
**Estd. 2001**

# PRATHYUSHA

## ENGINEERING COLLEGE

**Poonamallee to Thiruvallur High Road,**
**Chennai – 602025**

# PROJECTS

## 2017-18

## EVEN SEMESTER

## 28.02.2018

## LIST OF PROJECTS

| S.No. | Department | Coordinator | No. of Projects |
|---|---|---|---|
| 1. | BioTech | Mr. Cholapandian | 17 |
| 2. | Civil | Ms. Vallabhy | 12 |
| 3. | CSE | Ms. Revathy and Dr. S. Padmapriya | 43 |
| 4. | ECE | Mr. Padmanabhan and Ms. Vimala | 59 |
| 5. | EEE | Ms. Shobana and Mr. Anand | 74 |
| 6. | IT | Ms. Kamatchi | 30 |
| 7. | Mechanical | Mr. Balachander and Mr. Mohan Mitra | 81 |
| Total No. of Projects | | | 316 |

# DEPARTMENT OF BIOTECHNOLOGY

| Department | Major project supervisor | Domain | No. of Major projects | Total |
|---|---|---|---|---|
| BIOTECH | Dr.P.Dhasarathan | Microbiology/Immunology | 2 | 2 |
| BIOTECH | Mr.K.Cholapandian | Chemical Engineering/Environmental | 2 | 4 |
| BIOTECH | Dr.M.Thenmozhi | Microbiology/ Industrial biotechnology | 3 | 7 |
| BIOTECH | Dr.A.Praveena | Bioinformatics/Phytochemistry | 3 | 10 |
| BIOTECH | Dr.Sathya | Environmental Engineering/Food technology | 2 | 12 |
| BIOTECH | Ms.Divyalakshmi | Biopharmaceutical technology/phytochemistry | 1 | 13 |
| BIOTECH | Mrs.Ponjayanthi | Microbiology/ Biopharmaceutical technology | 1 | 14 |
| BIOTECH | Ms. Joyce Hellensathya | Bioprocess Engineering | 1 | 15 |
| BIOTECH | Dr.AJA.Ranjit singh | Nanotechnology/Immunology | 2 | 17 |

**TEAM ID: 4BT1**

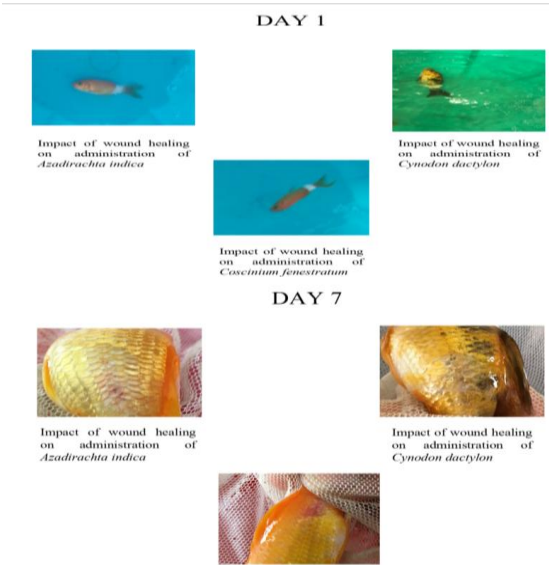
TITLE OF THE PROJECT: Wound healing mechanism in fish muscle tissue after administration of Coscinium fenestratum,

**FACULTY GUIDE:**

Dr.P.Dhasarathan


P. Vinoth

P. Manishkumar



The Wound healing process on fish muscle and its repair mechanism is a natural process. The wound healing is achieved through four phases: Hemostasis, Inflammation, Proliferation, and Remodelling. The fish model taken for the wound healing process is Cyprinus rubrofuscus (Koi carp). The plants choosen for the administration in the wounded region are Coscinium fenestratum, Azadirachta Indica, and Cynodon dactylon. The chosen plant samples were analysed for the presence of alkaloids, flavonoids, tannins, terpenoids, glycosides, steroids, and saponins to confirm the phytochemicals in the plant extracts. The plants samples were then analysed with gas chromatography mass spectroscopy and the results obtained from GC-MS shows highest retention time (i.e RT=18.22) in Azadirachta Indica, for Coscinium fenestratum RT=16.66, and for Cynodon dactylon RT=16.68. From GC-MS results and the rate of wound healing Azadirachta Indica shows the best result.The sample analysed for the process of wound healing naturally show a decreasing in the size of the wound from day1 (1.12cm) to day7 (0.90cm). The collagen dermal patches with chosen plant extract were administrated to overcome the slowdown process of wound healing. The plant extract (A.indica) on administration shows an (38.8%); the plant extract (C.fenestratum) on administration shows an (29.4%); and the plant extract (C.dactylon) on administration shows an (27.5%) increased the rate of wound healing.


**Achievements:**

Project Design Contests: Nil

National conference: 1

Publications: 1

**Social Media Reach:**

Youtube: -

Facebook:

**TEAM ID: 4BT2**

TITLE OF THE PROJECT:

Demystifying herd immunity using fish as experimental models

**FACULTY GUIDE:**

Dr. P. Dhasarathan


N.Rajalekshmi

W.Emy Florence




Herd Immunity refers to the indirect protection conferred to vaccine-naïve susceptible individuals by immune individuals during outbreak of communicable diseases as immune individuals act as hurdles in the spread of infection. This study was conducted to establish this concept using fish as the experimental models, to determine if the co-existence of immune koi carps (Cyprinus rubrofuscus) with naïve ones could confer protection against spread of pathogen Aphanomyces invadans, which caused Epizootic Ulcerative Syndrome (EUS) in fish. The experiments were so designed to have four replicate trials, where two sets of six-5 fish groups, acclimatized to laboratory settings, were subject to vaccination with crude pathogen extract and immuno-stimulation using ethanol extract of Solanum nigrum, proven to enhance immunity in EUS susceptible fish. The immune and naïve fishes were later challenged with the pathogen and the spread of disease, cumulative mortality, and antibody titer were measured. The cumulative mortality of naive fishes averaged across four trials was lower when they co-existed with immune fishes than when housed independently. The mortality in the aquaria with only vaccinated fish and only naïve fish were <4 % and ~85 % respectively.


**Achievements:**

Project Design Contests: Nil

Symposium/ conference: 2

Publications: 1

**Social Media Reach:**

Youtube : -

Facebook :

**TEAM ID: 4BT3**

TITLE OF THE PROJECT:

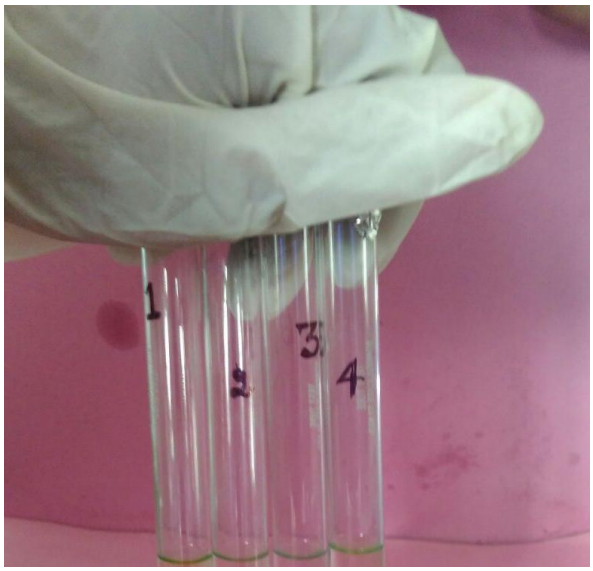
Enhancement in biodiesel production from waste cooking oil by ultrasonication

**FACULTY GUIDE:**

Mr. K. Cholapandian


G. Punitha

D. Charumathi


Biodiesel is the alternate fuel which can meet the demand of existing need of diesel in the society. Diesel is the fuel which is produced from the fossil fuel petroleum. As the demand of fossil fuel is increasing and it is the non renewable resource so it cannot be used again and again. Biodiesel will overcome all these disadvantages and meet the need of the society in the efficient manner. Biodiesel is produced when the vegetable oils and animal fats are treated with alcohol in the presence of catalyst under suitable conditions and this process is called trans esterification. The efficiency is based on the extent of reaction between the alcohol and the triglyceride present in the vegetable oil. Mixing to be done properly and to get more yield ultra sonication is used. Through ultrasonic waves the alcohol and the oil mixed together thus producing greater yield. Biodiesel is most commonly used as a blend with petroleum diesel. Ultrasonic excitation helps increase the liquid–liquid interfacial area through emulsification, which is important for the formation of vapor bubbles and cavitation bubbles in viscous

**Achievements:**

Project Design Contests: Nil

Symposium/ Conference: 1

Publications: On process

**Social Media Reach:**

Youtube :

Facebook:

**TEAM ID: 4BT4**

TITLE OF THE PROJECT:

Removal of sulphur from soild fuel using microbial froth floatation method

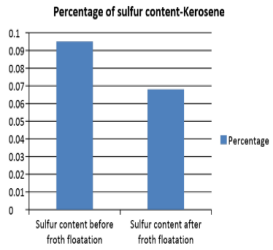
**FACULTY GUIDE:**

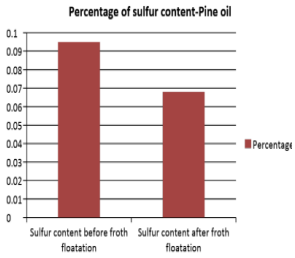
Mr. K. Cholapandian


R. Tharani

G.Jayashri


| S.No | Frother | Sulfur Content before Froth Flotation | Sulfur Content after Froth Flotation |
|---|---|---|---|
| 1 | Kerosene | 0.095% | 0.042% |
| 2 | Pine Oil | 0.095% | 0.068% |




The high grade coals are depleting gradually and low grade coals are used. As a result of burning the low grade coals, Sulfur dioxide is released. Our project is focused on removing the sulphur from the Coal before burning it. The sulfur is removed by Froth Floatation process which separates hydrophobic materials from hydrophilic, with the help of kerosene and pine oil as the frothing agent. This process also helps to clean other impurities from the Coal, thus making the coal a better quality product. So thereby removing the sulfur from coal helps to reduce the release of sulfur-di-oxide in the atmosphere. The presence of sulfur content in coal is being checked by Barium chloride estimation method, before and after undergoing the process of froth floatation. The sulfur amount in the anthracite coal collected from Ennore was initially 0.095% which was reduced to 0.042% (kerosene) and 0.068% (Pine Oil) using froth flotation process using kerosene and pine oil as frothers separately. And on comparing both the frothers, it is being confirmed that, by undergoing the process of froth floatation with kerosene as frother, the sulphur content is being reduced effectively when compared to that of pine oil.

**Achievements:**

Project Design Contests: Nil

Symposium/conference: 1

Publications: On process

**Social Media Reach:**

Youtube :

Facebook :

**TEAM ID: 4BT5**

TITLE OF THE PROJECT:

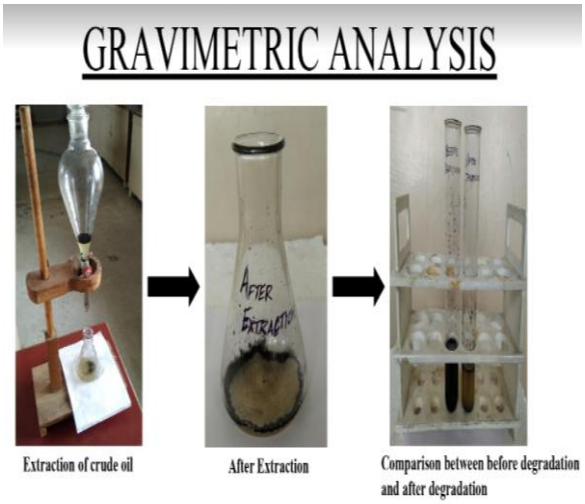
Isolation and Characterization of Marine bacteria for Crude oil degradation

**FACULTY GUIDE:**

Dr.M.Thenmozhi


J. Naveena

T. Murugeswari



The present study was undertaken to isolate and characterize crude oil degrading microbes from crude oil contaminated marine water samples collected from Ennore, Tamil Nadu, India and gravimetric analysis of degradation in which, two isolates formed maximum clearing zone on Mineral Salt Medium. Bacteria were the most dominant microbiota and were therefore characterized with several biochemical tests. Two bacterial isolates isolated were CDB1 and CDB2. Biochemical characterization showed that both bacterial species responded positive to several tests such as Catalase, Methyl red, Citrate utilization and Nitrate reduction and negative to Urease test. Isolates were tested for potentials to degrade crude oil in mineral salt medium and the result revealed that crude oil was degraded at varying rates. Maximum crude oil degradation of 71.9% was achieved using CDB2 with 1% crude oil after 7 days. Such a bacterial species may be useful for preventing natural decontamination process.


**Achievements:**

Project Design Contests: Nil

Symposium/ conference: 1

Publications: On process

**Social Media Reach:**

Youtube :-

Facebook :

**TEAM ID: 4BT6**

TITLE OF THE PROJECT:

Isolation and Characterization of Rhizosphere microbes for plastic degradation

**FACULTY GUIDE:**

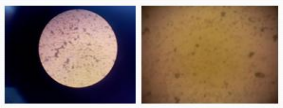
Dr. M. Thenmozhi


M. Kajendran

D. Sathish Kumar


WEIGHT REDUCTIONS OF POLYTHENES BY ISOLATED MICROORGANISMS:

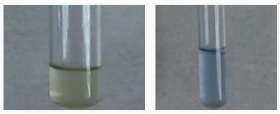
| S.No. | Weight measured in (milligram) | Initial weight | | Final weight | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Number of days | 0th day | | 10 days | | 20 days | | 30 days | |
| | Polythene types | 10 µ | 40 µ | 10 µ | 40 µ | 10 µ | 40 µ | 10 µ | 40 µ |
| 1 | PDB 1 | 20 | 30 | 20 | 30 | 19 | 28 | 18 | 27 |
| 2 | PDB 2 | 20 | 30 | 17 | 28 | 16 | 27 | 13 | 22 |
| 3 | Consortium ( PDB 3) | 20 | 30 | 20 | 30 | 17 | 30 | 14 | 28 |



Microscopic views of isolates (PDB1), (PDB2)

Results for Methyl Red test (PDB1), (PDB2)

Positive results for Nitrate reduction test



Results for starch hydrolysis test (PDB1), (PDB


This study aims to isolate the plastic degrading microbes from the Rhizosphere region. The isolates will be screened and characterized by their culture morphology, biochemical properties and their efficiency in plastic degradation will be determined. And the isolates will be studied for their potential in land filling plastic waste management. The microorganisms which shown maximum as well as minimum degradation of polythene in the Rhizosphere region were identified. Initially weighed, two types of polythenes (10 micron and 40 micron) were taken and kept for degradation at respective interval of days (10, 20 and 30). Later on by taking out the final weighed and the degradation percent, the isolate which shows the maximum degradation at 30 days of 10 and 40 micron polythene was identified.


**Achievements:**

Project Design Contests: Nil

Symposium/Conference: 1

Publications: On process

**Social Media Reach:**

Youtube :

Facebook :

**TEAM ID: 4BT7**

TITLE OF THE PROJECT:

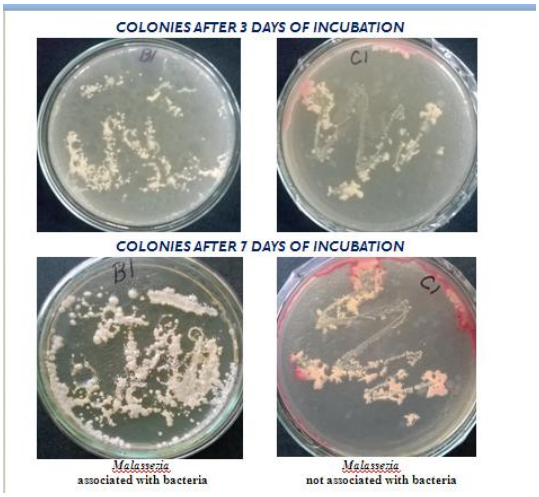
Identifying and analyzing natural extracts for isolated synergistic microbes for dandruff

**FACULTY GUIDE:**

Dr. M. Thenmozhi


R. Karthick kumar

R. Aravindh



Dandruff is a condition of the scalp that causes flakes of skin to appear and sheds. As of now, the market loaded with antidandruff shampoos and such skin care products. Medicinal plants have some natural antimicrobial property, antifungal property and therefore such combination could be a potential antidandruff activity. To check its antidandruff activity, experiments have been conducted mainly on Malassezia furfur and other Malassezia sp. the causal organism for seborrheic dermatitis or dandruff. The studies found that the presence of dandruff is more closely linked with excess growth of Staphylococcus bacteria. The pairwise and overall alignment as 5.634 showed the maximum evolutionary relation between the species Malassezia furfur, Staphylococcus aureus with Homo sapiens using MEGA 6.0. By identifying the antidandruff activity using assays showed that the combination of Phyllanthus emblica and Lawsonia inermis as the potential one and formulated in polyherbal hair oils and gels have excellent results due to their synergistic, anti-fungal, anti-inflammatory and


**Achievements:**

Project Design Contests: Nil

Symposium/Conference: 1

Publications: On process

**Social Media Reach:**

Youtube :

Facebook :

**TEAM ID: 4BT8**

TITLE OF THE PROJECT:

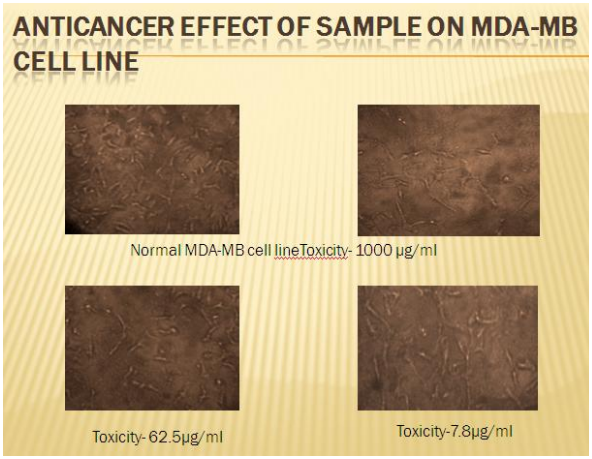
*In-vitro and in-silico analysis to identify novel lead compound from Morinda tinctoria against*

**FACULTY GUIDE:**

Dr. A. Praveena


S.Arthi

B. Sudarmathi



Breast cancer is the most common invasive cancer in women, and the second main cause of cancer death in women, after lung cancer. Therefore the present study was carried out with an intension to reveal the potentials of Morinda tinctoria fruit abundant in Tamil Nadu.This work aimed to identify active compound from Morinda tinctoria fruit extract and to determine its anticancerous activity by using Invitro and Insilico studies. The ethanolic fruit extract was subjected to qualitative phytochemical and GC-MS analysis to identify its phytochemical constituents. Free radical scavenging activity of Morinda tinctoria fruit extract was evaluated using ABTS (2, 2'-azinibis (3ethylbenzothiazoline 6 sulfonic acid) method. In-vitro studies on anticancerous activity of Morinda tinctoria fruit extract in breast cancer wild cell line (MDA-MB) was done by MTT (3-[4, 5-dimethylthiazol-2-yl]-2, 5-diphenyl tetrazolium bromide) assay. Anti-cancer activity of Morinda tinctoria fruits have been shown the inhibition activity i.e. IC 50 value is 125 µg /ml with MDA-MB cell lines. Drug likeness were analyzed based on Lipinski's rule of five. Out of nine compounds from GC-MS analysis, six compounds followed the Lipinski's rule of five. Breast cancer protein ErBb2 was chosen as target. The efficient lead molecule against target was selected based on the lowest binding energy value. Corynan-17-ol shows lowest binding energy of -5.9 Kcal/mol. This showed that the fruit of Morinda tinctoria could be exploited to harvest promising lead molecules against DCIS


**Achievements:**

Project Design Contests: Nil

Symposium/ Conference: 1

Publications: On process

**Social Media Reach:**

Youtube :

Facebook :

**TEAM ID: 4BT9**

TITLE OF THE PROJECT:

