# Bhoj Reddy Engineering College for Women

## Department of Electrical and Electronics Engineering

## Major Project Details for Academic Year 2020-2021

| Batch No | Roll No | Name of the Student | Title of the Project | Abstract | Internal Guide | Hardware/ Software/ Analysis | Organization |
|---|---|---|---|---|---|---|---|
| 1 | 17321A0203 | Amulya P | Analysis Of Power Charges Before And After Solar Power Installation At BRECW | As the source of conventional energy deplete day by day, resorting to alternative sources, energy like solar energy has become the need of the hour. Solar energy can be used to generate power in two-ways; solar thermal conversion and solar electric (photovoltaic) conversion.<br>Photovoltaic (PV) production becomes double every two years, increasing by an average of 48 percent each year since 2002. For this reason, it has become the world's fastest growing energy technology. A charge controller is an essential part of nearly all power systems that charge batteries, whether the power source is PV, wind, hydro, etc.<br>The Solar Panels (Modules) will generate the DC Voltage and will feed to an inverter to convert the voltage from DC to AC. BRECW took an initiative to installed Solar Power generation at campus on roof top to produce required electricity to meet the part load requirement.<br>Solar Grid was constructed in BRECW during the year 2015 with an Output 100 kW with 336 No. of modules. Solar panels are located on Roof top, 200sq feet length and 80sq feet width and facing towards south. Its Latitude angle is 17.35degrees and Longitude angle is 78.512degrees. | R Manju Bhargavi | Analysis | BRECW |
| | 17321A0209 | Deepika Yapala | | | | | |
| | 18325A0204 | Jogi Haripriya | | | | | |
| | 17321A0211 | Hari Keerthi Thumma | | | | | |
| 2 | 17321A0259 | Vijaya Laxmi Purnapanda | Electronic Interlocking In Railway Signalling System | Railway Signalling system plays a vital role in the movement of trains. In railway signalling, an interlocking is an arrangement of signal apparatus that prevents conflicting movements through an arrangement of tracks such as junctions or crossings.<br>An interlocking is designed so that it is impossible to display a signal to proceed unless the route to be used is proven safe. Railway interlocking is of British origin, where numerous patents were granted.<br>Railway signalling has come a long way from un-interlocked, mechanical and electro-mechanical interlocking. With the advent of electronics and computers, there have been revolutionary changes in the field of railway signalling.<br>Electronic Interlocking (EI) system is a microprocessor based interlocking equipment to read the yard and panel inputs; process them in a fail-safe manner as per selection table and generate required output. This system is the alternative to the conventional Relay Interlocking system (PI & RRI). Electronic Interlocking, an advanced signalling system used worldwide has been introduced on Indian Railways.<br>An EI for a railway signalling system comprises of 2 interfaces. The first interface is for communication between the interlocking anal a central control and monitoring system, a plurality of local integrated circuit processor units, each local processor unit performing the logic operations associated with one or more specific line side equipment elements. Each processor unit performs the logic operations associated with at most one of a signal, a set of points and a fixed crossing. A second interface is provided between the integrated circuit processor units and the line side equipment elements. The invention provides an integrated circuit implementation of the logic associated with individual line side equipment units.<br>EI system has several advantages over Electro-Mechanical or Conventional Panel Interlocking, such as reduced space requirements, self-diagnostic features, safety and reliability etc. Although EI system is supposed to give flawless performance, failure of this due to its safe shut down feature or any other reason may paralyze train movements. For ensuring the efficiency and reliability of the system, the staff installing or maintaining this should have fair knowledge about its components and working.<br>EI system installations of different approved manufacturers have been commissioned on a number of stations on Indian Railways and are going to increase in future. | S Deepti | Hardware | Signal and Telecommunication Training Centre (STTC), South Central Railways |
| | 17321A0255 | Uma Barmavath | | | | | |
| | 18325A0210 | Kummarikunta Sathwika | | | | | |
| | 17321A0247 | Srinidhi Yadla | | | | | |
