project lis**t with abstracts. we do train a student from basic level which includes basic Classes, projects implementation, final project demo and final code explanations. If you have questions regarding these projects feel free to contact us. You may also ask for abstract of a project idea that you have or want to work on. The **own projects idea** for diploma and Engineering students can also encouraged here.

Electrical engineering is a branch of engineering which deals with the study and application of electricity, electronics, and electromagnetism. We provide electrical projects based on core electrical , electronics, embedded system, wireless communication and IOT.

IEEE ELECTRICALS AND ELECTRONICS PROJECT LIST 2018 AND 2019

	2018 – 19 IEEE TRANSCATIONS ON ELECTRICALS AND ELECTRONICS BASED PROJECT TITLES
TIR001	**TITLE** - TRANSMISSION LINE MULTIPLE FAULTS DETECTION AND INDICATION TO ELECTRICITY BOARD **ABSTRACT** - In this paper, a scheme for fault detection and identification of SIGNLE PHASE overhead transmission lines is proposed. Fault detection techniques based on mean square value of the difference between incoming and out going single phase currents of each section. These differences are compared against threshold setting values. Faulty phase identification is based on the analysis of single phase currents at one end of transmission line. The transient currents are processed by Discrete Wavelet Transform multi-resolution analysis. It is used as input to a rule-base system to identify the fault type. Many case studies are provided to validate the proposed algorithm.
TIR002	**TITLE** - SMART POWER SOURCE SELECTOR **ABSTRACT** - The main purpose of this project is to provide continuous power supply to a load, by selecting the supply from any of the four sources namely solar, inverter, main and generator automatically in case if one of the source is absent. The need of electricity is increasing day by day and the frequent power cuts of electricity are causing many problems in different areas like banks, colleges/schools, hospitals, houses and industries. Thus there is a

requirement for an alternate arrangement of power supply. This arrangement can be designed by using microcontroller. When a source, say mains fails the supply will shift to next source generator and so on. LED can be used to show that which source is used to provide the supply.

An important requirement of electric power distribution systems is the need for automatic operation. In particular, the rapid and reliable transfer of the system from one power source to another during certain system events is important to achieving the reliability goals for such systems and the facility serves.

In this project we are using four different sources of supply which are channelized to a load so as to have an uninterrupted operation of the load. A microcontroller of 8051 family is used. The output of microcontroller is given to the load driver which maintains uninterrupted supply to the load. The output shall be observed using a LED drawing power supply from any one of these sources and an LCD is used to show which power source is used.

TIR003

TITLE -SOLAR TRACKING SYSTEM WITH AUTOMATIC PANEL CLEANING MECHANISM FOR EFFICIENT POWER GENERATION

ABSTRACT - So many power generator available in our country to generate the power here we design a model which is generating a power from natural claimatation .In our country the power problem is increasing day by day due to lake of rain water   To avoid the power problem in our country the hybrid power generator are used to generate power throughout the day and night.

TIW004

TITLE - Smart meter for power factor enhancement in real-time

ABSTRACT- The Existing domestic Energy meter reading systems universally exist many problems, such as difficulty in construction, too narrow bandwidth, too low rate, poor real time, not two way communication quickly etc. To solve above problems, this paper uses the wireless technology for Automatic Meter Reading system. A proposed method provides the communication between the Electricity Board section and the consumer section using IOTfor transmitting the customer's electricity consumption and bill information that is calculated using Arduino.The information regarding the bill amount and payment are communicated to the consumer via Internet of things

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TIW005

TITLE - SOLAR POWER GENERATOR SEVEN LEVEL TO NINE LEVEL CONVERTER

ABSTRACT- Basic intention of developing this project is to provide a partial fulfillment

of electricity to the remote place or villages where scarcity of electricity is there and load shedding is a common problem. Our main goal of this project is to charge the battery during availability of power and to use the battery back for different purpose during power failure. This project is very much useful in rural electrification areas where scarcity of power is more. There are various benefits of rural electrification, such as in impoverished and undeveloped areas, small amounts of electricity can free large amounts of human time and labor.