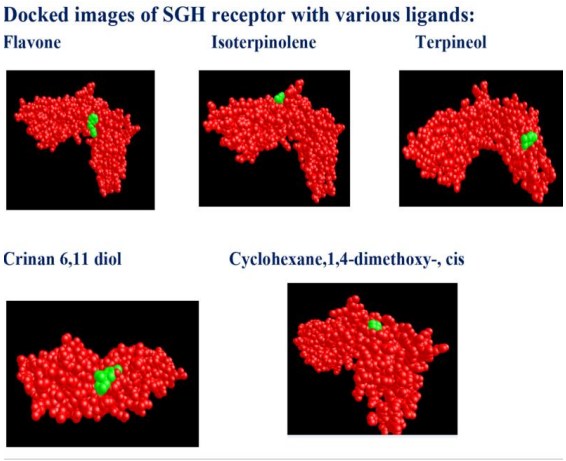
Relative efficacy of Megathyrsus maximusand cynodon in milk production

**FACULTY GUIDE:**

Dr. A. Praveena


K.Keerthana

T.Niranjana



Dairy products, notably milk and butter, are traditionally important foods in our diet. Demand for these products, particularly milk, continues to rise, driven by changing consumption patterns and, secondly, population growth. India contributes 9.5% of the global cow's milk production. In South India, some farmers feed their cows with guinea grass*(Megathyrsus maximus)*and bermuda grass *(Cynodon dactylon)* to get more amount of milk. So the major aim of this study is to comparatively analyze both the grasses to find out the leading novel components that involves to improve the milk production. The crude extract of grasses are extracted by using aqueous ethanol-aqueous chloroform as solvent in soxhlet extractor. The extracted compounds of the guinea grass and bermuda grass are analyzed by GC-MS. Drug likeness property of the nine compounds obtained from GC-MS was analyzed based on Lipinski's rule of five. Among the nine compounds, three compounds followed the Lipinski's rule of five. The molecular docking technique is used to find out the binding affinity of the shortlisted three lead compounds to the selected receptor such as Oxytocin receptor of Humans and SGH receptor of Bovine. The docking results reveal that the flavone has the least binding energy as -6.6 kcal/mol with SGH receptor and -5.0 kcal/mol with Oxytocin receptor. Since the flavone is present in both the grasses with remarkable binding affinity it could to be served as potential lead compound that helps to stimulate the Somatotropin and Oxytocin


**Achievements:**

Project Design Contests: Nil

Symposium/Conference: 1

Publications: On process

**Social Media Reach:**

Youtube :

Facebook :

**TEAM ID: 4BT11**

TITLE OF THE PROJECT:

Production and characterisation of biodiesel from Jatropha curcas

**FACULTY GUIDE:**

Dr.S.Sathya


G.Subashini

S. Vimala merlin


Seeds after the extraction process


Collected Oil after the solvent Extraction


Biodiesel is known as the green-fuel which is non-toxic and eco-friendly. The biodiesel is produced from Jatropha seeds by the process of transesterification. These seeds act as the main sources in the production of biodiesel. As in current scenario, the cost of all commercial fuels are of higher cost and the rates are increasing dramatically day by day and even their usage leads to pollution , that in turn increases the global warming .So, biodiesel usage would be the only remedial way that leads to the environmental friendly fuel and a cost-effective fuel. The existing method for the extraction of oil from seeds involves the solvent extraction method using different solvents. Using different combinations of solvent in order to determine the efficiency yield of oil from seeds. The yield percentage of the biodiesel are increased from the extraction method of oil. The best solvent and remedial measure of solvent was determined by the analysis. The estimation of biodiesel sample was carried out with thin layer chromatography and Gas chromatography in order to determine presence of fatty acids in biodiesel. This method is an alternative for the extraction of oil from seed using solvent extraction.


**Achievements:**

Project Design Contests: Nil

Symposium: 1

Publications: On process

**Social Media Reach:**

Youtube : -

Facebook :

**TEAM ID: 4BT12**

TITLE OF THE PROJECT:

Cultivation, Nutrient analysis and effect of shade drying in Oyster mushroom

**FACULTY GUIDE:**

Dr. S. Sathya

S.S. Balaji

**METHODS:**

**(iv) GC-MS ANALYSIS:**

Soxhlet Extraction

Mushroom extract

Dried mushroom after

Mushrooms are a good source of protein, vitamins, and minerals and they also posses anti-cancer, anti-cholesterol and anti-tumour properties. Mushroom cultivation is a profitable agribusiness with minimal capital cost. The research experiment was carried out in order to cultivate oyster mushroom (Pleurotus ostreatus) using paddy straw and analyze the nutrient composition by proximate analysis in both fresh and shade-dried mushrooms. The research further focused on polar and non polar compounds present in oyster mushroom by performing GC-MS analysis. Upon analysing the nutrient content in both fresh and shade-dried mushroom, it was found that shade-dried mushrooms have higher energy (324.67 Kcal/100g), protein (30g/100g) and carbohydrate value (49.75 g/100g) which is higher than the nutritional values obtained from convective drying techniques such as sun drying, oven drying and low heat air blow drying. Fresh P. ostreatus mushroom has energy (37.79), protein (5.27) and carbohydrate (3.03 g/100g). The moisture content in fresh mushroom was 89.69 % and 12.27 % in shade-dried mushroom. The difference in values of crude fibre, total ash and total fats were significantly negligible. In GC-MS analysis, the following major volatile non-polar compounds were obtained:10-Ethyl-10H-acridin-9-one (40.881), followed by Furfurylmethylamphetamine (40.563),11H-Naphtho[1,2-b]thieno[3,4-d]pyran-11-one, 1-amino-3-methyl (40.461), and Isophthalic acid,2-formylphenyl propyl ester (40.359). This study concludes that energy, protein and carbohydrate values are comparatively higher in shade dried mushroom

**Achievements:**

Project Design Contests: Nil

Symposium: 1

Publications: On process

**Social Media Reach:**

Youtube :

Facebook: 2780 reach

**TEAM ID: 4BT10**

TITLE OF THE PROJECT:

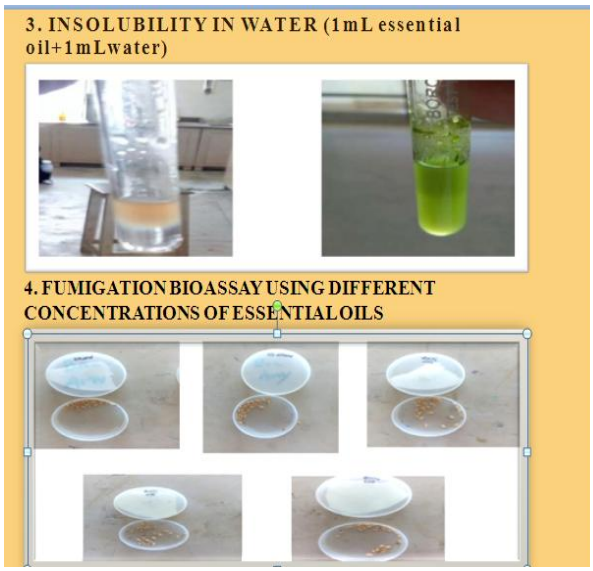
A comparative study on the effect of Citrus medica leaf extract and Ixora coccinea flower

**FACULTY GUIDE:**

Dr.A.Praveena

C.Sindhudevi

G. Dharanyaa




Botanical insecticides are naturally occurring chemicals extracted from plants. This study aims to analyse the insecticidal activity of compounds present in essential oils of *Citrus medica* leaves and *Ixora coccinea* flowers. Essential oils were extracted by solvent extraction method and the components present were analyzed using GC-MS. The insecticidal activity of essential oils was studied by fumigation bioassay against *Tribolium castaneum*. The percentage of insect mortality, feed deterrence index and the consumption rate were assessed to analyse the insecticidal activity of essential oils. The highest percentage of insect mortality was 82%,64.33% and feed deterrence index was 97.66%, 98% in 80% concentration of essential oils of *Citrus medica* leaves and *Ixora coccinea* flowers respectively. The insecticidal likeliness property of the compounds present in the essential oils was evaluated based on Tice rule and the binding efficiency was studied using molecular docking against Acetylcholinesterase of *Tribolium castaneum*. From the molecular docking studies the compound Curan,16,17,19,20-tetradehydro- from essential oil of *Citrus medica* leaves and the compound 3H-Pyrazol-3-one,4-[[4-(dimethylamino)phenyl]imino]-2,4-dihydro-2,5-diphenyl- from the essential oil of *Ixora coccinea* flowers have best interaction with Acetylcholinesterase with least energy values of -89.65 and -98.83 respectively. The promising results of the present study could be utilized for the development of novel insecticide against stored

**Achievements:**

Project Design Contests: Nil

National conference:1

Publications: On process

**Social Media Reach:**

Youtube: -

Facebook:

**TEAM ID: 4BT13**

TITLE OF THE PROJECT:

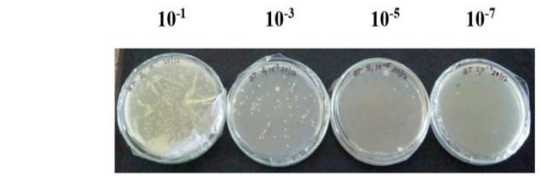
Probiotic bacteria isolation from infants of south indian population

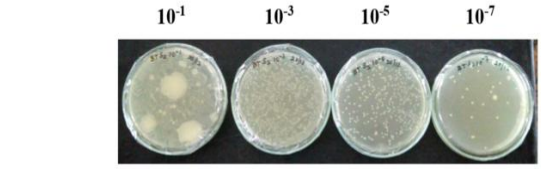
**FACULTY GUIDE:**

Mrs.B.Ponjayanthi


R. Bhagya Shree

Trupti Borole



The aim of this study was to isolate the probiotic strains from the fecal samples of infants and to evaluate the probiotic potential of the same. In this study, cultures of presumptive Lactobacillus were isolated from five infants b  orn in South India (Pudhucherry). Collected infant fecal samples were serially diluted on MRS agar plates and screened for gram positive Lactobacillus sp. In order to confirm the selected probiotic strains, the Lactobacillus sp. were examined for acid tolerance and bile tolerance as it should colonize in the GI tract and the colon. It was observed, the isolated bacterial strains labelled as C 1, C 3, C 5, C 9 and C 10 are found to be acid tolerance (90.06%) and bile salt tolerance (73.8%) whereas the strains C 4, C 6, C 7 are least resistant for the same. After screening for


**Achievements:**

Project Design Contests: Nil

Symposium/ Conference: 1

Publications: On process

**Social Media Reach:**

Youtube :

Facebook :

**TEAM ID: 4BT15**

TITLE OF THE PROJECT:

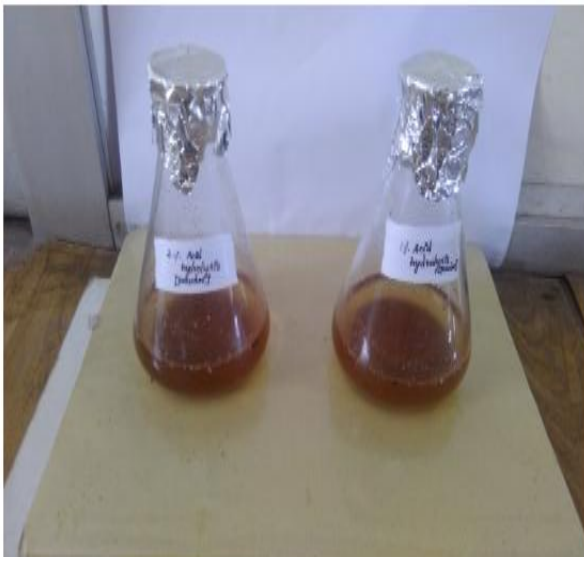
Utilisation of Delonix regia Pod as biomass for the production of bioethanol

**FACULTY GUIDE:**

Ms.Joyce Helen sathya


S.Reena

S.Gayethri


The usage of non renewable energy is one of the major reasons for most of the environmental problems which is due to the increased population and industrialization. This led the world to use the renewable resources. One of the most commonly used renewable fuel is bioethanol which is derived from starch and sucrose. Though it is a renewable resource it is expected that it will limit the supply of this raw material. Hence in this study *Delonix regia* pod is used as a raw material for the production of bioethanol. *Delonix regia* pod has several characteristic features it includes high cellulose and high hemicelluloses content which can be readily hydrolysed into fermentable sugar. This will satisfy the demand of petrol, diesel and other fuel. In our present study we aimed to produce bioethanol from *Delonix regia* pods. The pretreated pods yielded fermentable sugars of 1.9 mg/ml for 2% acid. It was analyzed by HPLC. The optimization was studied pH-4.5, Temperature- 30$^{o}$ C, Medium- Yeast extract. To produce bioethanol the sugars were allowed to ferment with *Sacchromyces cerevisiae* and its growth


**Achievements:**

Project Design Contests: Nil

Symposium: 1

Publications: On process

**Social Media Reach:**

Youtube :-

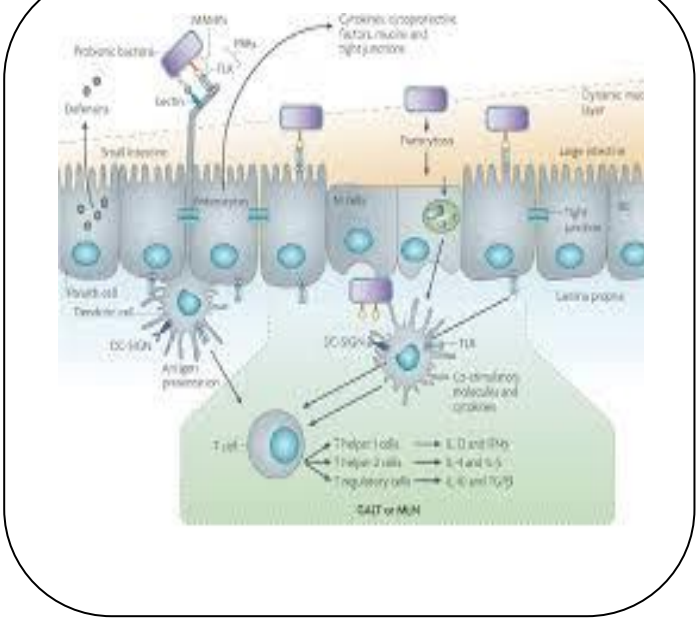
Facebook : 2780 reach

**TEAM ID: 4BT16**
TITLE OF THE PROJECT:
Immunomodulatory activities of probiotics isolated from milk

**FACULTY GUIDE:**
Dr.AJA. Ranjit singh


R.Priyanka

H.Harini


Milk contains high nutritive food value for the new borne mammal and human beings. A large number of probiotic bacteria is present in milk or milk products which are mainly Lactic Acid Bacteria (LAB). The major aim of this study is to determine the anti-inflammatory activity of probiotics isolated from lactic acid bacteria. The samples of freshly drawn cow milk and pasteurized milk were evaluated for total viable count of Lactic Acid Bacteria (LAB) using selective media under aerobic and anaerobic conditions. Distinct colonies of LAB were isolated and categorized on the basis of their colony morphology and microscopic features. The Isolated Lactobacillus sp. is characterized by various Biochemical test. Recent studies proved that probiotics has high intensity of anti-inflammatory activity. The HT29 colon cancer cell lines were grown. The probiotics was treated towards HT29 Colon cancer cell lines to determine its anti- inflammatory activity. Both pellet and supernatant of Centrifuged Lactobacillus sp. (Probiotics)


**Achievements:**

Project Design Contests:2

Symposium: Nil

Publications: On process

**Social Media Reach:**

Youtube :-

Facebook :

**TEAM ID: 4BT14**

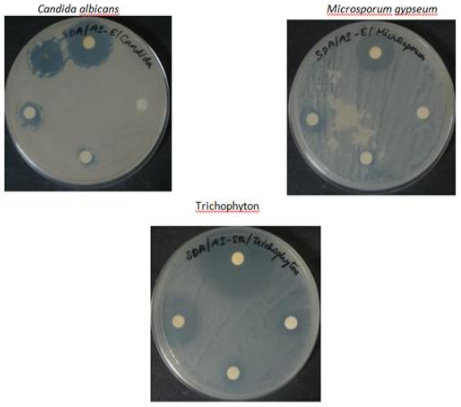
TITLE OF THE PROJECT: Antibacterial and antifungal activity of Acalypha indica and Wrightia tinctoria leaves extract: A

**FACULTY GUIDE: Mrs.S.Divya Lakshmi**


H. Nishanthini

A.D. Anitha


**Ethanol extract of *Acalypha indica* against Fungal strains**





In this study, the leaves of *Wrightia tinctoria* and *Acalypha indica* were extracted with chloroform and ethanol solvents. The extracts were tested against, the bacterial strains such as *Staphylococcus aureus, Escherichia coli* and *Pseudomonas aeruginosa* and fungal strains such as *Candida albicans, Microsporum gypseum* and *Trichophyton* which are being the causative agents of various skin infections in humans, by agar disc diffusion method to compare the antibacterial and antifungal activity of extracts of two leaf samples. This study showed that the ethanol extract of *A.indica* exhibited a maximum zone of inhibition of 27mm at 1000µg/ml against the *Tricophyton* than the *W.tinctoria* leaf extracts and the chloroform extract of *W.tinctoria* displayed a maximum zone of inhibition of 14mm, 10mm, 18mm, 14mm and 15mm at 1000µg/ml against *Staphylococcus aureus, Escherichia coli, Pseudomonas aeruginosa, Candida albicans* and *Microsporum gypseum* than the *Acalypha indica* leaf extracts.


**Achievements:**

Project Design Contests: 0

Symposium/Conference: 1

Publications: On process

**Social Media Reach:**

Youtube : -

Facebook :

**TEAM ID: 4BT17**

TITLE OF THE PROJECT:

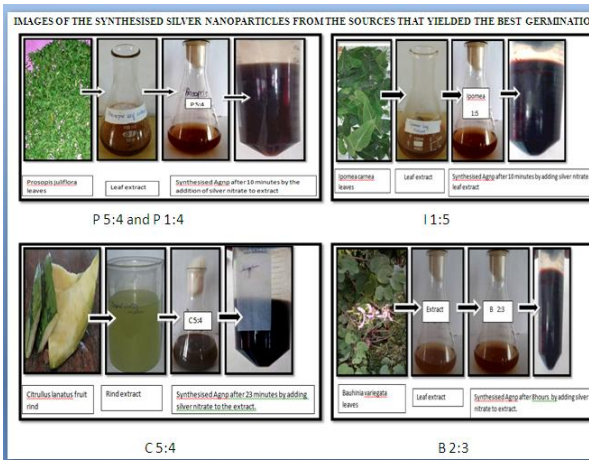
Synthesis and characterization of silver nanoparticles using plant souces and a study

**FACULTY GUIDE:**

Dr.AJA.Ranjit singh


J. Vidhya lakshmi

K. Radhika



Nanotechnology is an emerging field of science to find solutions for many problems.In nanobioscience,metal nanoparticles particularly silver nanoparticles play major role in biomedical area. The silver nanoparticles has potential application in inducing the seed germination efficiency of plants.The AgNPs accelerate the germination time and also influence the germination of plant.In the present study AgNPs were synthesized using the extracts of three plant products as reducing agents.Aqueous extracts of leaves of Prosopis juliflora,Bauhinia variegata,Ipomea carnea and rind of fruit Citrullus lanatus.SEM studies showed that the synthesized AgNPs were in the range of 0.2µm.The shape of nanoparticles of Bauhinia variegata were hexagonal pyramidal and that of others were spherical.Nano-encapsulated fertilizers helps in slow and sustained release of nutrients and agrochemicals resulting in precise dosage to plants.With the advancement in nanotechnology, nanoparticles have been reported to have varying impact in plant growth and inducibility of phytochemical composition.These green synthesized silver nanoparticles were used in its role of promoting the growth in Brassica juncea(mustard) plant by uptake of AgNPs encapsulated organic manure had been investigated and studied.Green synthesis of nanoparticles is one of the crucial requirements in today's climate changing scenario which is highly safe and


**Achievements:**

Project Design Contests: Nil

Symposium/Conference: 1

Publications: On process

**Social Media Reach:**

Youtube :

Facebook :

# DEPARTMENT OF CIVIL ENGINEERING

| Department | Miniproject Coordinator | Domain |
|---|---|---|
| CIVIL | Dr.S.Seetharaman | Structural Engg |
| | Mrs.S.Vallabhy | Structural Engg |
| | Mrs.M.Monitha | Environmental Engg |
| | Mr.G.Kumaresan | Structural Engg |
| | Mr.K.Muthukumar | Structural Engg |
| | Ms.K.Brundha | Environmental Engg |
| | Ms.P.Sarala | Structural Engg |
| | Ms.K.Saranya | Structural Engg |
| | Mr.S.Karuppasamy | Structural Engg |
| | Ms.A.Faizuneesa | |

**MAIN PROJECT EXHIBITION DATED 28 TH FEBRAURY 2018**

TEAM ID-

TITLE OF THE PROJECT: **COMPARATIVE STUDY ON NANO SILICA CONCRETE AND NANO ALUMINA CONCRETE**


FACULTY GUIDE: Mr.K.MUTHUKUMAR

R.NIRMALA

B.PRIYA DHARSHINI

RAJENDRAN KAVYA



**Abstract:**

Generally a concrete made with portland cement particles that are less than 500 nm as a cementing agent is known as nano-concrete. The nano particles will help to reduce the formation of micro pores by acting as a filler agent , producing a high dense concrete In present project deals about comparative study of nano concrete incorporating by nano particles. In this project nano-alumina and nano-silica is going to be used. The purpose of using these nano particles is to increase the strength and durability of concrete. Resists strong acid and alkali attack at elevated temperatures.The percentage of nano-silica is 1%,1.5%,2% and for nano-alumina is 1%,1.5%,2%.Laboratory tests will be conducted to determine the compressive strength, split tensile , flexural strength and durability of nano concrete by using nano silica and nano alumina.