| 3 | 17321A0232 | Sai Sri Kanya Kencha | Analysis Of Load Loss Reduction By Improving The Load Side Power Factor At BRECW | This project deals about the analysis of distribution losses that occur and how these losses can be reduced by installing the required capacitor bank at load end and thereby improving the power factor. Power factor is the ratio of true power (kW) to apparent power (kVA). Power factor correction is obtained via the connection of capacitors which produce reactive energy in opposition to the energy absorbed by inductive loads. So, at load end or in PCC (Power Control Centre), capacitors have to be installed in parallel to improve the power factor. If power factor is less, the system draws more current and power loss will be huge. So, power factor has to be improved nearly to unity. Required Capacitor bank (kVAr) = kW×(tanφ2-tanφ1). This is the formula used to calculate the capacity of capacitor bank, which is needed to improve power factor from cosφ1 to cosφ2.<br>Power Factor Correction (PFC) aims to improve power factor and thereby power quality. It increases energy efficiency and reduces electricity costs. It also decreases the fluctuation of input voltage.<br>BRECW is presently maintaining 0.829 lagging pf and this project aims to improve the pf to 0.99. By installing 76 kVAr capacitor bank, losses can be reduced to 30% which is equivalent to 30 kW. | S Asha kiranmai | Analysis | BRECW |
| | 17321A0205 | Anusha Guddeti | | | | | |
| | 18325A0201 | Palleboina Anusha | | | | | |
| | 18325A0205 | Gudipalli Lakshmi Deepika | | | | | |
| 4 | 17321A0258 | Vandana Gunda | WSN Based Covid 19 Symptoms Detection System | Coronavirus is the new virus that has not been identified in humans before which it causes the coronavirus disease called COVID-19. The virus can easily pass from person to person which make it spreaded rapidly. One of the common symptom of COVID-19 that can be easily identified is fever. Since the virus outbreak, thermal screening using infrared thermometers are used at public places to check the body temperature to identify the indicated infectee among crowd. This prevention still lacking because it spends a lot of time to check the body temperature from every person. This project proposes the design of system that has capability to detect the coronavirus automatically from the thermal image with less human interactions using smart helmet with Mounted Thermal Imaging System. The thermal camera technology is integrated to the smart helmet and combined with WSN technology for monitoring of the screening process to get the real time data. In addition, the proposed system is Equipped with the facial-recognition technology, it can also display the pedestrian's personal information which can automatically take pedestrians' temperatures. Hardware requirements like RPS, LCD, ARDUINO UNO, Temperature and Heart beat sensor. Software requirements like ARDUINO IDE, Embedded c. This proposed design has a high in demands from the healthcare system<br>and can potentially help to prevent for coronavirus spreading wider. Here we are additionally add power generation for operating this entire system by using solar panel. | S Mayuri | Hardware | R TECHNO SOLUTIONS |
| | 17321A0226 | Priyanka Kudithi | | | | | |
| | 17321A0225 | Praveena Koninti | | | | | |
| | 17321A0216 | Jyotsna Guddati | | | | | |
| 5 | 17321A0233 | Sakhi Jadhav | Research And Simulation Of DC Microgrid Three-Phase AC-DC Converter Control Strategy Based On Double Loop | The new voltage and current double loop control strategy is proposed to solve the DC microgrid bus voltage fluctuation caused by loads fluctuation, parameters perturbation and unbalanced three-phase power supply. Firstly, the dq axis mathematical model of three-phase AC-DC bidirectional converter in DC microgrid is analyzed and established, and then the controllers are designed according to the dq axis mathematical model. The outer loop is a voltage loop based on variable gain linear extended state observer (VGLESO) and sliding mode theory. VGLESO can not only effectively overcome the problem of peak output of traditional high-gain LESO in the initial stage of operation, and ensure that the system has good startup characteristics, but also quickly track and compensate the total disturbance of the system without additional current sensors.<br>The inner loop is a current loop based on adaptive PI, which can eliminate the influence of system parameters perturbation on bus voltage and improve the system's adaptability. Under the action of the inner and outer loops, the system has good dynamic and static characteristics. Finally, the feasibility and correctness of the control strategy are verified by Matlab/Simulink. | Sk Vali | Software | Vertilink technologies |
| | 17321A0257 | Vaishnavi Sanjannagari | | | | | |
| | 17321A0222 | Mowneka Sabavath | | | | | |
| | 18325A0202 | Gummadi Divya | | | | | |
| 6 | 18325A0208 | Gugloth Mounika | Intelligent Coal Mine Monitoring System Based On The Lora-Cloud | Due to many people died in mine accident, the mine safety play a key role in mine produce process. By virtual of recent advancements in the Internet of Things, this paper proposes an intelligent monitoring system for coal mines, which aims at monitoring the coal mine produce process. The proposed sense network architecture is completed based on Arduino and LORA technology. The sense nodes work cycle, powered by batteries, is extended by specific work model. Position of miners can be obtained through inquiry routing tables of network nodes. Manage system is designed to provide services for mine managers. The proposed system can monitor the process of mining intelligently and warn miners and managers immediately when dangerous issues emerge, such as gas leaking and sudden temperatures rise. | J Ashwini Kumari | Hardware | PANTECH Institute |