TIW006	**TITLE** - BATTERY MANAGEMENT SYSTEM **ABSTRACT-** A battery management system is essentially the "brain" of a battery pack; it measures and reports crucial information for the operation of the battery and also protects the battery from damage in a wide range of operating conditions. Battery management system (BMS) emerges a decisive system component in battery-powered applications, such as (hybrid) electric vehicles and portable devices. However, due to the inaccurate parameter estimation of aged battery cells and multi-cell batteries, current BMSs cannot control batteries optimally, and therefore affect the usability of products. In this paper, we propose a BMS such that continuously it monitors current, voltage and temperature and these parameters values are sent to the android app through PC.
TIW007	**TITLE** - SMART HOUR METER **ABSTRACT**- Under the background of smart grid's real-time electricity prices theory, a real-time electricity prices and wireless communication smart meter was designed. The metering chip collects power consumption information. The real-time clock chip records current time. The communication between smart meter and system master station is achieved by the wireless communication module. The "freescale" micro controller unit displays power consumption information on screen. And the meter feedbacks the power consumption information to the system master station with time-scale and real-time electricity prices. It results that the information exchange between users and suppers can be realized by the smart meter. It fully reflects the demanding for communication of smart

	grid
TIW008	**TITLE** - Energy meter billing with theft detection **ABSTRACT-** The Existing domestic Energy meter reading systems universally exist many problems, such as difficulty in construction, too narrow bandwidth, too low rate, poor real time, not two way communication quickly etc. To solve above problems, This paper presents a detection of power theft in every houses and in industry for different methods of theft. Electrical energy is very important for everyday life and spine for the industry. Electricity is indiscipline to our daily life with increasing need of electricity the power theft is also increasing, power theft is a problem that continues to plague power sector across whole country the objective of this project is to design such a system which will try to reduce the illegal use of electricity and also reduce the chances of theft. This project will automatically collect the reading and also detect the theft this model reduces manual manipulation work and try to achieve theft control. this paper uses the wireless technology for Automatic Meter Reading system. A proposed method provides the communication between the Electricity Board section and the consumer section using Internet of things (IOT) for transmitting the customer's electricity consumption and bill information that is calculated using Arduino.The information regarding the bill amount and payment are communicated to the consumer via Global System for Mobile communication. The power and billing information is continuously transmitted by the use of internet of Things and monitored by the Electricity Board section.
TIW009	**TITLE** - AUTOMATIC FAULT DETECTION AND LOCATION OF TRANSMISSION LINES USING IOT **ABSTRACT-** In this paper, a scheme for fault detection and identification process in transmission lines is developed. Fault detection techniques based on mean square value of the difference between incoming and outgoing sensors of each section. These differences are compared against threshold setting values. Fault identification is based on the analysis of sensor values and monitoring using app. We are proposing a IoT wireless communication device to acquire sensor values.
TIW010	**TITLE** - Fire Fighting Robot **ABSTRACT**- Now a days, fire accidents are very common and sometimes it becomes very difficult for a fireman to save someone's life. It is not possible to appoint a person to continuously observe for accidental fire where robot can do that. Therefore in such cases firefighting robot comes in picture. Robot will detect fire remotely. These robots are mostly useful in industries where probability of accidental fire is more. The proposed vehicle is able to detect presence of fire and extinguishing it automatically by using gas sensor and temperature sensor. It contains gear motors and motor driver to control the movement of robot. Relay circuit is used to control the pump and when it

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will detect fire then it will communicate with microcontroller (Arduino UNO R3) through Bluetooth module. The proposed robot has a water jet spray which is capable of sprinkling water. The sprinkler can be move towards the required direction .At the time of moving towards the source of fire it may happen that it will come across some obstacles, then it has obstacle avoiding capability. It will provide GUI for arduino operation using android. It detects obstacles using ultrasonic sensors up to range of 80 m. Communication between the mobile phone and robot will take place through Bluetooth, which will have GUI to control the movement of robot. When mobile gets connected to Bluetooth firstly it will set module name, baud rate. It is feasible to implement Bluetooth communication between smartphones and microcontroller. Android controlled robot can be used easily in everyday life such as in homes, market , companies etc. The development of apps for Android in Android SDK is easy and free of cost.