**Key words:** nano-alumina , nano-silica, strength, durabilty


**Achievements:**

Project Design Contests:

Symposium:

Publications: PUBLISHED

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MAIN PROJECT EXHIBITION DATED 28 TH FEBRAURY 2018**

TEAM ID-EQ01
TITLE OF THE PROJECT: COMPARATIVE STUDY OF REACTIVE AND MODIFIED REACTIVE POWDER CONCRETE

FACULTY GUIDE: Ms.T.SARANYA

V. NANDHINI

.K.SUMITHRA

G.DIVYA

**Abstract:**

Reactive powder concrete (RPC) is the generic name for a class of cementitious composite materials developed by the technician division of Richard and Cheyrezy, in the early 1990s. Reactive Powder Concrete (RPC) is an ultra-high strength and high ductility composite material. RPC extensively uses the pozzolanic properties of highly refined silica fume and optimization of the Portland cement chemistry to produce the highest strength hydrates. RPC with an introduction of graded aggregate (8-10mm) and also do the without of coarse aggregate, and also changing the fine aggregates with quartz sand is to be done by the Ordinary Reactive Powder Concrete. The compressive and flexure strength of RPC and MRPC is determined.

**Keywords**: Ordinary Reactive Powder Concrete (ORPC), Ultra High-Performance Concrete (UHPC), High-Range Water Reducer (HRWR).

**Achievements:**

Project Design Contests:

Symposium:

Publications: PUBLISHED

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MAIN PROJECT EXHIBITION DATED 28 TH FEBRAUARY 2018**

TEAM ID-T01
TITLE OF THE PROJECT: EXPERIMENTAL STUDY ON REHABILITATION AND UPGRADATION OF NH-4 (NALAGAMPALLI TO AP/KARNATAKA BORDER)

1.EXPERIMENTAL STUDY ON REHABILITATION AND UPGRADATION OF NH-4(NALAGAMPALLI TO AP/KARNATAKA BORDER)

FACULTY GUIDE: Mr.S.KARUPPASAMY

NUTHAKI INDUDHAR

RAVURU VENKATESH

RAYAPANENI RAJASEKHAR

**Abstract:**

The National Highway development programme (NHDP) is carried out by National Highway Authority of India. In India as well as in the whole world transport system plays a very important role in the development of the country as an economic way. In other ways also such as development of agriculture and industries. It also helps us to reduce poverty by creating employment. Our project deals with the detailed study on Rehabilitation and Upgradation of NH-4 from Nalagampalli to AP/Karnataka Border (from existing Km 171.590/ Design Km172.00 to existing Km216.912/ design Km219.687)(Design length =47.68Km) to four lane under NHDP=4 in the state of Andhra Pradesh on EPC mode. The study includes that material production, tests on materials and mix designs, which involves in up-gradation of highway. The project is carried out by the company DILIP BUILDCON LIMITED.

**Achievements:**

Project Design Contests:

Symposium:

Publications: PUBLISHED

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MAIN PROJECT EXHIBITION DATED 28 TH FEBRAUARY 2018**

TEAM ID-
TITLE OF THE PROJECT:EXPERIMENTAL STUDY OF FLEXIBLE PAVEMENT USING SYNTHETIC ORGANIC MATERIAL (PLASTIC)

FACULTY GUIDE: Ms. K.BRUNDHA

| P.NITHESH | G.PRABHU | R.PRAKASH | R.SRIDHAR |
|---|---|---|---|

1.EXPERIMENTAL STUDY OF FLEXIBLE PAVEMENT USING SYNTHETIC ORGANIC MATERIAL (PLASTIC)

2. IDENTIFY THE MATERIALS AND PROPORTIONS.


**Abstract:**

The contemporary asphalt roads were first developed in the early 20th century. These bituminous roads are still successful all over the world. Though the roads are successful they also have some flaws. In India the roads are famous for their bumps and pot holes. On the other hand, the day-today increase in plastic waste in the environment leads to a serious crisis to the environment. The test conducted is softening point, Ductility, Penetration, Viscosity, Flash & fire point. The strength test such as Marshall stability test was also conducted. Based on the results obtained from the tests it was found that the strength of the bituminous road added with plastic has a higher strength than the normal bituminous road. Finally, on overall comparison of the test results obtained from various test the bitumen when added with 10% plastic is more considerable, optimum and exhibits higher strength. Hence so we conclude that bitumen when added with plastic is more stable and efficient when compared to normal bituminous roads.


**KEY WORDS:** Bitumen, plastic, thermoplastic, testing of bitumen.


**Achievements:**

Project Design Contests:

Symposium:

Publications: PUBLISHED

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MAIN PROJECT EXHIBITION DATED 28 TH FEBRAUARY 2018**

TEAM ID-E02
TITLE OF THE PROJECT:EXPERIMENTAL INVESTIGATION ON CRACK ASSESSMENT USING MATLAB AND REHABILITATION APPROACHES

1. EXPERIMENTAL INVESTIGATION ON CRACK ASSESSMENT USING MATLAB AND REHABILITATION APPROACHES

FACULTY GUIDE: Dr.S.SEETHARAMAN

T.N.S.CHANDANA

UTHRA PRIYADHARSHINI K

R. SAI PRIYA

**Abstract:**

Cracks in buildings are understood as complete or incomplete separation in elements (such as walls, beams, columns, etc,.) Cracks are generally classified as structural and non-structural cracks. Cracks are one kind of universal problem in buildings, as they affect the building aesthetics, destroy the walls' integrity and affect the structures' safety and durability.

The present study involves assessment of cracks in buildings manually and using image processing tools such as MATLAB (MATRIX LABORATRY). The study will also involve repair techniques and their assessment.

Initially, some of the major cracks will be chosen and their severity would be analysed using manual measurements. Based on the analysed severity of cracks, some of the critically large as well as easily accessible cracks will be chosen for further study.

Then, the cracks will be rained using image processing technique. The assessments using two methods would be compared.

**Achievements:**

Project Design Contests:

Symposium: PRESENTED IN RMK ENGINEERING COLLEGE

Publications:

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MAIN PROJECT EXHIBITION DATED 28 TH FEBRAUARY 2018**

TEAM ID-
TITLE OF THE PROJECT : COMPARISON OF WATER QUALITY ANALYSIS GROUND WATER AND AIR CONDITIONED WATER

FACULTY GUIDE: A.FAIZUNEESA


R.AADITHYAN | V.JAIKUMAR | S.MADHAN KUMAR | V.ALEX PANDIYAN



**Abstract:**

Human life, as with all animal and plant life on the planet, is dependent upon water. Not only do we need water to grow our food, generate our power and run our industries, but we need it as a basic part of our daily lives - our bodies need to ingest water every day to continue functioning .so water is making the important role in human life. By this project we want to convey that extracted water from air conditioner is not waste water, we can use that also for the other domestic purposes. In this project we are comparing the ground water and extracted air conditioner water. The following water qualities like pH, dissolved oxygen, total dissolved solids, hardness, acidity, alkalinity etc. are compared and represented. Through which we should beware of such activities i.e air conditioner water can be used for domestic purpose also


**Achievements:**

Project Design Contests:

Symposium:

Publications: PUBLISHED

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MAIN PROJECT EXHIBITION DATED 28 TH FEBRAUARY 2018**

TEAM ID-

TITLE OF THE PROJECT:**EXPERIMENTAL STUDY ON HIGH PERFORMANCE CONCRETE**

FACULTY GUIDE:S.KARUPPASAMY

V.S.POORNIMA

B.SHARMILA

R.VINITHA

**Abstract:**

- High performance concrete should have at least one property like high strength, high durability, acid resistance, self compaction ,low permeability to water. so, there is a need to design high performance concrete which is far superior to conventional concrete. High performance concrete has received increased attention in the development of infrastructure such as buildings, industrial structures, hydraulic structures, bridges, highways, etc. This study is based on influence of two mineral admixtures and chemical admixtures like silica fume and fly ash, on the properties of super plasticised high performance concrete. The mineral admixture generally improve strength and durability characteristics. Silica fume is slightly more effective than the fly ash in improving durability properties. In high performance concrete that have a water /binder ratio between 0.30 and 0.40 are usually more durable than the ordinary concrete. This project deals with the study of compressive strength of M40 concrete.

**Achievements:**

Project Design Contests:

Symposium:

Publications: PUBLISHED

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MAIN PROJECT EXHIBITION DATED 28 TH FEBRAUARY 2018**

TEAM ID-S04
TITLE OF THE PROJECT:**EARTHQUAKE RESPONSE OF AN EIGHT STOREYED RC BUILDINGIN ZONE III**

FACULTY GUIDE: Dr.S. SEETHARAMAN

G.VAISHALLI

U. PARIMALA PRIYA

**Abstract:**

During the occurrence of an earthquake,a building is subjected to inertia forces(seismic forces)that act horizontally, and in a direction opposite to the acceleration component to the earthquake excitation. Seismic loads vary in time and space. Generally ,a building is designed for the maximum storey shear force ,which is considered to be critical. Response spectrum analysis and push over analysis are often carried out to assess the response and strength of building subjected to seismic loads. Among the available software,ETABS and ANSYS are often employed by the designers for the above.

In this project work,an eight-storeyed reinforced concrete building frame,situated in earthquake zone III,has been assessed for Response and strength using both ETABS and ANSYS software.A comparison of results reveals that the results obtained using ETABS software are always higher than the response predicted by ANSYS software.

**Achievements:**

Project Design Contests:

Symposium: YES

Publications:

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MINIPROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

TEAM ID-E03
TITLE OF THE PROJECT: SOLAR WATER PURIFICATION SYSTEM

FACULTY GUIDE:Mrs.M.MONITHA

M.GAYATHRI

K.KAVISREE

M.MENAGA

**Abstract:**

The lack of clean drinking water is a problem that plunges many areas of the world today. Approximately 884 million people suffer each day from insufficient quantities of clean drinking of water. Most of the current technologies available to combat this problem are expensive and consume too much power. The system that do not consume an excess of power generally require expensive and time consuming filter maintenance.With an idea of low cost , we plan to develop a water purification system that will take advantage of natural energy. In order to save energy and decrease costs, water will enter system manually, eliminating the need for a pump. We plan to use photovoltaic technology. With the help of two container and a PVC pipe, we done this project. A container is filled with polluted water and connected with one end of a pipe. The other end of the pipe is connected to the empty container. The empty container is maintained in a low temperature. The polluted water gets heated and passes through pipe as vapour and gets cool and the purified water gets collected in the empty container.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MINIPROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

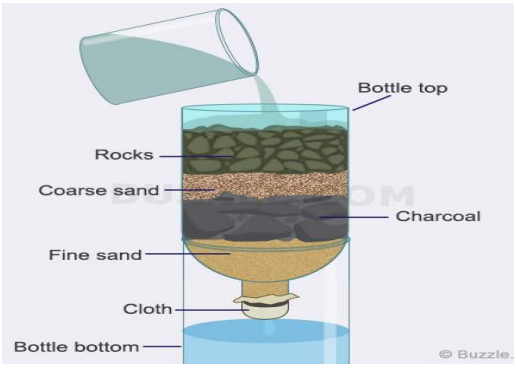
TEAM ID-E05
TITLE OF THE PROJECT: WATER PURIFICATION SYSTEM

FACULTY GUIDE: Mrs.M.MONITHA


S.PRADEEPKUMAR

K.SHRIRAM

C.SRINIVASAN



**Abstract:**

Water purification is the process of removing undesirable chemicals, biological contaminants, suspended solids and gases from water. The goal is to produce water fit for a specific purpose. Most water is disinfected for human consumption (drinking water), but water purification may also be designed for a variety of other purposes, including fulfilling the requirements of medical, pharmacological, chemical and industrial applications. The methods used include physical processes such as filtration, sedimentation, and distillation; biological processes such as slow sand filters or biologically active carbon; chemical processes such as flocculation and chlorination and the use of electromagnetic radiation such as ultraviolet light.So in this project we are going to analyse the methods of purifying water and produce an effective purifying system that fulfills the objectives given below.The main objectives of the project are to produce filters that:Can effectively remove bacteria and other contaminants from drinking water, Are easy for people to use, Are easy for local potters to produce, Are of little or no cost to users,


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MINIPROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

TEAM ID- E07
TITLE OF THE PROJECT: REPAIR, REROUTE AND REHABILITATION OF BUCKINGHAM CANAL

FACULTY GUIDE: Mr.P.RAJKUMAR


B.PRAVEENKUMAR

A.RAHUL RAJ

S.SHANKAR



**Abstract:**

The Buckingham canal in Chennai had the capacity to carry up to 5,600 cubic feet per second (cusecs) of water when it was intact. Had the integrated water system linking the canal and other rivers/waterways across Chennai been kept alive, it would have spared Chennai the crisis the historic city is facing today. Many irrigation and drainage systems built over the last 100 years have suffered from a chronic lack of maintenance, resulting in canal networks that cannot deliver sufficient water. By this stage, deferred maintenance is not effective – comprehensive rehabilitation and modernisation is needed. This entails a hydraulic design review (possibly increasing capacity), improving water level control, water distribution and flow measurement by building new canal structures or modifying existing ones, lining canals as required and installing canal performance monitoring equipment. The objective of the study would be to ensure effective abatement of pollution and protection of Buckingham Canal, providing proposal for effective management of solid waste and sewerage management, to check the structural safety and hydraulic adequacy of all the drains in the project.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MINIPROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

TEAM ID- E06

TITLE OF THE PROJECT: AN EXPERIMENTAL STUDY ON CHARACTERIZATION OF CONTAMINATED GROUND WATER BY LECHATE AROUND MUNICIPAL LANDFILL-THIRUVERKADU, CHENNAI

FACULTY GUIDE: Mr.P.RAJKUMAR


M.AJITHKUMAR

R.DHANUSH

P.K.KARTHICK YADAVA

K.MANOJ LAL



**Abstract:**

Landfill leachate treatment is a major engineering challenge due to the high and variable concentrations of dissolved solids, dissolved and colloidal organics, heavy metals and xenobiotic organics. On-site leachate treatment systems are an attractive alternative to reduce the cost and environmental risk of hauling leachate to off-site treatment facilities. Proper characterization of leachate, backed by treatability studies (bench tests or pilot studies) is helpful to select a reliable leachate treatment facility that can effectively accommodate variable influent characteristics. Applicable technologies for on-site leachate treatment include a variety of physical/chemical processes as well as biological processes.This study will describe the suitability of biological processes for treatment of young and intermediate leachate


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MINIPROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

TEAM ID-G03
TITLE OF THE PROJECT: IMPROVEMENT OF BEARING CAPACITY OF SOIL BY GROUTING

FACULTY GUIDE: Ms.T.SARANYA

| | | | |
|---|---|---|---|
| R.BALAJI | M.JAYAKEERTHI | MANUVARIER | |

1. TO DETERMINE THE NATURE OF THE SANDY SOIL PARTICLES.
2. TO DETERMINE THE DEGREE OF THE SANDY SOIL COMPATIBILITY.
3. TO CARRY OUT THE IMPROVEMENT OF SANDY SOIL THROUGH GROUTING.
4. TO CARRY OUT SOME LABORATORY TEST ON SANDY SOIL SUCH AS COMPACTION TEST CALIFORNIA BEARING RATION (CBR) TEST, ATTERBERG LIMIT TEST, LIQUID LIMIT TEST, PLASTIC LIMIT TEST, SIEVE ANALYSIS TEST IN COMPARING THE EFFECTIVENESS OF GROUTING SYSTEM.

**Abstract:**

The constructional activities in some particular areas often demand deep foundations because of the poor engineering properties and the related problems arising from weak soil at shallow depths. The very low bearing capacity of the foundation bed causes shear failure and excessive settlements. Further, the high water table and limited depth of the top sandy layer in these areas restrict the depth of foundation thereby further reducing the safe bearing capacity. This paper discusses grouting as one of the possible solutions to the foundation problems by improving the properties of soil at shallow depths by using sodium silicate.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MINIPROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

TEAM ID-S03
TITLE OF THE PROJECT: EARTHQUAKE RESISTANCE DESIGN OF RCC BUILDING

FACULTY GUIDE: A.FAIZUNEESA


V.NANDHINI

PARIMALAPRIYA.U

POORNIMA. V.S

VAISHALLI.G



**Abstract:**

The development of new codes for earthquake-resistant structures has made possible to guarantee a better performance of buildings when they are subjected to seismic actions. Therefore, it is convenient that current codes for design of building become conceptually transparent when defining the strength modification factors and assessing maximum lateral displacements, so that the design process can be clearly understood by structural engineers.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MINIPROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

TEAM ID-S02
TITLE OF THE PROJECT: DAMPING IN STRUCTURES-METHODS OF DETERMINATION

FACULTY GUIDE: MRS.S.VALLABY

THURIMELLA NAGA SRI CHANDANA

**Abstract:**

Damping is an energy absorbing mechanism in the structure which leads to failure in the structures. Estimating the damping in the structures comprising of various materials is a vast challenge. Because of safety and comfort concerns, the vibration analysis (also named modal analysis) is very important for many structures, such as cars, trucks, spacecrafts, and bridges. The main objective of the project is to find the damping ratio and natural frequencies of the beams in a structure using lab view software .this modal is analyzed using ETABs software. In this an external damping is introduced on a framed structure. Damping frequencies and vibrations and resonance frequencies are studied using lab VIEW software. Further the modal is analyzed by ETABs software.

**Achievements:**

Project Design Contests:

Symposium:

Publications: On Process

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MINIPROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

TEAM ID-S01
TITLE OF THE PROJECT: DYNAMIC BEHAVIOUR OF HERITAGE STRUCTURES

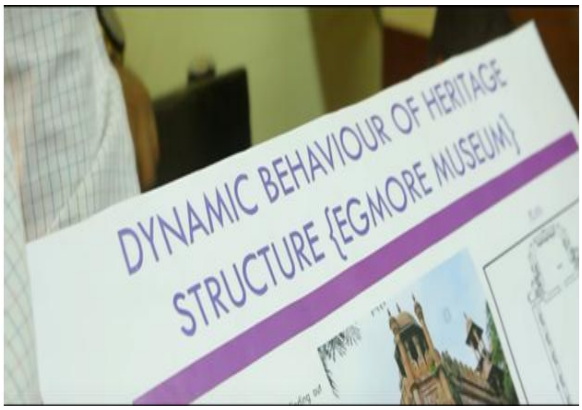
FACULTY GUIDE: Mrs.S.Vallaby


N.PREMKUMAR

S.RAJASEKAR

S.ROKESH

R.P. SUKUMARAN



**Abstract:**

The conservation of archaeological heritage is of major importance for preserving the scientific, ethnographic and artistic values of past cultures. Once archaeological sites were exposed they were subjected to natural hazards, which should be studied with up-to-date techniques. This study evaluates the dynamic behavior of a heritage brick masonry building. For this purpose non linear time history analysis is done by using SAP2000. Different mode shapes with their corresponding natural frequencies and stresses are obtained. These stresses are compared with the permissible stresses given in code of practice for unreinforced masonry structures.

(IS1905-1987).


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MINIPROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

TEAM ID- TP01
TITLE OF THE PROJECT: SMART CITY DEVELOPMENT

FACULTY GUIDE: Mrs.K.S.DIVYA


R.TAMILSELVAN

PARAMESHWAR TUDU

J.RAJESH



**Abstract:**

Smart Cities Mission is the most ambitious project of the Central government in which, the government has targeted to develop 100 smart cities across the country. about 20 cities have been selected in the first batch of the Smart Cities Mission to set up Special Purpose Vehicles (SPVs) with municipal corporations. Full-time CEOs, CIOs and CFOs have been appointed for this.