| | 17321A0245 | Sridevi Annadi | | | | | |
| | 17321A0219 | Mahitha Bonugula | | | | | |
| | 17321A0212 | Harika Gaddam | | | | | |
| 7 | 17321A0201 | Aakanksha Namilikonda | Utility Grid Interfaced Solar Water Pumping System Using PMSM Drive | The Utility Grid Interfaced Solar Water Pumping System Using PSPM Drive presents a solar photovoltaic (PV) array fed grid interfaced, encoder-less, permanent magnet synchronous motor (PMSM) based solar water pumping (SWP) system. This system mitigates the intermittency issues associated with the solar PV energy. In the presence of grid, the SWP system provides an uninterrupted water flow irrespective of available solar insolation. In condition of grid failure, the output water flow is a function of available solar insolation. A boost converter is used on the grid side to facilitate power transfer from the grid and enabling the unity power factor (UPF) operation using unit vector template (UVT) theory. The speed of the PMSM, is regulated using sensor less vector control. A double second order generalized integrator quadrature signal generator is used for extracting the fundamental signal from the distorted grid voltage. Performance of the proposed system is validated using a laboratory developed prototype under varying solar insolation, during grid failure, during voltage sag, voltage swell and distorted grid voltage conditions. | G Poorna | Software | SRI EMKY TECHNOLOGIES |
| | 17321A0213 | Harshitha Tiwari | | | | | |
| | 17321A0221 | Manichandana Pathanaboina | | | | | |
| | 17321A0202 | Adhvithi Potharaju | | | | | |
| 8 | 17321A0235 | Sanjuna Gopu | Sensorless Dc-Link Control Approach For Three-Phase Grid Integrated PV System | In this project, a novel control approach for a Grid-Connected Photovoltaic System (GCPVS) has been proposed. This novel approach introduces a sensor less DC-link voltage control for two-stage, three-phase GCPVS. The two-stagesystem with the proposed control approach<br>includes an intermediate (DC-DC boost) converter and Pulse Width Modulation (PWM) strategy-based voltage source inverter (VSI). In the first-stage control, the intermediate converter is incorporated with the maximum power point tracking (MPPT) technique. The incremental conductance MPPT technique is implemented to enhance the voltage level of the PV array under variable irradiance condition. Further, the second-stage control of VSI deals with DC-link voltage regulation(outer-loop) and current control (inner-loop) matching with the conventional<br>scheme. Distinctively, the proposed scheme avoids the outer-loop and controls the inner-loop. Hence, the reduction of DC-link high voltage sensor minimizes the cost as well as the size of the system. However, the DC-link voltage will remain maintained through the power balancing. Hence, the removal of the outer-loop controller enhances the system stability and the dynamic response of the system under variable irradiance conditions. The proposed GCPVS is simulated in MATLAB/Simulink using sim power tools to verify the system performance and the<br>dynamic behavior at different irradiance levels of the system. | R Manju Bhargavi | Software | R TECHNO SOLUTIONS |
| | 17321A0243 | Sowmya Sree Maringanti | | | | | |
| | 17321A0248 | Suchitha Mothkuri | | | | | |
| | 17321A0254 | Tejaswi Gummadavelli | | | | | |

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| 9 | 17321A0246<br>18325A0212<br>17321A0204<br>17321A0251 | Srinidhi Pavushetty<br>Jakinboina Vinnela<br>Anjali Guntur<br>Sushmitha Jakkani | Renewable Powered Portable Weather Update Station | Weather estimate, in reality continuous weather gauge is essential for our day by day life. National weather data does not generally contain the precise information of each area rather it contains the information of closest climate station for a time frame.<br>The fundamental aim of this project is to develop a RES powered Weather Station which will help to monitor the weather parameters. Such a project contains sensors for detecting temperature, humidity, raindrop, carbon mono-oxide, smoke, LPG in the environment, barometric pressure, altitude etc. The information from the sensors are gathered by the Arduino. Arduino sends the sensors information in LCD display. Additionally, the device sends an SMS which contains weather information to the user with the assistance of a GSM module. At the end of the project the results have been compared between the national weather data and the actual reading.