After a delay of two years, the Chennai smart city project is finally going to start in year 2017. Main aim under Chennai smart city project will be in focussing on traffic issues in the state Under the project

In order to make Chennai as a smart city, the Greater Chennai Corporation has invited the applications for CEO & CFO posts in Chennai Smart City Limited (CSCL), the special purpose vehicle tasked with the project's implementation. This project will be implemented Rs. 518 crore worth solutions related to water management and information communication technology and Rs. 848 crore worth retrofitting solutions for T Nagar.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MINIPROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

TEAM ID-S08
TITLE OF THE PROJECT: DESIGN OF TWO WAY SLAB

FACULTY GUIDE: MS.P.SARALA


S.ABISHEK

V.ARUNKUMAR

E.DAKSHINAMOORTHY

T.S.HEMANTH



**Abstract:**

Two-way slabs subjected mostly to uniformly distributed loads resist them primarily by bending about both the axis. However, as in the one-way slab, the depth of the two-way slabs should also be checked for the shear stresses to avoid any reinforcement for shear. Moreover, these slabs should have sufficient depth for the control deflection. Thus, strength and deflection are the requirements of design of two-way slabs.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube : - Yes

Facebook : -Yes

**MINIPROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

TEAM ID-S09
TITLE OF THE PROJECT: A STUDY ON SANDWICH PANEL

FACULTY GUIDE: Ms.P.SARALA


S.SANJAY

S.R.SATHEESH

G.S.SHYAM SUNDAR

K.VASANTH



**Abstract:**

Honeycomb sandwich structure combines high flexural rigidity and bending strength with low weight. Sandwich construction plays an increasing role in industry, and sandwich structural designing is an available method for sandwich structures..

The structure and mechanical properties of honeycomb sandwich panels are introduced. The weight ratio range of honeycomb core that is deduced on the basis of optimum mechanical properties offer a principle foundation for designing the structure of honeycomb sandwich panels. The satisfying weight condition of the honeycomb core weight is 50–66.7% of the weight of the whole honeycomb sandwich panels by theoretical analysis. Based on that conclusion, the honeycomb sandwich panels were designed and the results were verified by further experiments. Agreement between the theoretical values of the sample and experimental results is good.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

**MINIPROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

TEAM ID-E12
TITLE OF THE PROJECT: INTERLINKING OF WATER BODIES IN CHENNAI

FACULTY GUIDE: Mr.G.KUMARESAN


A.SHEKELAHI

N.VEERASELVAM

S.VIGNESH KUMAR

V.YUVARAJ



**Abstract:**

The interlinking of rivers is a major endeavor to create additional storage facilities and transfer water from water-surplus regions to more drought-prone areas through inter-basin transfers. Interlinking of major rivers in India, aims at modifying the acute spatial inequity in the availability of water resources in India. An integrated approach becomes necessary when dealing with resources such as water, which transcend state boundaries and form lifelines for entire communities. River deltas and drainage areas suffer from disequilibrium in water supplies that may necessitate the transfer of water from surplus to deficit areas. The concept of inter-basin transfer on a large scale has been under consideration for some time. The idea was mooted in as early as 1926 by Sir C.P. Ramaswamy Aiyarand then by K.L. Rao and Capt. Dastur in 1970 and 1980, respectively.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

You tube: - Yes

Face book: -Yes

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING


| Department | Miniproject Coordinator | Domain | No. of Miniprojects | Total |
|---|---|---|---|---|
| CSE | Ms.K.P.Revathi | IOT | 11 | 43 |
| | | MOBILE APP | 8 | |
| | | WEB APP | 11 | |
| | | CYBER SECURITY | 3 | |
| | | CODE COMPUTING | 7 | |
| | | NETWORKING | 1 | |
| | | COMPUTER VISION | 1 | |
| | | DATA ANALYTICS | 1 | |

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE1**

TITLE OF THE PROJECT: **App With Government Services For Women**

FACULTY GUIDE:


SAKTHI .J

ABINAYA

NIVEDHA .P


Miniproject Photo/


## Abstract :(10 lines)

Women are the most vulnerable group in major parts of India. India's North Eastern region is quite backward comparing to other parts of the country and the condition of women is also not so good. Adolescence is a stage when a girl sees a number of changes in her physical and mental health. In this stage she needs proper nutrition for her all round growth. But in our country specially in this part of the country the girls face lot of obstacles including mal nutrition due to which she lacks proper growth of her body and mind. The Government of India thus introduced a number of schemes for the welfare of the people and more specifically for the women and girls. But the schemes also do not reach to the appropriate group of people because of lack of awareness and corruption along with a number of other reasons. In this paper a modest attempt has been made to analyse the causes of poor performance of the Govt. schemes on the basis of available data collected from different sources and Govt. data and produces a comparative chart of the implementation of the Govt. schemes in the eight North Eastern states of India. The study has given special emphasis on KSY(Kishori Shakti Yojona), an important scheme for the development of adolescent girls and its implementation in different states of North East India.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE2**

TITLE OF THE PROJECT: **Code Optimization by simulating Quantum Annealing**

FACULTY GUIDE: **Ms.V.R.Kavitha**


NARENDR A KUMAR --

NAVEEN KUMAR

YUGESH .E

SANTHOSH .M.M.


Miniproject Photo/ **Block Diagram or schematic:**


**Abstract :(10 lines)**

The technology of searching for system failure through counterexample in model checking has drawn some attentions recently. For large concurrent systems, the number of states is always in an exponential growth when the number of processes which composed the system increases. It is so ineffective to use common heuristic method to search for the counterexample, that researching how to search for the counterexample in model checking for concurrent systems effectively becomes an important research domain. For the problem of searching for counterexample, a new annealing genetic algorithm was put forward in this paper. Compared with the genetic algorithm, this algorithm can promote the efficiency to a certain extent.


**Achievements:**

Project Design Contests: TPL'18

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE3**

TITLE OF THE PROJECT: **Development of Online Mentor Platform**

FACULTY GUIDE: **Ms.V.R.Kavitha**

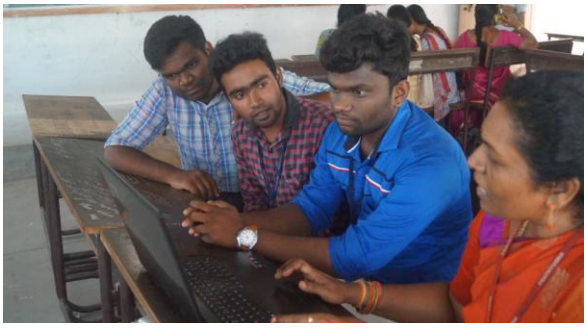

VEERA MANI

KARTHIK .M

CHUKKAPALLI MOUNISH

R.DEEPAK RAJ


Miniproject Photo/ **Block Diagram or schematic:**




**Abstract :(10 lines)**

E-MEMOC system is the redesign of online instructional consultation (OICON) system to compensate for the incompatibility of the Flash platform in cross-browser. We redesign and migrate the OICON platform that mainly built with flash to responsive web-based real-time communication. We design and develop the online consultation platform using webrtc (web real-time communication modules) that compatible in cross-browser platform. The main goals of E-MEMOC are to provide the platform of matching committed young, inexperienced new comer who need help (mentees) from experienced, dedicated mentee who want to provide help (mentors), to solve the problems that challenge them in education settings. This E-MEMOC system provides easy to-use online mentoring tools such as web video, voice calls, broadcast of audio video online video recording and playback without installation of software. E-MEMOC provides a solution of more secure and privacy data transfer (protect the information and privacy). The methodology used are rapid prototyping, and evaluated using Nielsen' Usability evaluation. During the testing phase, A/B testing and gaze-tracking methods had been used to evaluate the usability of system. The system was refined and introduced to a small number of users for beta-testing. The users were relatively satisfied with the system navigation, functionality and usability.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE4**

TITLE OF THE PROJECT: **CV based Quality Check**

FACULTY GUIDE: **Mr.Thamba Meshach W**


PRABHU .P

PURUSHOTHAMAN

RAVI RAGHAVEND

SURENDAR S.R


Miniproject Photo/ **Block Diagram or schematic:**


**Abstract :**

Quality control is an important process in all manufacturing industries, the proposed system presented here for quality control of blister-packed medical pills. The project is a camera-based quality checking system, where the picture is taken using camera and which are analyzed after image extraction through image processing and checked against quality standards. In case of blister packing, manufacturers need to check all the blisters have been filled with unbroken tablets. The systems automatically checks the number of pills through the camera and the system beeps if the number is less than the expected .


**Achievements:**

Project Design Contests:

Symposium:RIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE5**

TITLE OF THE PROJECT: **Patient Health Monitoring using IOT**

FACULTY GUIDE: **Mr.Thamba Meshach W**


NITHYASSREE .V

POORNIMA .S.S

SMRUTHI .E.R


Miniproject Photo/ **Block Diagram or schematic:**


**Abstract :**

- The project addresses the problem of automatic anomaly detection for surveillance applications. A general framework for anomalous event detection in uncrowded scenes consists of the following components . (i) an efficient foreground detection model based on a Gaussian mixture model (GMM), which can selectively update pixel information in each image region; (ii) an adaptive foreground object tracker that combines the merits of Kalman, mean-shift and particle filtering; (iii) a feature clustering algorithm, which can automatically choose the optimal number of clusters in the training data for scene pattern modeling; (iv) a statistical scene modeller based on Bayesian theory and GMM, which combines trajectory-based and region-based information for enhanced anomaly detection. The resulting approach achieves fully unsupervised anomaly detection in surveillance video.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE6**

TITLE OF THE PROJECT: **IoT based Theft detection system**

FACULTY GUIDE: **Mr.Thamba Meshach W**


K.ALEKHYA

AMULURU SAI GOUTHAMI

A.BRINDHA


Miniproject Photo/ **Block Diagram or schematic:**


**Abstract :**

The proposed IOT based theft detection project using Raspberry Pi where we use image processing on live video to detect theft using motion and also highlight the area where motion occurred. This system secures offices/homes from theft by instantly detecting theft as well as allowing user to view the theft details thereby highlighting the theft details and saving the video in a USB drive. As soon as camera motion is detected in camera footage the system uses image processing to detect exact area of motion occurrence and highlights it accordingly. The system now transmits the images of the occurrence over IOT cloud to be viewed by user online. Thus the system provides an innovative approach to theft detection using IOT.


**Achievements:**

Project Design Contests:IEEE PROJECT EXPO,CSI,JNN

Symposium:RIT,PIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE7**

TITLE OF THE PROJECT: **Efficient session password based Security System - Module 1**

FACULTY GUIDE: **Ms.S.Famitha**


KAVITHA .R

GAYATHRI .S

V.DILLI PREMIKA

P.CHITHRA DEVI

MANASA .R


Miniproject Photo/ **Block Diagram or schematic:**


**Abstract :**

This Project helps the user to login into their account more securely. Stalker won't be able to collect the password via shoulder surfing. Complex password technique using character matrix with easy user interface.


**Achievements:**

Project Design Contests:

Symposium:PIT,RIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE8**

TITLE OF THE PROJECT: **Efficient session password based Security System - Module 2**

FACULTY GUIDE: **Ms.S.Famitha**

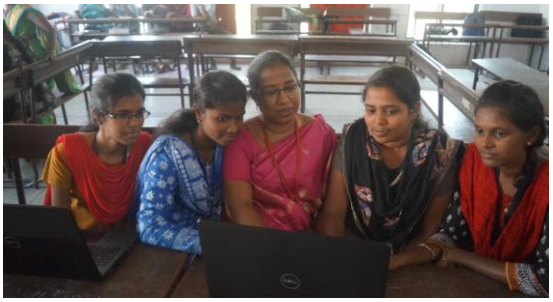

SHANMUGA PRIYA .R

SUGANYA U

SWETHA .M.R

UMADEVI .K


Miniproject Photo/ **Block Diagram or schematic:**




## Abstract :

Textual passwords are the most common method used for authentication. But textual passwords are vulnerable to eyes dropping, dictionary attacks, social engineering and shoulder surfing. Graphical passwords are introduced as alternative techniques to textual passwords. Most of the graphical schemes are vulnerable to shoulder surfing. To consider this problem, text can be combined with colors to generate session passwords for security purpose. Session passwords can be used only once and every time a new password is generated. In this paper, two techniques are proposed to generate session passwords using text and colors which are protect data from dictionary attack, shouldering etc. These methods are suitable for Personal Digital Assistants.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE1**

TITLE OF THE PROJECT: **Efficient session password based Security System - Module 3**

FACULTY GUIDE: **Ms.S.Famitha**


VARALAKSHMI .R

PODILI ROSHITHA

RANGANI KALYANI

VEERATH CHANDRALEKHA


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

A session password is a password uniquely generated for every session. The scheme allows the system to automatically generate a session password each time the user logs in. The session password is generated randomly based on the randomly generated grid. The grid is used as a medium for password generation. While registration the user must normally enter his username and password while registering into the system. Now the system stores this password and uses it to generate a unique session password while user logs in the next time. This session based authentication system uses the user password and compares alphabets contained alongside a 6*6 grid with letters a-z and numbers 0-9. The user needs to know the original password and the generation scheme to enter the exact password.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE9**

TITLE OF THE PROJECT: **Mobile App on employment opportunities for PwDs in the country.**

FACULTY GUIDE: **Mr.R.THIAGARAJAN**

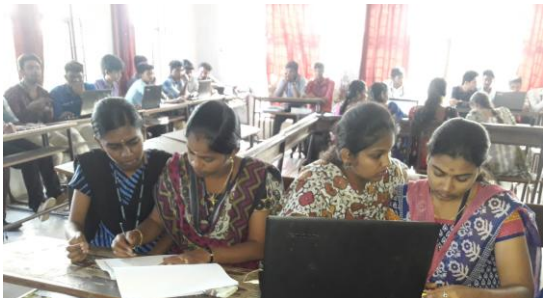

PREETHA .P

PREETHI .S

PRITHIKCA LAKSHMI .S.P

PAVITHRA .R


Miniproject Photo/ **Block Diagram or schematic:**




## Abstract :

To undertake a desk review of the Government livelihood schemes those have three percent reservation for the PwDs as well as the three percent reservation in Government jobs with the aim to understand the implementation status at the ground level and identify the gaps. 2. To undertake documentation of good practices from various Government and non-government agencies in the area of livelihood of PwDs with the aim to understand the current situation and disseminate the relevant know how. This included a process study of the organisational interventions that led to individual successes in gaining livelihoods. Drawing out of these processes, individual case studies were documented. 3. To undertake documentation of good international practices from different parts of the world, in particular from the Asia Pacific region with the aim to share the lessons learned and explore the possibilities of simulating similar efforts in India.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID- **2CSE2**

TITLE OF THE PROJECT: **Using TV Remote as a Cordless Mouse for the Computer**

FACULTY GUIDE: **Mr.R.THIAGARAJAN**

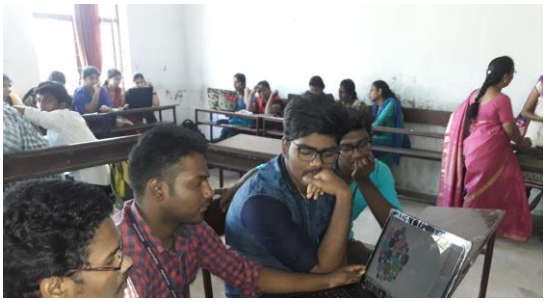

NELAPATI JAGADEESH BABU

PELLAKURU CHAITANYA

NITHISHKUMAR .P.K

THOTA YALLAMANDA


Miniproject Photo/ **Block Diagram or schematic:**




**Abstract :**

The project is designed to use a TV remote as a cordless mouse for the computer. A conventional PC/laptop uses a mouse to operate and control all its applications. As a PC mouse is wired to the system, one has to sit near the PC to operate it. This becomes very tedious when the PC is used for presentation purposes (when using a projector). In this proposed system TV remote can be used as a cordless mouse, and the user need not operate the PC sitting near it.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID- **2CSE3**

TITLE OF THE PROJECT: **Katamari damacy game**

FACULTY GUIDE: **Ms.B.GunaSundari**

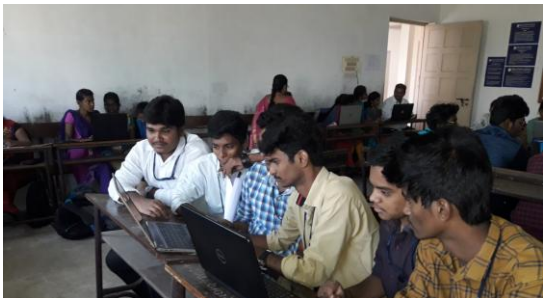

UKESH .B

SHIVARA M .K

SUNDER RAJU .T

SANTHOSH .V.R


Miniproject Photo/ **Block Diagram or schematic:**




**Abstract :**

The player controls a small object in a world of different-sized objects. Touching the smaller objects grows the player, touching the larger objects damages or shrinks the player. The player wins when they reach a certain size.


**Achievements:**

Project Design Contests:JNN

Symposium:RIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE4**

TITLE OF THE PROJECT: **Connect Four game**

FACULTY GUIDE: **Ms.B.GunaSundari**


ABIRAME .S

DIVYA .N

NANDHINI .S


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

Connect Four is a two players game which takes place on a 7x6 rectangular board placed vertically between them. One player has 21 yellow coins and the other 21 red coins. Each player can drop a coin at the top of the board in one of the seven columns; the coin falls down and fills the lower unoccupied square. Of course a player cannot drop a coin in a certain column if it's already full (i.e. it already contains six coins).Even if there's no rule about who begins first, we assume, as in chess, that the lighter side makes the first move. We also use the chess notation to represent a square on the board. That is, we number rows from 1 to 7 starting from the bottom and the columns from A to G starting from the leftmost.The object of the game is to connect four coins vertically, horizontally or diagonally. If the board is filled and no one has alligned four coins then the game is drawn (i.e. after 42 moves if no one wins).


**Achievements:**

Project Design Contests: JNN

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE10**

TITLE OF THE PROJECT: **Pygame for Happy Thanksgiving**

FACULTY GUIDE: **Ms.B.GunaSundari**


NISHANT H .G

SHAIK FIROZ

BOREDDY OBULA REDDY


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

Happy thanks giving bird is a one-player game where the user controls a bird and attempts to fly the bird between pipes. The bird moves forward (i.e., right) at a constant speed set by the game's logic. As the bird moves, pipes come on-screen and become visible. Each pipe has an opening that the bird must pass through to clear the pipe. Furthermore, the bird is impacted by gravity and accelerates down at a constant rate. If the bird touches a pipe or the bottom border of the screen the game ends. At any time, there are two actions available to the user: click, in which case the bird accelerates up, or do nothing. Hence, at every frame in the game play the user must decide whether to propel the bird up, or do nothing and simply let it be impacted by gravity. The user must be strategic in deciding when to click: too early, and the bird will come back down and hit the bottom end of the pipe; too late, and the bird may overshoot the pipe's opening and hit the top part of the pipe. 2 The user gets one point added to their score every time the bird passes an obstacle, with the final score being score the user has accumulated throughout the duration of the game.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID- **2CSE5**

TITLE OF THE PROJECT: **Bejeweled game**

FACULTY GUIDE: **Ms.B.GunaSundari**


CHAPALA MADUGU MALLIKAR

CHENNU VENKATA SHIVA REDDY

GANGINENI TEJ KUMAR

KANAMARL APUDI SAI MANKANTA


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

The goal of this project is primarily to establish a collection of video games developed by companies based here in Massachusetts. In preparation for a proposal to the companies, information was collected from each company concerning how, when, where, and why they were founded. A proposal was then written and submitted to each company requesting copies of their games. With this special collection, both students and staff will be able to use them as tools for the IMGD program.The board is filled with seven different types of jewels. The player can swap two adjacent jewels to form a three-in-a-row, causing the jewels to disappear and the jewels on top of them to fall down. Creating chain reactions gives bonus points.


**Achievements:**

Project Design Contests:

Symposium:RIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID- **3CSE11**

TITLE OF THE PROJECT: **PEC File Sharer App**

FACULTY GUIDE: **Ms.R.Kannamma**


SOORIYA N .P

VENKATES H .A

PREMKUMA R .A


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

The objective of this project was to design an online file sharing website where users can upload files and other users can download them. To attain this objective an AJAX enabled interactive user interface involving features like versioning control, RSS syndication and extensive search capabilities was developed. To make the website more user friendly, users were given two space-constrained visualizations of their file system to view space occupied by the files and folders, and three AJAX based file management system that works like browsing files on a desktop computer with drag and drop, context menu functionalities etc.


**Achievements:**

Project Design Contests:IEEE PROJECT EXPO,CSI

Symposium:RIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID- **3CSE12**

TITLE OF THE PROJECT: **App for safe ride in cab for women safety**

FACULTY GUIDE: **Ms.R.Kannamma**


PREETHI .I

PAVITHRA .S

SWETHA .N

NISHANTHI .R


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

Providing safe ride for women. For that I would like to start a cab service for women to give the better safety the service is same as all other online cab bookings but the specialty is this cab is only for Ladies and also for Gents who are eligible by having a Lady with them and having the family relation with her. We have a special tracking system in it. "THE DRIVERS IN THE CAB IS ALSO THE LADIES WHO HAVE SOME SELF DEFENSE". The cab contains CCTV cams in it. When the person book the cab we provide a unique code to her and alternative reference number by entering the number in our app. we the customer and her referee can see the live update of cab. If any unwanted things happen then the driver or passenger can press a special button in cab by that the GPS can track the car and give the emergency message to service center to the police station and to the referee.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE13**

TITLE OF THE PROJECT: **Moblie App for Faculty information**

FACULTY GUIDE: **Ms.R.Kannamma**


N.ABISHEK RAJA

MOHANLAL .S

FRANKLIN DAVID PAUL


Miniproject Photo/ **Block Diagram or schematic:**



## Abstract :

The Faculty Information System is intended to manage all the faculty details in various departments of an organization. The main aim of this Faculty Information System is to manage all details of faculty into the organization, adding information about faculty and also provides the option of updating new information about faculty. Depending on various users in an organization it provides necessary information. Hence, this is the efficient solution to manage faculty details in an appropriate manner. This app serves the users based on their role. There are mainly 3 different roles categorized as Student, Faculty and Parent. Based on the particular role's operations /functions they are divided uniquely, maintaining the differences according to their functionality.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE6**

TITLE OF THE PROJECT: **Crop monitoring and smart farming using IoT**

FACULTY GUIDE: **Mr.K.Shankar**


SANTHOSHKUMAR .C

SATHISH KANNA .K

SHANTHOSH KUMAR .K

YASHWANTH .P


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

Farming in India is done using the mundane ways. The fact that most of our farmers lack proper knowledge makes it even more erratic. A large portion of farming and agricultural activities are based on the predictions, which at times fail. Farmers have to bear huge losses and at times they end up committing suicide. Since we know the benefits of proper soil moisture and its quality, air quality and irrigation, in the growth of crops, such parameters cannot be ignored. We, therefore, have come up with a new idea of crop monitoring and smart farming using IoT. We believe that our concept will be a benchmark in the agribusiness due to its reliability and remote monitoring. Our idea tries to digitalize farming and agricultural activities so that the farmers can check on the requirements of the crops and accurately predict their growth. This concept will surely accelerate their business to reach new heights and also be more profitable. The implementation of our project largely depends upon the awareness among farmers, which, we believe will be easily created due to its numerous advantages.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE14**

TITLE OF THE PROJECT: **Sensors enable plants to text message farmers**

FACULTY GUIDE: **Mr.K.Shankar**


NANDHINI .V.S

SONIA .G

NALLABANEN I NIHITHA

BHARGAVI .S


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

This Sensor-System has developed for monitoring plants. Electrodes attached directly to a plant can detect and report water shortages or pest infestation early on, thus optimizing pesticide use and avoiding unnecessary watering. Plants are our most important food source. Like all living organisms, they are continuously exposed to environmental influences and suffer from factors such as excessive or insufficient water and nutrient levels. They have to fend off predators and react to the time of day and season. However, they are not able to provide adequate information about their condition and we only notice disruption to growth when a plant's leaves begin to droop or it shows clear signs of pest infestation. Farmers and gardeners mainly draw on experience to protect crops from frost or pests and provide them with optimum irrigation. They will ask themselves whether the soil is dry or whether it has been a long time since it last rained. As a precaution, careful gardeners will water their plants, whether they actually need to be watered or not.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE7**

TITLE OF THE PROJECT: **IOT based weather reporting system**

FACULTY GUIDE: **Mr.K.Shankar**


DHANUSH A .V.N

MITHRA SINGH .H

KESANI JYOSHNA

DEEPIKA .M


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

The system proposed in this paper is an advanced solution for monitoring the weather conditions at a particular place and make the information visible anywhere in the world. The technology behind this is Internet of Things (IoT), which is an advanced and efficient solution for connecting the things to the internet and to connect the entire world of things in a network. Here things might be whatever like electronic gadgets, sensors and automotive electronic equipment. The system deals with monitoring and controlling the environmental conditions like temperature, relative humidity, light intensity and CO level with sensors and sends the information to the web page and then plot the sensor data as graphical statistics. The data updated from the implemented system can be accessible in the internet from anywhere in the world.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE8**

TITLE OF THE PROJECT: **Mobile App for checking Freshness of fruits**

FACULTY GUIDE: **Ms.M.Vanitha**

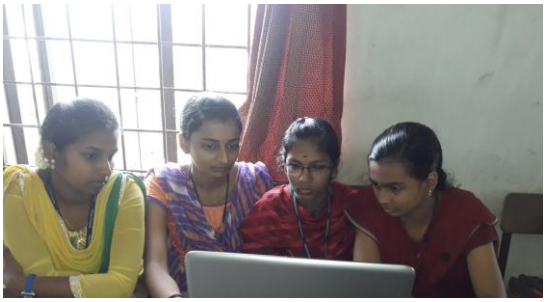

ARCHANA .W.R

CHAMAN THI .V

LAVANYA .R

KALPANA .K


Miniproject Photo/ **Block Diagram or schematic:**




## Abstract :

The paper proposes to organize the vegetable market and bring about a change in the way things work. Milk, one of the products that is highly dependent on the rural section of the country has developed into such an efficient system that ensures that every household in the country gets fresh milk early in the morning with all due remuneration to the producers. The paper proposes on interface for the consumers/buyers of vegetables. The main challenge for the system is to intervene starting with the current set up and incrementally bring the benefit of improved efficiency. Information technology can bring about considerable change in the way systems work in India. Especially systems in which the rural economies cater to the urban consumers for e.g. agro products, vegetables, milk sectors etc.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE9**

TITLE OF THE PROJECT: **Smart App for Clean enivronment for Thiruvallur**

FACULTY GUIDE: **Ms.M.Vanitha**


ANUVITTHA .V

INDHUMATHI .E

JEEVITHA .M

JENCY .P


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

The development objective of the Clean Air and Sustainable Environment Project for Bangladesh is to improve air quality and safe mobility in Dhaka through the implementation of demonstration initiatives in urban transport and brick making. This restructuring paper allows the following changes to the project: 1) revise the scope of some activities, 2) refine and simplify the results framework to make it a more useful management tool, 3) reallocate project funds, 4) extend the closing date, and 5) amend some terminologies and definitions to match Government institutional and economic framework. The restructuring will allow successful completion of activities, enhance the implementation of the project and facilitate achievement of the project development objective.


## Achievements:

Project Design Contests:

Symposium:

Publications:

## Social Media Reach:

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE10**

TITLE OF THE PROJECT: **m- Diary**

FACULTY GUIDE: **Ms.M.Vanitha**

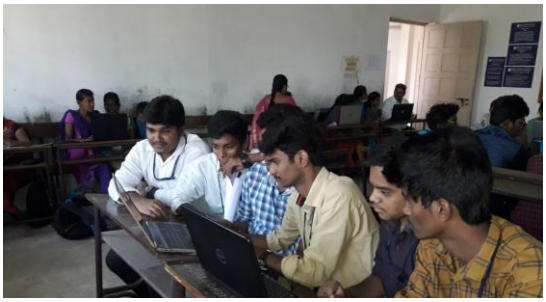

UKESH .B

SUDARSA NAM .D

SATHISH KUMAR .P

YENDLURI HARISH BABU


Miniproject Photo/ **Block Diagram or schematic:**




## Abstract :

This work aims in developing mobile Diary that makes ease the work of users .By this application a user can store contact details, retrieve contact details, set reminder for important meetings of works and make dead line notes on single platform. Thus the user can manage his contacts and daily working schedules through this application. It is a process of conceptualizing, planning, and building a collection of electronic files that determine the layout, colors, text styles, structure, graphics, images, and use of interactive features that deliver pages to your site visitors. Everything about your website - including the content, the way it looks, and the way it works - is determined by the website design.


**Achievements:**

Project Design Contests:IEEE PROJECT EXPO,CSI,JNN

Symposium:RIT,PIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE11**

TITLE OF THE PROJECT: **E-CLASS ROOM**

FACULTY GUIDE: **Ms.V.Anithalakshmi**

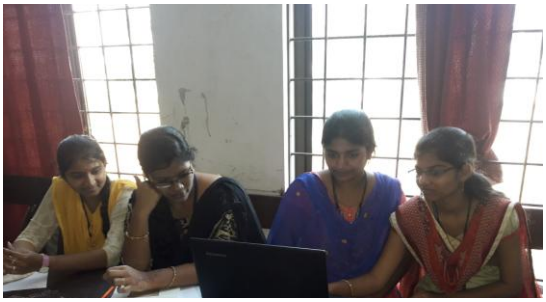

SHINY SHARON .P

VIRUVURI YAMINI

PALURU PRAVEENA

PAVITHRA .S


Miniproject Photo/ **Block Diagram or schematic:**




## Abstract :

In the last few decades, education has witnessed some advances in technologies involving computeraided learning that promises to drastically change the methods of teaching and learning. The World Wide Web has played a major role in information storage and dissemination in the educational community. Conventional classroom based teaching involves the delivery of course materials by the lecturer in a particular place at a defined time. Hence it imposes a constraint of time and place on both the instructor and the student. Due to human factor arising from the traditional classroom method, the lecturer may not always be able to put in optimum effort towards preparing and delivering course materials. There may also be inconsistencies in the pedagogy and learning style due to repetitive nature of teaching/learning. The objective of this paper is to develop a virtual classroom system to enhance learning on campus. The system was developed using PHP and MySQL as server side programming and database respectively. The web-based virtual classroom provides a web enabled interactive model for e-learning in which the course material is presented using multimedia and hypermedia.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE12**

TITLE OF THE PROJECT: **Free heart diseases consulting**

FACULTY GUIDE: **Ms.V.Anithalakshmi**

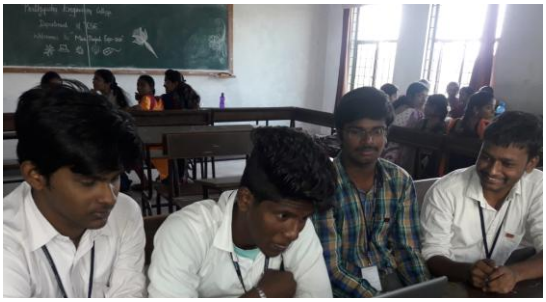

ARAVIND .A

DHINESH .M

NAGENDRA BABU .S

DINESH KUMAR .R


Miniproject Photo/ **Block Diagram or schematic:**




## Abstract :

This system Heart Attack Detection by Heart Rate Monitoring Project helps to inform if a person is about to have a heart attack. This system does this by detecting the heart beat level and informs as soon as the heart beat level does not fall within the permissible limit. Thus this system can be used to save life of many people as this system alerts the doctor about the patient's heart beat level. For this the system uses two circuits. One is the transmitting circuit which is with the patient and the other is the receiver circuit which is being supervised by the doctor or nurse. The system makes use of heart beat sensor to find out the current heart beat level and display it on the LCD screen. The transmitting circuit includes AVR family microcontroller interfaced to LCD screen and this transmitting circuit is powered by 12V transformer. Similarly, the receiving circuit includes AVR family microcontroller and RF receiver and also has a 12V transformer. The receiver circuit also includes LED light and a buzzer which are used to alert the person supervising the heartbeat rate of the patient and turns on the LED light and buzzer as soon as the heartbeat level of the patient does not fall within the normal heart beat level set.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE15**

TITLE OF THE PROJECT: **Faculty information system**

FACULTY GUIDE: **Ms.V.Anithalakshmi**


JOTHI JANIFER A A

MONICA .R

JOTHI JAHNAVI .B

JANANI .P


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

The Faculty Information System is a web-based application designed to track current and prospective faculty information for the School of Computer Science and Information Systems (CSIS) at Pace University. This application provides a user-friendly web interface for prospective faculty to add, manage and submit their curriculum vitae. The application stores details of all faculty vitae in a searchable database to be reviewed by authorized personnel and matched to a suitable position. Current faculty will use the same interface to update their academic achievements and credentials. Microsoft SQL Server is used for the backend database and Cold Fusion and Fusebox for developing the web interface. This paper includes a detailed description of the application and the methodology used to implement it. The paper concludes with a hand-off to the client with a recommended exit strategy listing future enhancements.


**Achievements:**

Project Design Contests: JNN

Symposium:RIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE16**

TITLE OF THE PROJECT: **PEC CSE ClubSite**

FACULTY GUIDE: **Ms.N.Sripriya**


T.K.GAYA THRI

LIKITHA .C H

MOHANA PRIYA .T

RAGAVI .E


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

The activities, student details and many matters like this can be better managed by the applications which are capable in doing this task. The online college portal application will allow the authorities of the college management to reduce the pen paper work which is a tedious job. The admission details, students and faculty's information, feedback system performance of the students, reviews of the particular colleges, suggestions that can be given in some matters needed for improvement can all be dealt easily using the online college portal application. The online college portal application is one of the interesting and useful projects that the final year students can work on. There can be separate login id and the password for the students and the higher authorities of the college. This application can also include the feedback system that can be obtained from the students and the faculties for the further improvement of the system in the colleges. The application must be having a strong back end system to store all the database of the college. This application will help in smooth running of the college management.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE13**

TITLE OF THE PROJECT: **Traffic Congestion Alert system using GSM**

FACULTY GUIDE: **Ms.N.Sripriya**


CHIDAMBARAM .B

DHANASEKAR .K

DILEEP .M

GADIKOTA SAI AKARSH


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

Traffic congestion system automatically alerts the traffic congestion that will be there in the particular area or the lane. This system can be implemented in lanes or the junctions where the traffic is high. In such areas or the lanes, transmitter or the receiver along with the LCD screen can be present. When there is traffic congestion in the particular lane or the junction there can be message displayed in LCD screens. This will indicate the people to take a different route which is free of traffic. In this way it can help people to find a way which is traffic free and not to take the route full of traffic. This will be one of the interesting applications that one can work on and help the people to get proper messages of the traffic congestion in the particular lane or the junction without any delay. This system will help in diverting the traffic and also reducing the congestion.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE17**

TITLE OF THE PROJECT: **Rent Car system**

FACULTY GUIDE: **Ms.N.Sripriya**


HARI BABU .R

K.DIVAKAR

CHINTHAPATLA DINESH

DISAMCHARLA NAGENDRA BABU


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

The rent car application will help the car riders to locate the type of car that will be provided for rent and enjoy the ride. You will be able to search for the car of your choice for rental in the town. You can use this application remotely anywhere from the world and enjoy the ride. The price may be depended on the number of hours that you drive. Most of the people in the world will have a craze about the cars that are being bought in the market. But some people will be having the craze of enjoying car rides in the new cars that are introduced into the market.


**Achievements:**

Project Design Contests:IEEE PROJECT EXPO,CSI,JNN

Symposium:RIT,PIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE18**

TITLE OF THE PROJECT: **Online Blood Banking System**

FACULTY GUIDE: **Ms.N.Sripriya**


K.DIVYA

GAYATHRI .S [M.R. SARAVANAN]

MONISHA .R


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

The purpose of this study was to develop a blood management information system toassist in the management of blood donor records and ease/or control the distribution ofblood in various parts of the country basing on the hospital demands. Without quick andtimely access to donor records, creating market strategies for blood donation, lobbyingand sensitization of blood donors becomes very difficult.The blood management information system offers functionalities to quick access to donorrecords collected from various parts of the country. It enables monitoring of the resultsand performance of the blood donation activity such that relevant and measurableobjectives of the organization can be checked.It provides to management timely, confidential and secure medical reports that facilitatesplanning and decision making and hence improved medical service delivery. The reportsgenerated by the system give answers to most of the challenges management faces as faras blood donor records are concerned.


**Achievements:**

Project Design Contests:IEEE PROJECT EXPO,CSI

Symposium:RIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE19**

TITLE OF THE PROJECT: **Resource management sysytem for PEC**

FACULTY GUIDE: **Ms.N.Sripriya**


S.ELLAKYA

R.DIVYA BHARATHI

D.GAYATHRI

MASWIN RIYANA .Z


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

Based on the theory of project management and human resources, combining with the practical construction situations in China, using theoretical analysis and comparative analysis, four important characteristics are extracted in engineering project using EPC mode, that is, mobility, duality, commodity & humanity and collaboration. Furthermore, the origins and implications of above characteristics in depth are analyzed, and some management methods are presented with the guidance in connection with them in theory.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE14**

TITLE OF THE PROJECT: **Impressive Factor of PEC – Analyzing Student Mindset**

FACULTY GUIDE: **Ms.R.Meena**


NAVEEN KUMAR .K

RAGHUL .A

PAMURU NARAYANA

NAVEEN KUMAR .S


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

This project aims at exploring the most impressive factor about our college on student perspective. The project collects student forms which has set of credits for every factor in our college and will analyze the top impressive factor of our college. Eg: Teaching, Infrastructure, Clubs, etc... This will give a clear view about the student's mindset and their word of mouth.


## Achievements:

Project Design Contests: JNN

Symposium:

Publications:

## Social Media Reach:

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE15**

TITLE OF THE PROJECT: **Learn Logics – Do Code**

FACULTY GUIDE: **Ms.R.Meena**


SARANYA .T

SHARMILA .V


Miniproject Photo/ **Block Diagram or schematic:**


**Abstract :**

Students of various departments face coding as a challenge. This system works similar to a online tutor. The difference is that it will present several logics on a problem. It also gives the syntax of several programming languages to solve it. Students also can suggest their own idea to solve the question. This will surely help the students to understand logical problem solving.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE20**

TITLE OF THE PROJECT: **Blind Aid Stick-Travelling Friend**

FACULTY GUIDE: **Ms.K.P.Revathi**


B.AKSHAY A

JAYA PRIYA .M

MOHANA .P


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

Blind stick is an innovative stick designed for visually disabled people for improved navigation.The system is intended to provide overall means Artificial vision and object detection. The aim of the overall system is to provide a low cost and efficient navigation aid for a visually impaired person who gets a sense of artificial vision by providing information about the environmental scenario of static and dynamic objects around them. The main aim of this project is to detect the obstacle in front of the electronic stick and giving the alarm. This will assist the blind persons during the walk and provides an alarm if any hurdle is detected with-In the set range. This system mainly consists of a regulated power supply, IR transmitter, IR receiver, control circuit and the output driver circuit. The IR sensor detects the presence of an obstacle in front of the person. If any obstacle comes in front of blind person, he can know about the obstacle by hearing the sound generated by the head phone. The smart walking stick is very useful for the visually impaired persons for their safety and freedom from the other persons at all the time.


**Achievements:**

Project Design Contests:IEEE PROJECT EXPO,CSI,JNN

Symposium:RIT,PIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE21**

TITLE OF THE PROJECT: **Blind Aid Stick-For Home Automation**

FACULTY GUIDE: **Ms.K.P.Revathi**


A.GNANA VEL

KARTHIC K .M

KALAISELVAN .R

MAGESH KUMAR .P


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

The main idea of the project where the objects and products in the house that are interconnected and identifiable through digital networks. In smart house the smart lock has been embedded where the owner has to enter the password to unlock and open the door, intruders can be identified when they physically tried to open the door without the password. Pet care can be automated with connected feeders. Houseplants and lawns can be watered by way of connected timers. The gas detector sensor which can identify the leakage and it can turn on the alarm to warn the owner. Smart homes are also beneficial for the elderly, providing monitoring that can help seniors to remain at home comfortably and safely, rather than moving to a nursing home or requiring 24/7 home care. Wireless Home security and Home automation are the dual aspects of this project. The currently built prototype of the system sends alerts to the owner over voice calls using the Internet if any sort of human movement is sensed near the entrance of his house and raises an alarm optionally upon the user's discretion. The provision for sending alert messages to concerned security personnel in case of critical situation is also built into the system.