<br>A wireless Sensor Network (WSN) is a wireless network consisting of spatially distributed autonomous devices using sensors to cooperatively monitor physical or environmental conditions, such as temperature, humidity, at different locations. In the temperature sensor is used to measure the temperature around environment. The humidity sensor is to calculate the temperature in surrounding air and the Gas sensor is used to measure Gas level. This all data are updated to the Authorized Person using GSM. The nodes in the network are connected via wireless communication channels. Each node has capability to sense data, process the data and send it to restate nodes. LCD is used to print the current status from the controller.<br>Hardware equipments used are Arduino UNO, Humidity Sensor, Temperature Sensor, CO2 Sensor, GAS Sensor, LCD, Power Supply, GSM, Solar Panel, and Battery. Software tools used are Arduino IDE, and Embedded C. | K Ravi Kumar | Hardware | Vertilink technologies |
| 10 | 17321A0244<br>17321A0260<br>17321A0252<br>17321A0240 | Sreeja Reddy Chiligireddy<br>Vinitha Danthala<br>Swarnalatha Burra<br>Shrishna Naini | Electric Vehicle Charge–Discharge Management For Utilization Of Photovoltaic By Coordination Between Home And Grid Energy Management Systems | This project proposes an electric vehicle (EV) charge-discharge management framework for the effective utilization of photovoltaic (PV) output through coordination based on information exchange between home energy management system (HEMS) and grid energy management system (GEMS). In our proposed framework, the HEMS determines an EV charge-discharge plan for reducing the residential operation cost and PV curtailment without disturbing EV usage for driving, on the basis of voltage constraint information in the grid provided by the GEMS and forecasted power profiles. Then, the HEMS controls the EV charge-discharge according to the determined plan and real-time monitored data, which is utilized for mitigating the negative effect caused by forecast errors of power profiles. The proposed framework was evaluated on the basis of the Japanese distribution system simulation model. This framework is investigated using MATLAB 2009a. | S Mayuri | Software | R TECHNO SOLUTIONS |
| 11 | 17321A0238<br>17321A0229<br>18325A0209<br>17321A0256 | Shravya Chilukuri<br>Sabiha Shaik<br>Angadi Omkari<br>Gottemukkala Uma Maheswari | Analysis Of Hybrid Storage System In DC Microgrid | The major challenges in power systems are driven by the energy shortage and environmental concerns, namely facilitating the penetration of renewable energy and improving the efficiency of the renewable powers. Accordingly, much attention has been focused on the development of energy storage technologies to guarantee renewable power penetrations. Recently, advances in the supercapacitor have made the SC and battery hybrid energy storage systems technically attractive. Hybrid storage devices are used in microgrids to provide power backup solutions when the distributed energy resources are unable to supply the load demands. Combination of battery and supercapacitor banks provide an appropriate hybrid storage solution. The objective of this project is to present a comparative study of charging and discharging process of both battery and SC banks and hence understand their application areas in a DC microgrid. However, the supercapacitor unit can discharge as low as 10% of its rated voltage due to self discharge. In this project , the sensitivity of dc microgrid stability with respect to upercapacitor<br>voltage variation is analyzed, an optimal supercapacitor voltage to be considered in the design is calculated and a design method is proposed to ensure the stability of dc microgrid in all operating modes. The stability of the dc microgrid with controllers designed using the proposed method is evaluated with digital simulation and experimental studies. | S Deepti | Software | SRI EMKY TECHNOLOGIES |
| 12 | 17321A0234<br>18325A0203<br>17321A0208<br>17321A0207 | Samhitha Sree Meghi<br>Avusula Hari Chandana<br>Chaturya Nagubandi<br>Chandana K | Hybrid Energy Management Strategy Based On Fuzzy Logic And Optimal Control For Tri-Actuated Power Train System | In this project, an efficient Energy Management Strategy (EMS) of a specific multi hybrid plugin electric bus is designed and validated using high fidelity Truck Maker software simulation. The studied bus is equipped with a tri-hybrid power train in which traction torque is produced by three distinct energy sources (internal combustion engine (ICE), hydraulic accumulator and battery). To manage the complex operation of this hybrid power train smoothly and efficiently, an EMS composed of two control layers combining fuzzy logic and adaptive optimal control is proposed. The main purpose of this control strategy is the coordination of these multiple energy sources while minimizing the fuel consumption and ensuring smooth torque transitions between the motors. This last-mentioned benefit is quite important since smooth torque transitions helps to reduce power loss in the hydraulic system and ensure reliability of the powertrain. In addition, the proposed strategy is designed so that it respects the intrinsic constraints of the powertrain components and to deal with the uncertainties on the driving conditions when controlling the hybrid powertrain system. | G Poorna | Software | Vertilink Technologies |