**Achievements:**

Project Design Contests:IEEE PROJECT EXPO,CSI,JNN

Symposium:RIT,PIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**2CSE16**

TITLE OF THE PROJECT: **Child and Women's Safety Using IoT**

FACULTY GUIDE: **Ms.K.P.Revathi**


MAHALAKSHMI .J

MAHIMA MISHRA

KRITHIKA S R

BHAVANI SREE .S.

SUGANTHI


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

This project is based on IOT (Internet of Things). This project deals with the safety of women. The main objective of the project is to make a device which will provide safety for women as they are exposed to various threats in public. The device will be a wearable device which consists of a GPS system and sensors. The device is a watch. When the individual faces threat the heartbeat, the temperature of the body increases which is sensed by the sensor. The device becomes active and the GPS system traces the location of the individual which is thereby connected to the database send the information to the database and sends an alert to the nearest police station immediately.


## Achievements:

Project Design Contests:IEEE PROJECT EXPO,CSI,JNN

Symposium:RIT

Publications:

## Social Media Reach:

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-**3CSE22**

TITLE OF THE PROJECT: **Automatic Irrigation System for Farmers using IoT**

FACULTY GUIDE: **Ms.K.P.Revathi**


P.AJITH KUMAR

S.AJITH SHANKRITHI

R.GANESH PRASAD

K.U.AKASH


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

This paper discussed about how the water can be efficiently used for agriculture. According to this proposal Real Time Clock(RTC) is used to control the motor in the real time. First the ON time and OFF time of the motor is send from the android application via GPRS modem. Once the ON and OFF timings are reached the controller, the motor continuously starts and stops in that particular time interval in the by using RTC. Temperature and moisture values of the irrigation area are continuously monitored and the values are send to the android application via GPRS modem. If the temperature and moisture values are beyond the certain limit an alert SMS will be send to the farmer. If the farmer wish to control the motor remotely it is possible by pressing the ON and OFF button given in the android application.


**Achievements:**

Project Design Contests:IEEE PROJECT EXPO,CSI,JNN

Symposium:RIT,PIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID- **2CSE17**

TITLE OF THE PROJECT: **Automatic Irrigation System for Farmers using IoT**

FACULTY GUIDE: **Ms.K.P.Revathi**


SANGEETH A .C

PADMINI .V.S

SRIPRIYA .V

VAISHALI .D.

RAMYA .H


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

The main objective of our project is to protect the farm from the animals without hurting them and without the presence of farmer in the farm. The animal is detected using pi-cam and the information is sent to farmer. We use Raspberry pi for this process. The farmer can ON the burglar alarm of his farm from the given application. Presume if the animal intrudes to the farm the notification message has been sent to the farmer. By means of notification the farmer ON the latch of designated Application which in turn ON the alarm sound in the farm based on the Animal. The application has unceasing video of the farm in it. At particular time the animal will go away from the farm after hearing the sound, the farmer can switch OFF the burglar alarm. In some instance the farmer can't able to use the phone or the phone would have been switched OFF. In that case the alarm automatically turns ON if it crosses the specified time after detecting the presence of animal. So this way to approach the problem does not cause loss to both animal and farmer, the crops are also been prevented from the wastage. In existing system the Man power is consumed more. It leads to demise of farmer and animals life.


## Achievements:

Project Design Contests:IEEE PROJECT EXPO,CSI,JNN

Symposium:RIT,PIT

Publications:

## Social Media Reach:

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID- **3CSE23**

TITLE OF THE PROJECT: **Accident Prevention System using IoT**

FACULTY GUIDE: **Ms.K.P.Revathi**


SHASHI VARDHAN .K.R

SHRIRAM .S

SOMINENI PENCHALA KRISHNA BABU

SUNKARA BHARATH KUMAR


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

This project will provide an optimum solution to this draw back.In this project we are using accelerometer,GSM,GPSand LCD module.An accelerometer(ADXL335) can be used in a alarm application so that dangerous driving can be detected. It can be used as a crash or rollover detector of the vehicle during and after a crash. With signals from an accelerometer, a severe accident can be recognized.Microcontroller(atmega338) sends the alert message through the GSM(Global System for Mobile Communication) MODEM including the location of the vehicle to police control room or a rescue team. So the police can immediately trace the location through the GPS(Global Positioning System) MODEM, after receiving the information. After collecting the data message is sent to the concerned authority through the GSM. This project is useful in detecting the accident precisely by means of both vibration sensor and Micro electro Mechanical system (MEMS) or accelerometer.


**Achievements:**

Project Design Contests:IEEE PROJECT EXPO,CSI,JNN

Symposium:RIT,PIT

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID- **3CSE24**

TITLE OF THE PROJECT: **Management Information System for Colleges - Module 1**

FACULTY GUIDE: **Ms.K.Sornalatha**


BODDAPATI SINDHU PRIYA

GUDURU SOWMYA

ROJA .J

POOJA .G.

SAMUDRALA


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

In this post abstract of the project for college management system is given. Along with full explanation of the project college management system. There are many departments of administration for the maintenance of college information and student databases in any institution. All these departments provide various records regarding students. Most of these track records need to maintain information about the students. This information could be the general details like student name, address, performance; attendance etc or specific information related to departments like collection of data. All the modules in college administration are interdependent. They are maintained manually. So they need to be automated and centralized as, Information from one module will be needed by other modules. For example when a student needs his course completion certificate it needs to check many details about the student like his name, reg number, year of study, exams he attended and many other details. So it needs to contact all the modules that are office, department and examination and result of students. This project is useful for easy user interface. The system utilizes the powerful database management, data retrieval and data manipulation. This project provides more ease for managing the data than manually maintaining in the documents. The project is useful for saving valuable time and reduces the huge paper work.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID- **3CSE25**

TITLE OF THE PROJECT: **Management Information System for Colleges - Module 2**

FACULTY GUIDE: **Ms.K.Sornalatha**


ANNABATTINA VENKATA

BALU MANOJ REDDY

JAYAKUMAR .E

RAHUL .M.

RAMESH RAJAN .M


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

This project is based on COLLEGE MANAGEMENT SYSTEM. It manages the college information, student information, placement information, various different types of event going on in our college. It also keeps track records of all the information regarding students those who are placed in the various organizations. It has a notice board which contains information about various cultural or technical or any sports which is supposed to be held soon. With the help of this project, you can view the previous videos with the help of internet connection.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID- **2CSE18**

TITLE OF THE PROJECT: **Dice Rolling Simulator using Python**

FACULTY GUIDE: **Ms.K.Sornalatha**


STERLIN .S.P

SWEETHA .I

THENMOZHI .R


Miniproject Photo/ **Block Diagram or schematic:**


## Abstract :

This project simulates the rolling dice game. When the program runs, it will randomly choose a number between 1 and 6. The program will print what that number is. It should then ask you if you'd like to roll again. This project will help establish a solid foundation for python concepts. This is a classic "roll the dice" program. We will be using the random module for this, since we want to randomize the numbers we get from the dice. We set two variables (min and max), lowest and highest number of the dice. We then use a while loop, so that the user can roll the dice again. The roll again can be set to any value, but here it's set to "yes" or "y", but you can also add other variations to it.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

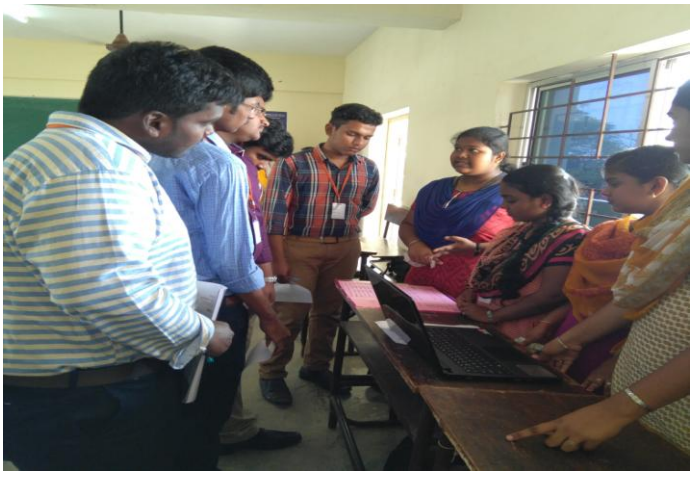
**Social Media Reach:**

Youtube :

Facebook :

# DEPARTMENT OF ECE

# EVEN SEMESTER

| Department | Project Coordinator | Domain | No. of Projects | Total |
|---|---|---|---|---|
| ECE | L.PADMANABAN | Embedded & Robotics | 19 | 19 |
| | | VLSI | 2 | 21 |
| | | Antenna | 16 | 37 |
| | | MATLAB/Image Processing | 15 | 52 |
| | | NI Labview | 6 | 58 |
| | | Speech Processing | 1 | 59 |

**MINIPROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE42

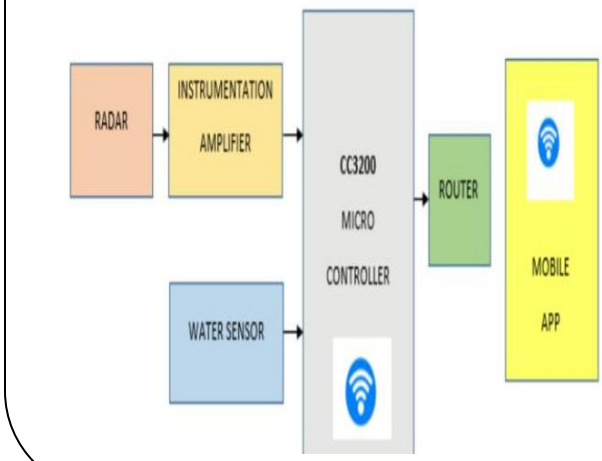
TITLE OF THE PROJECT: Imperceptive Steering

FACULTY GUIDE: L.Padmanaban

Pratheeba Basyal

B.Reshma

Rakesh




**Abstract :** The visually impaired are at a considerable disadvantage because they often lack the information for avoiding obstacles and hazards in their path. They have very little information on self-velocity, objects, direction - which is essential for travel. Previously developed navigation systems use costly equipment which is often not affordable by the common blind community. The navigation systems available are heavy and very complicated to operate. The navigator system designed will detect an object or obstacle using ultrasonic sensors and gives audio instructions for guidance.. The algorithm developed gives a suitable audio instruction depending on the duration of ultrasound travel which in turn is made available by an mp3 module associated with the system. This work presents a new prototype of navigation system on a cane which can be used as a travel aid for blind people. The product developed is light in weight, hence, does not cause fatigue to the user. This project is developed by keeping in view the affordability and reliability. An obstacle as close as 4cm can be detected by this module. A resolution of 15cm of obstacle distance has been designed and achieved. This system can also detect potholes on the path.

**Achievements:**

Project Design Contests: IIDC & Texas Contest

Symposium: Participated in conference

Publications:

**Social Media Reach:**

Youtube : Uploaded

Facebook : **dia Reach:**

Youtube : Uploaded

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

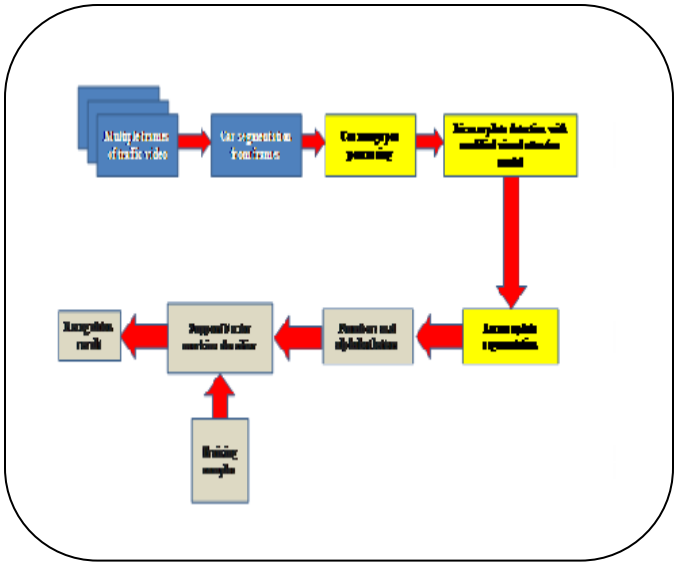
TEAM ID: 4ECE13

TITLE OF THE PROJECT: Automatic recognition of vehicles in Toll gate

FACULTY GUIDE: C.Ada Christa

Indhumathi.K

Anbu .N.S.




**Abstract :**

Automatic Number Plate Recognition (ANPR) is a mass surveillance system that captures the image of vehicles and recognizes their license number. The goal of ALPR is to extract and recognize the license plate without any human involvement. It plays essential role in numerous applications, such as toll enforcement by police and military force for electronic toll collection , and parking. This work presents a recognition method in which the vehicle plate image is obtained and the image is processed to get the number plate information. A rear/back image of a vehicle is captured and processed using various algorithms. In this context, the number plate area is localized using a novel modified visual attention model and then the license plate is segmented into seven blocks using a projection method. One classifier, which combine the advantages of convolutional neural network-based feature learning and support vector machine for multichannel processing, are designed to recognize the letters.


**Achievements:**

Project Design Contests: Applied

Symposium:

Publications:Applied

**Social Media Reach:**

Youtube :

Facebook :

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

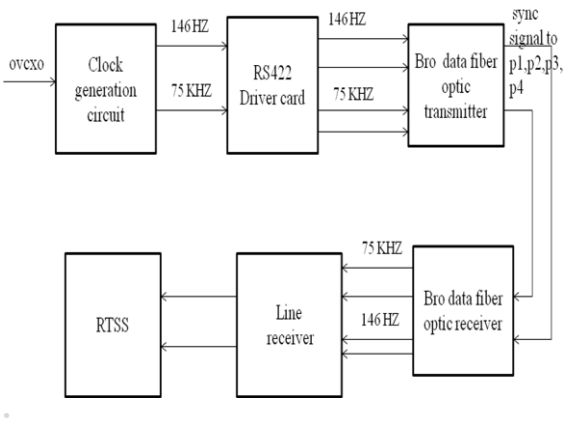
TEAM ID: 4ECE02

TITLE OF THE PROJECT: Generation of Synchronization signal for C- Band radars

FACULTY GUIDE: L.Padmanaban

Sangeetham Charitha

K.Jhanavi




**Abstract :** The Generation of Synchronization signals for C-band RADARS describes the Designing of Clock Generation Circuits for Radar Synchronization. Rdio Detection And Ranging (RADAR) is an electromagnetic system, which is used for tracking the targets and to detect the location and distance of the Object from the point where the RADAR is placed. Radars are also used for Range Safety. In SDSC SHAR, there are 4 C-Bands radars and their Operating Frequency is 5.45 to 5.85 GHz. Synchronization is essential in an environment of multiple radars operating in a same frequency band to maintain fixed Phase Relation among the Transmitted Pulses. In the absence of Synchronization in the multiple Tracking radars environment, the reply echoes of radar moves closes to the other radar echoes and cause confusion to the radar operation when multiple radars are transmitting signals to the transponder, it is necessary to ensure that the radar interrogating pulses should not coincide with each other. This process is done by using Crystal Oscillator which acts as Clock Generator. These signals (75 KHz and 146 Hz) are transmitted via Fiber optical cables to all the 4 C-Band Radars.

**Achievements:**

Project Design Contests: No

Symposium:NO

Publications:NO

**Social Media Reach:**

Youtube :NO

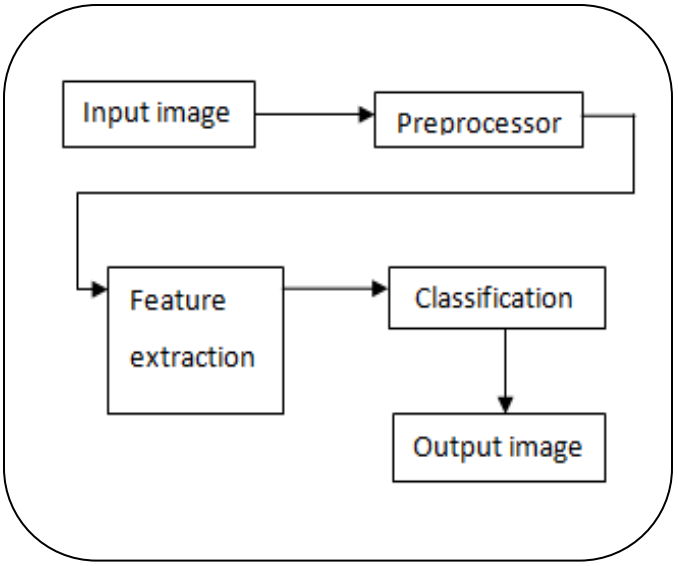
Facebook : NO

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE08

TITLE OF THE PROJECT: Detection of chromosome abnormality using image processing technique for analysis of

FACULTY GUIDE: Dr. L.Vanitha




**Abstract :**

In this system, chromosome abnormality is detected without human intervention by classifying the chromosome. Chromosome image are acquired and the features are extracted by which linear Vector Quantization classifier classifies the chromosome. Numerical abnormality is diagnosed based on features of chromosome. Classification of chromosome is done according to their length, width, area, entropy, standard deviation and is compared with the normal chromosomal values to detect the chromosomal abnormality. The genetic defects are caused due to the abnormalities are found out through mat lab software. This system helps in identifying the genetic disorders in infants.

**Achievements:**

**Journal: Applied**

**Social Media Reach:**

Youtube :

Facebook :

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE07

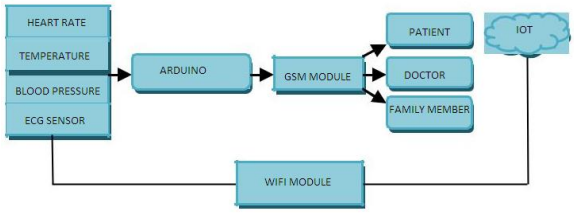
TITLE OF THE PROJECT: Wireless patient health Monitoring using IoT

FACULTY GUIDE: Ms. S.Rubini

M.Akila

S.Ashika

Miniproject Photo/ **Block Diagram or schematic:**




**Abstract :**

Remote patient monitoring devices had greatly decreased the burden of patients and delivered high quality of care with lower risk by monitoring various medical parameters such as BP, ECG, Heart Rate, temp. The technology platform is being enhanced in every corner and solves all medical related problem of the patient at remote locations using IoT. The usage of IOT technologies brings convenience of physicians and patients, since they are applied to various medical areas such as healthcare monitoring. Body sensor network used to monitor the patient regularly, the sensed values is continuously compared with threshold limits. Whenever the sensed values exceed the threshold limits, the message about patient health condition is communicated through IoT

**Achievements:**

Project Design Contests: First prize in National Conference –Best paper award

Symposium: No

Publications: Journal

**Social Media Reach:**

Youtube : No

Facebook : No

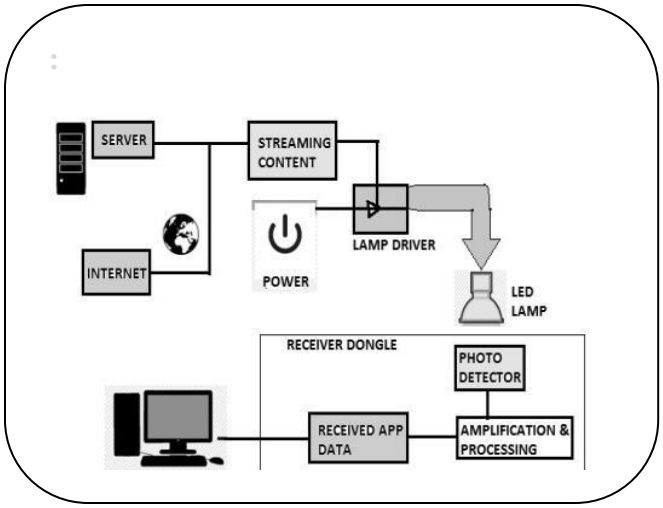
**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE18

TITLE OF THE PROJECT: Real time Industrial Automation Monitoring using IoT

FACULTY GUIDE: Ms. S.Rubini

K.Prasanna Kumar O.Vamsi Krishna A.Jashwanth




**Abstract :**

Light Fidelity (Li-Fi) is a new technology for wireless communication. In this article, Li-Fi technology will be analyzed in details. Its applications, challenges and limitations will be mentioned. Li-Fi will be compared with Wireless Fidelity (Wi-Fi). In industrial automation systems, production process should be fast and safely. Unlike Wi-Fi, high-speed internet connection is provided using Li-Fi technology. Therefore, applicability of industrial automation systems of Li-Fi technology will be examined.

**Achievements:**

Project Design Contests: No

Symposium: No

Publications: No

**Social Media Reach:**

Youtube : No

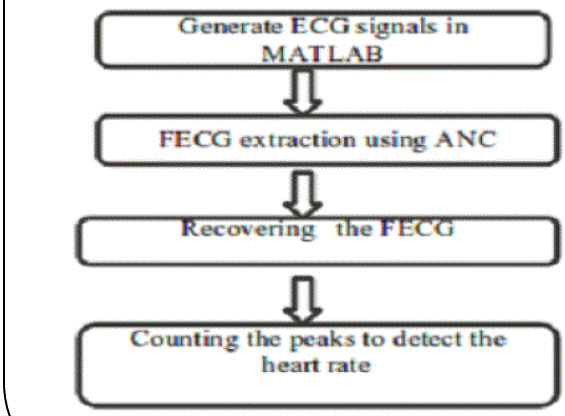
Facebook : No

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4 ECE 35

TITLE OF THE PROJECT: Design and development of fetal ECG recorder

FACULTY GUIDE: Dr.S.Hemajothi




**Abstract :**

Fetal heart rate monitoring helps us to know about the growth of fetus and also about any abnormalities present. Hence it is very necessary to record fetal ECG. But the extraction of FECG is very difficult as it is corrupted by different types of noise such as maternal ECG, noise due to electrode movements and also noise due to the motion of mother during diagnosis. Because of these unwanted signals, the interpretation of fetal ECG has become difficult. Congenital heart defects originate when the heart is forming i.e. in the early stages of pregnancy. It can affect any part or the function of heart. Structural defects in heart cannot be diagnosed effectively using fetal electrocardiography, except during labor. FECG is confined to issues such as general ischemia due to specific fetal positioning. This limitation is because the FECG is contaminated by fetal brain activity, muscle activity from both mother and fetus. No signal processing technique can accurately provide an undistorted FECG signal from electrodes placed on the maternal abdomen because of the low signal to noise ratio of FECG recorded from the maternal body surface. Adaptive filters are time variable filters whose characteristics can be varied with time

**Achievements:**

Project Design Contests: Nil

Symposium:Nil

Publications:Nil

**Social Media Reach:**

Youtube :Uploaded

Facebook :Uploaded

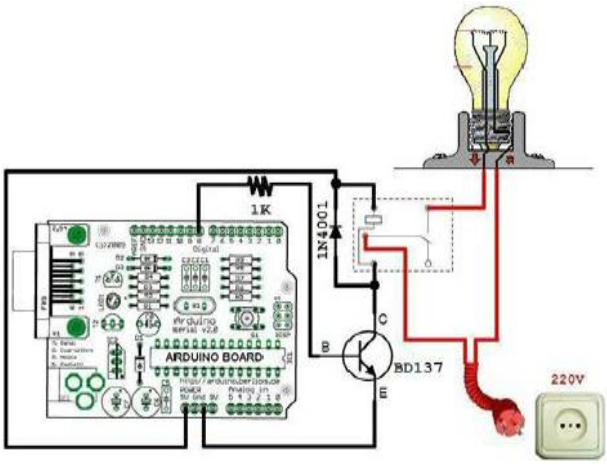
**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

**TEAM ID: 4ECE09**

TITLE OF THE PROJECT: Arduino based smart switch ports

**FACULTY GUIDE**: Ms.P.Vadivu

**Project Block Diagram:**




**Abstract :**

Technology is a never ending process. To be able to design a product using the current technology that will be beneficial to the lives of others is a huge contribution to the community. This paper presents the design and implementation of a low cost but yet flexible and secure cell phone based home automation system. The design is based on a stand alone Arduino BT board and the home appliances are connected to the input/ output ports of this board via relays. The communication between the cell phone and the Arduino BT board is wireless. This system is designed to be low cost and scalable allowing variety of devices to be controlled with minimum changes to its core. Password protection is being used to only allow authorised users from accessing the appliances at home.

**Achievements: Nil**

**Project Design Contests:** Nil

**Symposium**: Nil

**Publications: Published in UGC approved International Journal.**

**Social Media Reach:** ----

**Youtube** : Uploaded

**Facebook** : ----

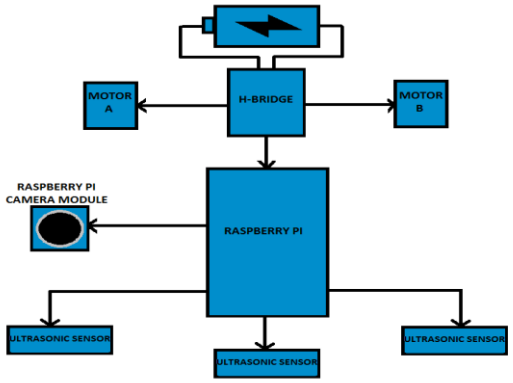
**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

**TEAM ID**: 4ECE21

**TITLE OF THE PROJECT:** 360 degree eye ball rotating using rasperii pi 3

**FACULTY GUIDE:** Ms.P.Vadivu

**Project Block Diagram:**




**Abstract :**

The major drawback in today's surveillance rests on the involvement of human operators which can easily be distracted, so we need a system which can autonomously monitor regions continuously, making decisions while identifying unwanted or obnoxious things and respond accordingly. Object tracking using computer vision is crucialin achieving automated surveillance.In this project in order to build a basic ball tracking car. Here, robot used camera to take frames and do image processing to track down the ball. The features of the ball such as color, shape, size can be used. But my objective was to make a basic prototype for such a robot which can sense color and follow it.Robot tries to find a color which is hard coded, if it finds a ball of that color it follows it. I have chosen raspberry pi as micro-controller for this project as it gives great flexibility to use Raspberry Pi camera module and allows to code in Python which is very user friendly

**Achievements: Nil**

**Project Design Contests:** Nil

**Symposium:** No

**Publications: Applied in UGC approved International Journal.**

**Social Media Reach: ----**

**Youtube : -----**

**Facebook : -----**

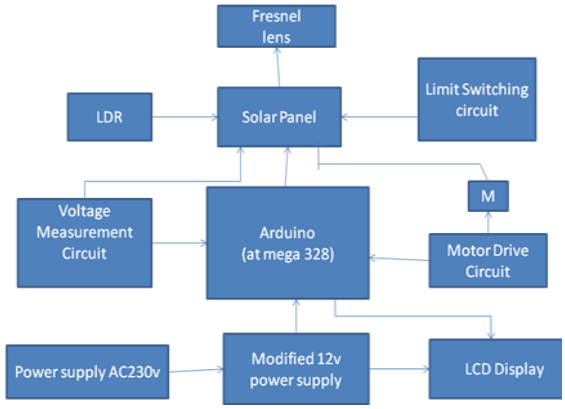
**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE31

TITLE OF THE PROJECT: Arduino based High intensity radiance tracking solar panel using frsenel lens

FACULTY GUIDE: Ms.P.Vadivu

**Project Block Diagram:**




**Abstract :**

Sun based vitality frameworks have utilized as a sustainable power source. Presently generally utilized for an assortment of modern and locally applications. Utilization of sun powered board is to change over sunlight based vitality into either electrical vitality (or) warm vitality. Because of progress of the sun from east to west. The settled sun powered board might have the capacity to create ideal vitality. In the proposed framework tackles the issue by focal point utilizing Arduino to run the DC engine. This paper depends on the following the current settled sun powered board. Utilization of the sun oriented board combined with Dc engine to track the sun along its bearing Fresnel focal point is which expands the power proficiency.

**Achievements: Nil**

Project Design Contests: Participated in

***Expo- ELECTRO 2K18***

Symposium: No

Publications: **Published in UGC approved International Journal.**

**Social Media Reach: -----**

Youtube : Uploaded

Facebook : ------

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

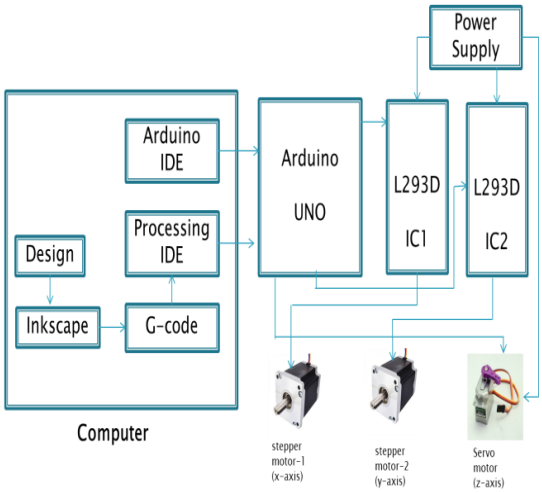
TEAM ID: 4ECE56

TITLE OF THE PROJECT: Arudino based CNC machine

FACULTY GUIDE: Ms.P.Vadivu

K.R.Venkatesh

**Project Block Diagram:**





**Abstract :**

The fast development of the prerequisite of CNC machines, requires the machines ought to be anything but difficult to work in the meantime ought to be more unique than any time in recent memory. This paper manages how to make these CNC machines dynamic that they might work with numerous outlines without prerequisite of reinventing. That implies these machines would prefer not to be reconstructed for every single time when we proceed onward to new outline. This is conceivable by creating and gushing the G-codes of the specific plan to the Arduino Uno which at that point sends the digitals charges to the Motor Driver ICs to control the stepper and servo engines to plot that outline. This paper manages the outline of a model that can plot the plans with the measurement of 40mm square. In future it can be produced into substantial scale with high power stepper engines.


**Achievements: Nil**

Project Design Contests: Nil

Symposium: No

Publications: **Applied in UGC approved International Journal.**

**Social Media Reach: ----**

Youtube : Uploaded

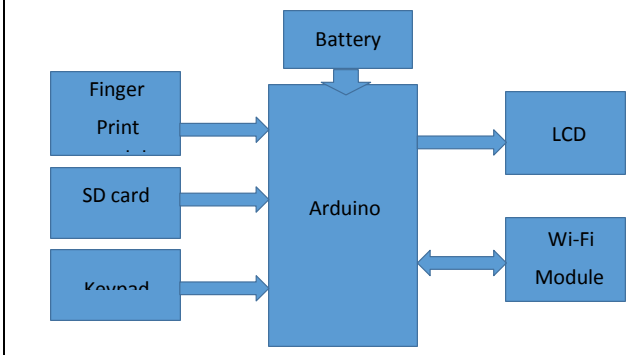
Facebook : ------

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID:4ECE46

TITLE OF THE PROJECT: Biometric wireless pendrive

FACULTY GUIDE: Mr.E.U.Iniyan




**Abstract :**

-Generally, we used to transfer data wirelessly between two devices by using controller and PC But it is not always possible to carry such a large size device to the particular location. So to overcome this problem, we are designing a hardware which is more compact to carry anywhere. With the help of this project we can not only transfer the data but also we can see secure the data. This station is connected to a PC over USB, and using our application-layer software on PC, allows the user to read and store data on the device. 20 fingerprints can be stored on the device, and each fingerprint has a separate logical volume that the corresponding user can utilize as their own private storage space

**Achievements:**

Project Design Contests: Participated in ITElegance'18 in Jeppiaar Inst of Tech

Symposium:

Publications: Applied in SCI Indexed Journal

**Social Media Reach:**

Youtube : nil

Facebook : nil

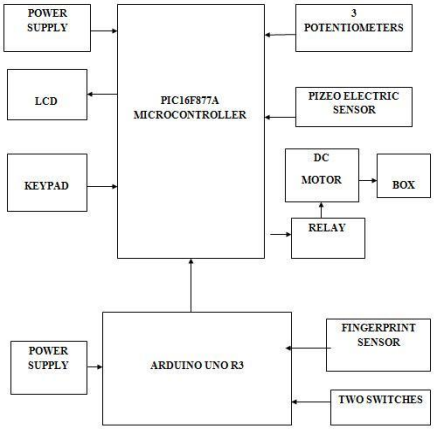
**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE54

TITLE OF THE PROJECT: Ultra Secure programmable lock box

FACULTY GUIDE: Mr.E.U.Iniyan

**Miniproject Photo/ Block Diagram or schematic:**




**Abstract :**

Security has always been a major concern for the households and the office environment, and for this concern various approaches are in place to address the problem. Most of the major lock security systems have several loopholes which could be broken down to gain access to the desired places, and it creates a concern for a secure lifestyle and proper working environment. With this consideration, a design and prototype of a biometric fingerprint based ultra lock box has been presented in this paper. In the proposed system, fingerprints of the authorized users are enrolled and verified to provide access to a facility that is used by multiple users. We have interfacing two controllers to provide security system. The Arduino UNO device is connected with fingerprint sensor and PIC16F877A is connected with keypad, potentiometer and vibration sensor. These controllers are interfaced.

**Achievements:**

Project Design Contests:Participated in IEEE Project Expo at SCSVM University

Symposium:

Publications: Applied in Scoupus Indexed Journal

**Social Media Reach:**

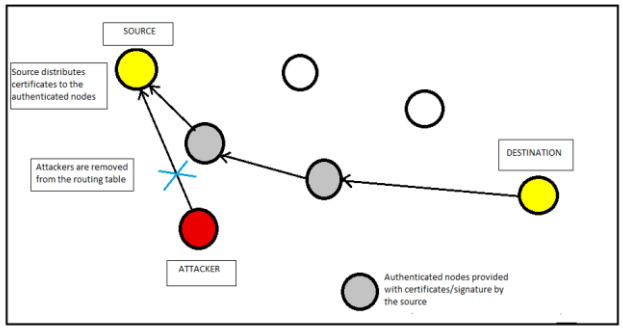
Youtube : Nil

Facebook : nil

TEAM ID: 4ECE27

TITLE OF THE PROJECT: Implementation of SMHSP protocol using ant search method in MANETS

FACULTY GUIDE: Ms. S. Vimala




**ANT SEARCH METHOD**

**Abstract :**

A mobile ad hoc network is a wireless network mainly used for its highly flexible predefined infrastructure but suffering from a serious issue of poor security due to very low radio transmission range. To overcome this security issue we used SMHSP(Secured multi hop strong path) by using ant search method.the proposed protocol includes providing secure routing table, finding attackers, verification of nodes so that the packet sent by the source are un customized. Here we use the SPPEM (secured packet protection encryption mechanism) algorithm and SMMD5 (Secured Modified Message Digest) algorithm to perform this routing protocol thereby increasing throughput, packet delivery ratio and decreasing the delay.

**Achievements:**

Project Design Contests: nil

Symposium: nil

Publications: nil

**Social Media Reach:**

Youtube :

Facebook :

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

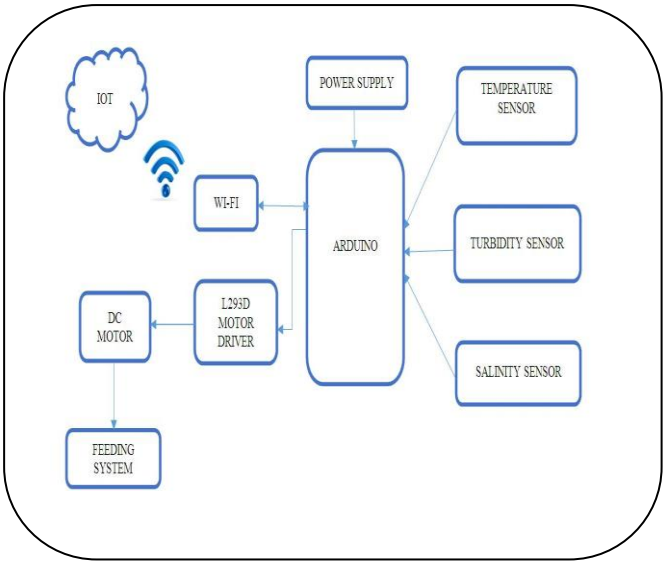
TEAM ID: 4ECE30

TITLE OF THE PROJECT: Real time acquaculture monitoring using IoT

FACULTY GUIDE: Ms. S.Rubini

M.Logeshwari

H.Nandhini




**Abstract :**

Aquaculture is the farming of fishes and aquatic cultures for commercial and edible purpose. Aquaculture is one of the fastest growing industries. So, the aquatic organisms are continuously monitored for their healthy growth as parameters varies continuously with time and surrounding should also monitor. In this paper we designed and developed a low cost IOT based real time aquaculture monitoring system with an automatic feeding system. This system consists of several sensors like temperature, salinity and turbidity sensors. These sensors are used to measure physical and chemical parameters in and around water. Using IOT, the farmers or owners can continuously monitored and through the internet over long distance. This wireless monitoring

**Achievements:**

Project Design Contests: No

Symposium: No

Publications: Journal

**Social Media Reach:**

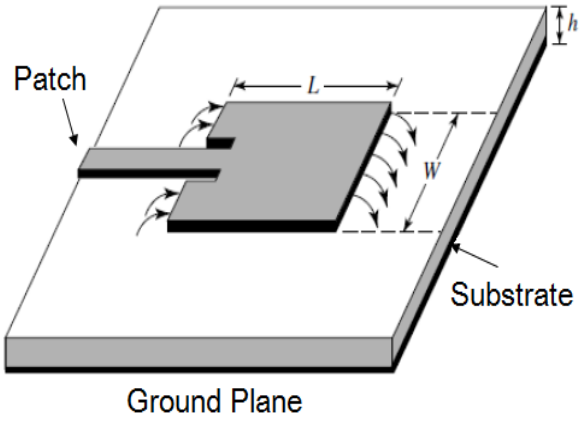
Youtube : No

Facebook : No

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE29

TITLE OF THE PROJECT: A Triband Swastika Patch Shaped antenna for wireless MIMO System




FACULTY GUIDE: Mr.B.Vidhyapathi

MEENA .G.R

M PRATHUSHA

MADU BRAHMANI

**Abstract :** Micro strip patch antennas are widely used in wireless applications in recent years because of its low profit, small size, weight, cost, performance and ease of installation. Micro strip patch antenna can be used in Satellite applications, space craft, air craft, wireless applications such as WLAN, Wi-MAX, Wi-Fi etc., The design of A Tri-band Swastika micro strip patch shaped antenna for wireless MIMO system for Industrial Scientific and Medical(ISM) band application. The design has four slots as same as Swastika Shape into it and it resonates at 3.102 GHZ frequency.

Feeding method used for this design is Inset Feed. Gain=3.01db, Bandwidth=7.89%, Return loss=-12.00, Resonant frequency=3.102GHZ and Directivity=5.77341dbi are investigated. ADS (2009) simulation tool the antenna and used to increase the impedance Bandwidth .This antenna is very attractive because of their Low Weight and it is used for Design and Simulation. This will reduce the size of weight and for Easy production. The simulation can be done using ADS simulation software and the main objective of the work is to improve gain, return loss, and radiation

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Applied

**Social Media Reach:**

Youtube : Nil

Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

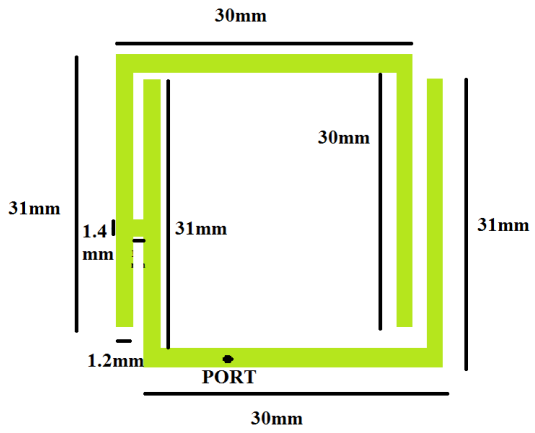
TEAM ID: 4ECE53
TITLE OF THE PROJECT: A New Dual-band Micro strip Antenna with U-Shaped Slot

FACULTY GUIDE: Mr.B.Vidhyapathi

SRINIVASAN .S

VARUN .R

VIGNESH .M.K.