| 13 | 17321A0218<br>17321A0250<br>17321A0241<br>17321A0237 | Mahima Sureka<br>Sushma Sree Laskar<br>Shriya Naini<br>Shravani G | A Power Quality Improved Ev Charger With Bridgeless Cuk Converter | An improved Bridgeless (BL) Cuk converter-based electric vehicle (EV) battery charger with high power factor and increased efficiency is designed and developed. It provides low cost and high-power-density-based charging solution for the EV. This charger incorporates less number of devices operating over one switching cycle, which reduces the additional conduction loss incurred by a diode bridge rectifier of the conventional charger. Hence, it improves the charger's efficiency.<br>This project has added advantage of the topology that the unwanted capacitive coupling loop is removed, as well as the unwanted conduction through the body diode of the inactive switch in the previously developed BL Cuk converter is avoided. This significantly improves the charger's efficiency. For the constant current and constant voltage charging, the commands are synchronized by a flyback converter.<br>The charger draws a sinusoidal current from ac mains and the total harmonic distortion in the supply current is reduced to the limits specified by the IEC 61000-3-2 guidelines. The improved efficiency and power quality indices of the charger are investigated to demonstrate its satisfactory charging operation at all operating conditions. | J Ashwini Kumari | Software | R TECHNO SOLUTIONS |
| 14 | 17321A0215<br>17321A0236<br>18325A0206<br>17321A0249 | Irene Kristen Anilija Kadari<br>Sathvika Bachireddy<br>Dayyala Lenina<br>Sumanjali Chowgani | Short Circuit Study Of Six Bus System | This project is approached for the study of Short circuit for detecting maximum fault current for improvement of power system. It provides the solution for the three phase to ground fault in a power system which consists of six buses, two transformers, two generators and five transmission line.<br>Six Bus systems are considered for Short Circuit Analysis. The system could face the damage of equipments as well as interruption of power supply to consumers due to the flow of very high current through transmission line and buses during the faults. So to sort out such problem these types of faults must be analysed by Short Circuit Analysis and System Equipments must be rated in accordance.<br>This project presents the short circuit analysis of described power system due to three phase to ground fault in the bus no.5 of the system followed by a contingency of single line (3- 6) open. In this project short circuit studies done on the system gives us the maximum fault current and fault MVA rating which helps in relay setting, coordination and setting up the overall protection system. Here MI power system software is used. Various types of faults occur on power system, Where we find the short circuit studies for the calculation of power handling capacities in normal operations and faulty conditions. | Sk Vali | Software | NSIC |
| 15 | 18325A0207<br>18325A0211<br>17321A0230<br>17321A0206 | Devunuri Meghana<br>Alkachanu Shailaja<br>Sai Akshitha Mogiligidda<br>Bhavani P | Investigation And Application Of Smart Door Locks Based On Bluetooth Control Technology | This project introduces the use of Bluetooth as an automatic door opener. From the existing door system, the RFID card or fingerprint are used to identify the person to open the door automatically. In the proposed system, we change the identification from RFID card or fingerprint to Bluetooth signal sent from the user's smart phones. It is because we observe, the users often forgot their RFID cards and there are many errors when the users use their fingerprint with the finger-scanner. From the evaluation results show that proposed system, Bluetooth can reduce the waiting time and error to open the door compared with RFID card. Moreover, because the proposed system uses the voice control on the smart phone. we also find the optimal time that the door should open when the user comes to the door.<br>The modern technology was developed by IoT (Internet of Thing). Automatic door systems are widely used today, the technology is the key card or fingerprint identification of the user to order the system to open the door. It is the origin of Bluetooth technology, which is commonly used to detect and monitor devices in the building. They can provide their device information and location. For this purpose, it is recommended to use technology.<br>Hardware Requirements: Node MCU, LCD Display, Servo Motor, Power Supply, Relay, Bluetooth, Door Lock<br>Software Requirements: Arduino IDE, Embedded C | K Ravi Kumar | Hardware | PANTECH Institute |
| 16 | 17321A0217<br>17321A0210<br>17321A0239<br>16321A0251 | Kavya Sri Ganji<br>Greeshma Perabhathini<br>Shreya Katla<br>Talari Sowmya | Rf Based War Field Spying Robot With Wireless Night Vision Camera | Robotics is one of the hot fields of modern age in which the nations are concentrating upon for military purposes in the state of war and peace. The main aim of this project is to reduce human victims in terrorist attacks. This will be achieved by designing the RF based spying robot which involves wireless camera. So that, from this it will be easy to examine rivals when it is required. This robot can quietly enter into enemy area and sends us the information via wireless camera. The movement of this robot is wirelessly controlled by a hand held RF transmitter to send commands to the RF receiver mounted on the moving robot. Since human life is always valuable, these robots are the substitution of soldiers in war areas. This spying robot can also be used in the star hotels, in shopping malls,jewellery show rooms, etc, where there can be threat from intruders or terrorists.<br>At the time of war, it can be used to collect information from the enemy terrain and monitor that information at a far secure area to safely devise a plan for the counter attack. It can also be used for tracking locations of terroristorganizations and then plan attack at suitable time. Robot can be used for making a surveillance of any disaster affected area where human beings can't go. With this feature, the robot can transmit real time videos with night vision capabilities.<br>Hardware requirements: Arduino, DC motor, Camera, RF module, Raspberry pi, Sound sensor, Joystick, L293D driver.<br>Software requirements: Raspbian Jessie, Language – Linux, Python, Arduino IDE, Embedded C. | S Asha kiranmai | Hardware | PANTECH Institute |
| 17 | 17321A0214<br>17321A0224<br>17321A0227 | Himanya Ponaganti<br>Niharika Thatikonda<br>Rakshitha P | Arduino Based Real Time Drowsiness And Fatigue Detection For Bikers Using Helmet | Vehicle accidents are rapidly increasing in many countries. Among many other factors, drowsiness and fatigue are playing a major role in these accidents and systems which can monitor it are currently being developed. Among them, Electroencephalography (EEG) proved to be very reliable. The conventional vehicle and the vision-based detection for drowsiness is very much essential only when the driver is about to sleep and every so often very late in preventing fatalities on road. This project is specially developed to improve the safety of the bikers. The proposed system has EEG-sensors which are implemented within the helmet to detect the drowsy state of the driver. The biomedical signal from the driver's brain is sensed by a Brain-wave sensor. This system provides real-time drowsiness and fatigue detection for the bikers by making a helmet to play a vital part with warning platform as a miniaturized sensor and to provide mind machine interface (MMI) to address the challenges like drowsiness and fatigue. When the biker is detected to be in drowse state the system alerts the biker by an alarm and motor gets slow down and stopped.<br>Hardware Requirements: Microcontroller and power supply, Lcd, EEG sensor, Relay, Dc motor, Alcohol sensor, Buzzer, Leds, Bluetooth<br>Software Requirements: Embedded C, ARDUINO IDE | S Deepti | Hardware | Vertilink Technologies |
| 18 | 17321A0228<br>17321A0242<br>17321A0220 | Ramya Guda<br>Soumya Muddasani<br>Manasa Manchireddy | Mathematical Modelling And Design Of DC Motor | One of the most used actuator in control systems is direct current (D.C.) motor. The general output variable of this actuator can by angular speed or angular displacement motion, but coupled with wheels or drums and cables, can provide translate motion.<br>This project is a state-space model of the D.C. motor build for constant flux and considering two inputs: supply voltage and resistive torque. The three states of the resulted model are represented by angular speed, angular displacement and current supply and either of these states can be an output variable for simulation model. Consequently, the system's model has two inputs and three outputs.<br>For the system's simulate is build a VI where the most important element is a Matlab script which contains the matrices A, B, C, D of the state-space model, the independent variable time and the Matlab simulation function lsim. The motor's parameters are given by digital controls on the panel so that these parameters can by interactive modified.<br>To generate inputs, there are used two CASE structures where can by set the inputs variables form: impulse, step and ramp and here is also possible to set the signal amplitude and duration by knob or slide control. For setting the matrices' dimensions there are used TRANSPOSE 2D ARRAY and INDEX ARRAY. The output signals are live display one by one or together on the WAVEFORM GRAPH.<br>Software Requirements: Matlab 2009.a | R Manju Bhargavi | Software | DRDL |

S Asha Kiranmai
Project Incharge

R Manju Bhargavi
HOD-EEE