**Abstract :**

In this paper, U-shaped slot micro strip patch antenna is designed which operates at the multiple frequencies of 5.6 GHz and 7.9 GHz. This antenna has the capability of wide bandwidth and for dual band applications. The substrate used for making antenna is RT-DUROID. This substrate has a relative permittivity of 2.4 and having a dielectric loss tangent of 0.02. The designed antenna has the capability of operating between 4 GHz to 8 GHz. In this project gain, directivity, return loss, rectangular plot, and radiation pattern are the parameters of U-shaped slot micro strip patch antenna which are analyzed and simulated. All multifarious parameters of the antenna are scrutinized and simulated on ADS. This shape will provide wireless applications like WI-FI, W-LAN, WIMAX, and satellite applications. In this project, radiation pattern is analyzed as well as return loss is measured which tells us how much power is transmitted by the antenna.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Applied

**Social Media Reach:**

YouTube : Nil

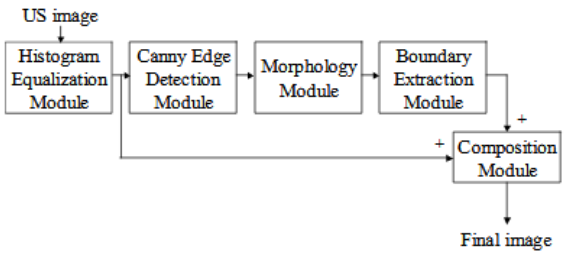
Facebook: Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE37

TITLE OF THE PROJECT: A Novel segmentation technique for carotid artery

FACULTY GUIDE: Dr.M.Moorthi




**Abstract :** Ultrasound provides a non-invasive means for visualizing various tissues within the human body. However, these visualizations tend to be filled with speckle noise and other artifacts, due to the sporadic nature of sound waves. The paper presents a novel segmentation technique for use on noisy B-mode ultrasound images of the carotid artery. This scheme is based on histogram equalization, Canny edge detection and morphology methods. The proposed scheme provides various degrees of customizability, for a wide range of ultrasound images. The experimental results show that this scheme is accurate enough to segment the different textures in ultrasound images. These automatically segmented regions may alleviate the need for a practitioner's time-consuming manual segmentation of wanted regions.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

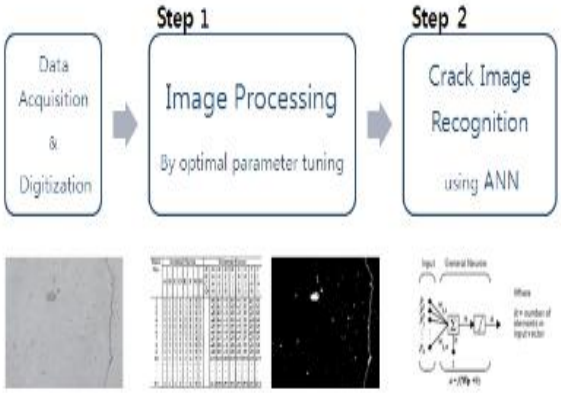
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE44

TITLE OF THE PROJECT: Crack detection using image processing

FACULTY GUIDE: Dr.M.Moorthi




**Abstract :**

In this paper, a novel crack detection method is proposed based on the digital image of building external wall. We strive to record the wall surface condition accurately, and then get the linear characteristics of the image for crack recognition. This paper first does image edge detection, image binary of adaptive threshold and removal of isolated points, obtaining effective linear characteristics. Finally we distinguish the cracks and the normal lines through the curve fitting and its parameter analysis.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

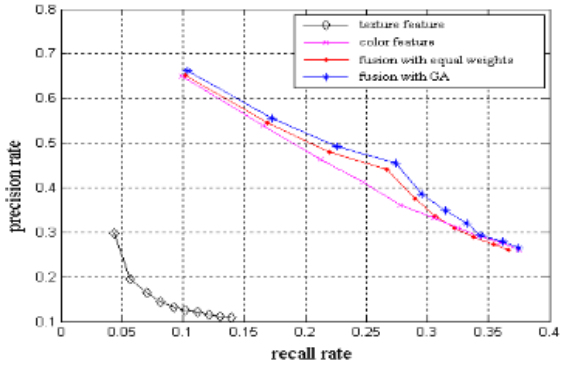
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE45

TITLE OF THE PROJECT: Image Retrival based on multi feature similarity score using genetic algorithm-Fusion

FACULTY GUIDE: Dr.M.Moorthi




**Abstract :**

This paper proposes an image retrieval method based on multi-feature similarity score fusion using genetic algorithm. Single feature describes image content only from one point of view, which has a certain one-sided. Fusing multi-feature similarity score is expected to improve the system's retrieval performance. In this paper, the retrieval results from color feature and texture feature are analyzed, and the method of fusing multi-feature similarity score is described. For the purpose of assigning the fusion weights of multi-feature similarity scores reasonably, the genetic algorithm is applied. For comparison, other three methods are implemented. They are image retrieval based on color feature, texture feature and fusion of color-texture feature similarity score with equal weights. The experimental results show that the proposed method is superior to other methods.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

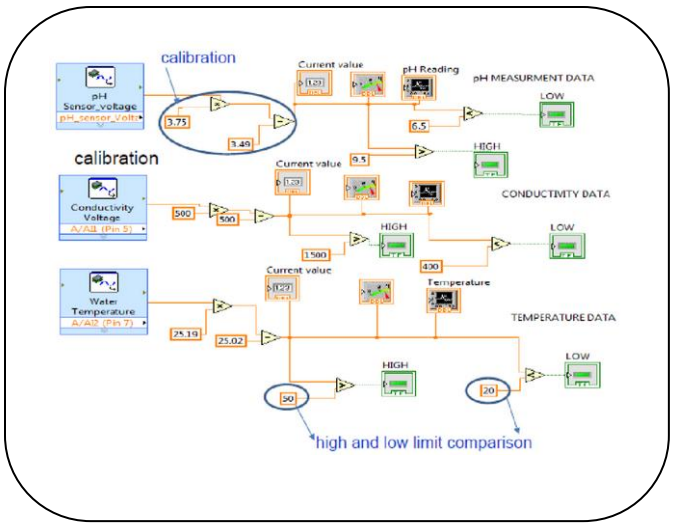
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE41

TITLE OF THE PROJECT: Smart green roof system using labview

FACULTY GUIDE: Dr.P.Kalpanadevi




**Abstract :** In the present work, wireless sensor network and smart real-time controlling and monitoring system are integrated for efficient energy management of standalone photovoltaic system. The proposed system has two main components namely the monitoring and controlling system and the wireless communication system. LabView software has been used in the implementation of the monitoring and controlling systemThe main functions of monitoring and controlling unit is to efficiently control the energy consumption form the photovoltaic system based on accurate determination of the periods of times at which the loads are required to be operated. The wireless communication system also continuously feeds the monitoring and controlling unit with updated input data from the sensors and from the photovoltaic module send to calculate and record the generated, the consumed, and the stored energy to apply load switching saving schemes if necessary. It has to be mentioned that our proposed system is a low cost and low power system because and it is flexible to be upgraded to fulfill additional users' requirements.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

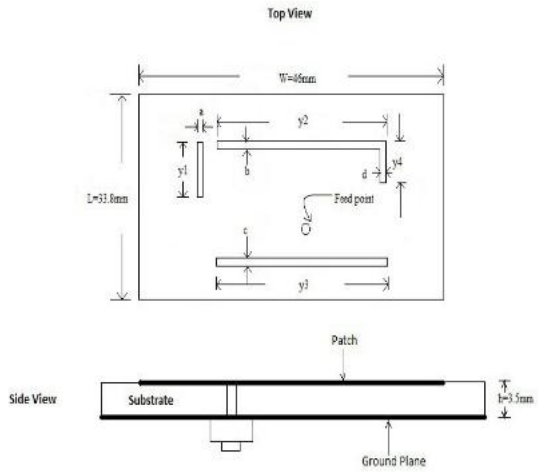
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE38

TITLE OF THE PROJECT: A Multi-band triangular patch antenna for WLAN and fixed sevices

FACULTY GUIDE: Mr.J.Arunprasath




**Abstract :**

In this paper, the design of a coaxial feed single layer rectangular microstrip patch antenna for three different wireless communication band applications is presented. The proposed antenna is designed by using substrate Roger RT/duroid 5880 having permittivity of about 2.2 and tangent loss of 0.0009. The characteristics of the substrate are designed and to evaluate the performance of modeled antenna using HFSS v.11 EM simulator,from Ansoft. The proposed antenna has small in size and operates at 2.25GHz, 3.76GHz and 5.23GHz suitable for mobile satellite service (MSS) network, WiMAX and WLAN applications. The dimension of the patch and slots are optimized to obtain these desired functional frequency ranges. The simulation results with frequency response, radiation pattern and return loss, SWR, Input Impedance are presented with appropriate table and graph.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

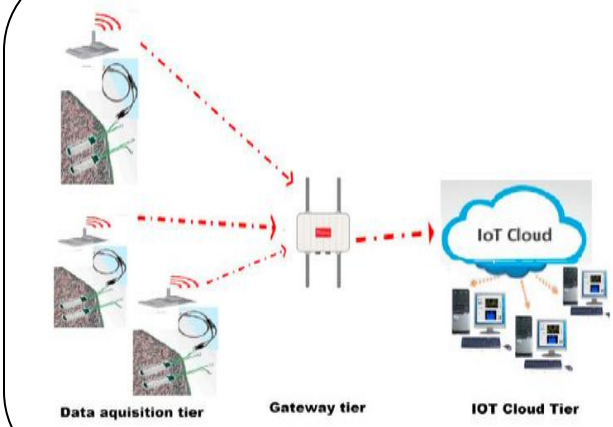
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE36

TITLE OF THE PROJECT: Smart Farming e-monitoring svstem

FACULTY GUIDE: Mr.E.Dilliraj




**Abstract :**

Internet of Things (IoT) plays a crucial role in smart agriculture. Smart farming is an emerging concept, because IoT sensors capable of providing information about their agriculture fields. The paper aims making use of evolving technology i.e. IoT and smart agriculture using automation. Monitoring environmental factors is the major factor to improve the yield of the efficient crops. The feature of this paper includes monitoring temperature and humidity in agricultural field through sensors using CC3200 single chip. Camera is interfaced with CC3200 to capture images and send that pictures through MMS to farmers mobile using Wi-Fi.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

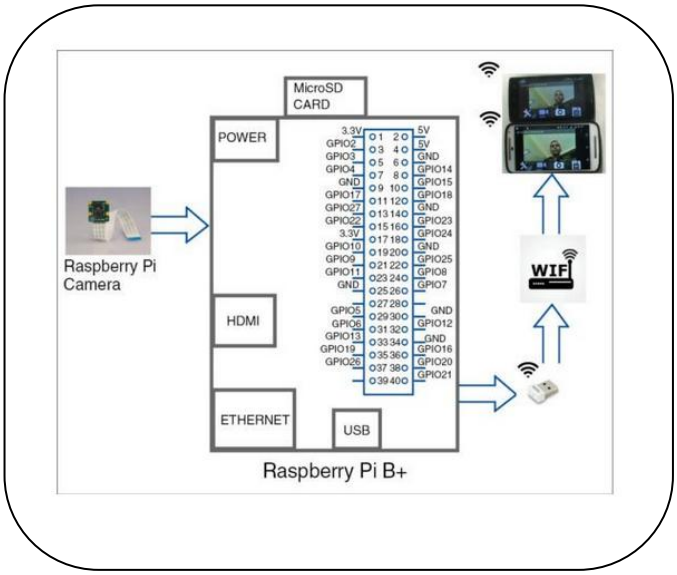
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE34

TITLE OF THE PROJECT: Survellence camera using Raspicam and Android app

FACULTY GUIDE: Ms.Subbulekshmi




**Abstract :**

This project describes how to build a surveillance camera based on Raspberry Pi (Raspi) that records HD video only when something moves in the monitored area. Live feed can be viewed from any Web browser, including one on a mobile phone.Security cameras are common in most industries around the world. Their applications can range from preventing theft or vandalism to traffic and weather monitoring and much more. Due to a small form factor, affordable price and low power consumption, Raspberry Pi can be easily integrated in a surveillance camera.In this project we will first connect Raspi camera to Raspi, and stream live video from it. We can also watch the streaming of content from our Android device. We will also take photographs with different effects.Raspi is a credit-card-sized low-cost microcomputer that can run Linux operating system, and has endless extension possibilities.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media** Nil **Reach:**

Youtube :

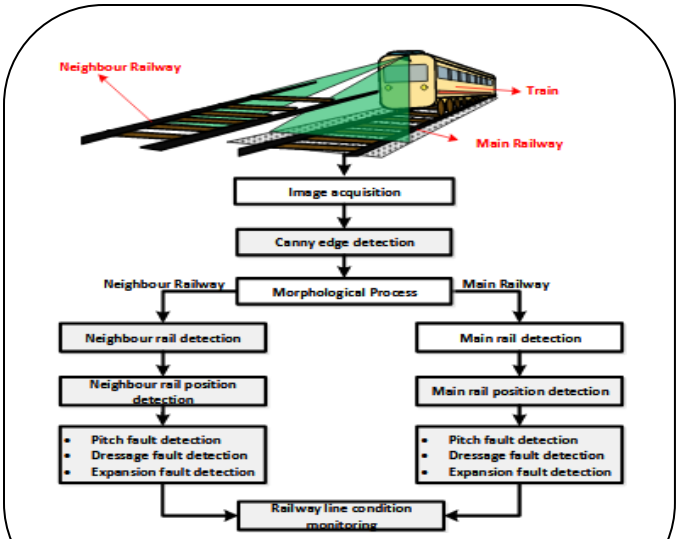
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE33

TITLE OF THE PROJECT: Vision based algorithm for sensing railway tracks

FACULTY GUIDE: Mr.T.Rubesh Kumar





**Abstract :**

Computer vision-based condition monitoring methods, the methods are increasingly used on railway systems. Rail condition monitoring process can be performed using data obtained with the help of computers using these methods. In this study, a computer-based visual rail condition monitoring is proposed. By means of a camera placed on top of the train the rail that the train is on and the neighbor rail images are taken. On these images, the edge and feature extraction methods are applied to determine the rails. The resulting several faults between railways were studied to determine if there is a failure. The results obtained are given at the end of the study. Experimental results show that the proposed method is examined, it is observed that a healthy and effective results.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

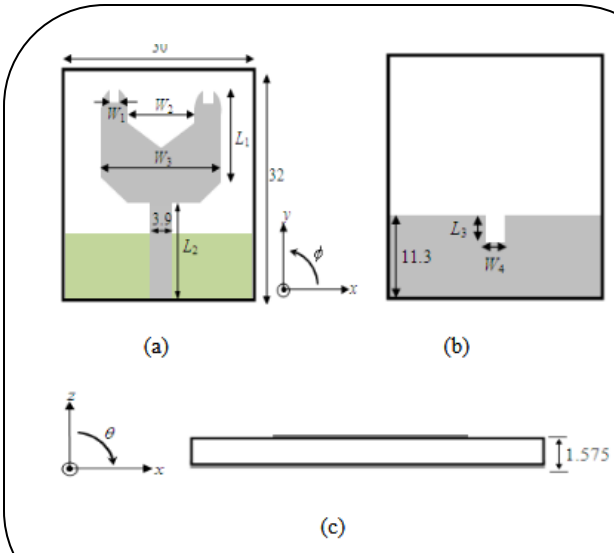
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE32

TITLE OF THE PROJECT: Design of UWB antenna for MIMO application

FACULTY GUIDE: Mr.J.Arunprasath




**Abstract :**

For ultrawideband (UWB) applications, a compact multiple-input-multiple-output (MIMO) antenna prototypes are proposed. The first prototype is with a dimension of 40 × 40 $mm^2$. The design consists of seven squares surrounding a center square in which the ground plane is partially implemented. In the second prototype, a compact multiple-input-multiple-output (MIMO) antenna having a size of 36 × 40 $mm^2$ is proposed. To achieve good isolation two planar-monopole (PM) antenna elements are placed perpendicular to each other. On one side of the substrate antenna elements with microstrip-fed is printed. On the other side of the substrate two ground planes are connected via a short ground strip and two inverted U-shape stubs are added to the ground. This arrangement provides good isolation and increase impedance bandwidth. Using High Frequency Structure Simulator Software the results are simulated.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

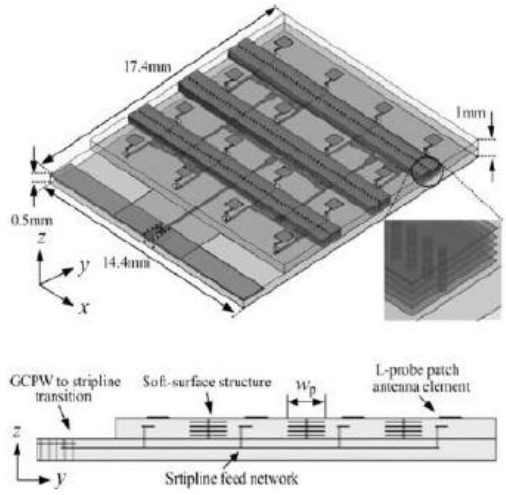
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE47

TITLE OF THE PROJECT: Millimeter wave connected antenna for 5G application

FACULTY GUIDE: Mr.J.Arunprasath




**Abstract :**

In this work, a beam switched antenna system based on a planar connected antenna array (CAA) is proposed at 28 GHz for 5G applications. The antenna system consists of a 4 × 4 connected slot antenna elements. It is covering frequency band from 27.4 GHz to 28.23 GHz with at least -10dB bandwidth of 830 MHz. It is modeled on a commercially available RO3003 substrate with $\epsilon_r$ equal to 3.3. The dimensions of the board are equal to 61×54×0.13 $mm^3$. The proposed design is compact and low profile. A Butler matrix based feed network is used to steer the beam at different locations.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

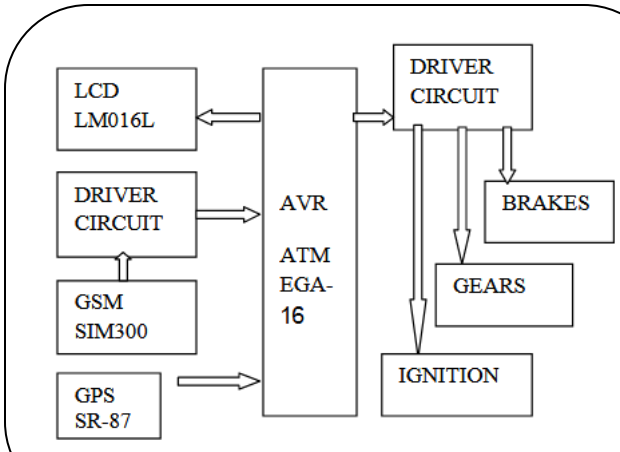
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE48

TITLE OF THE PROJECT: Engine lock and tracking system

FACULTY GUIDE: Ms.Dolly Irene




**Abstract :**

Currently almost of the public having an own vehicle, theft is happening on parking and sometimes driving insecurity places. The safe of vehicles is extremely essential for public vehicles. Vehicle tracking and locking system installed in the vehicle, to track the place and locking engine motor. The place of the vehicle identified using Global Positioning system (GPS) and Global system mobile communication (GSM). These systems constantly watch a moving Vehicle and report the status on demand. When the theft identified, the responsible person send SMS to the microcontroller, then microcontroller issue the control signals to stop the engine motor. Authorized person need to send the password to controller to restart the vehicle and open the door. This is more secured, reliable and low cost.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

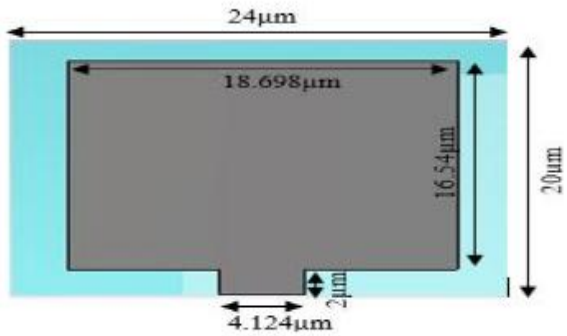
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE49

TITLE OF THE PROJECT: Microstrip patch antenna design for plastic explosive

FACULTY GUIDE: Mr.J.Arunprasath




**Abstract :** The paper represents Terahertz microstrip antenna employing FR4 material as a substrate with permittivity of 4.4 and thickness of 1.62 µm. The slotted substrate and stacked ground plane has been used in antenna design. The ground, patch and feedline are made up of copper. The proposed terahertz microstrip patch antenna has an impedance bandwidth of 0.077 THz with resonant frequency of 4.11THz, thus making it suitable for narrowband applications. The proposed antenna has return loss of -42.00dB with the operating frequency range of 4.07 THz-4.15 THz. It has gain of 5.73dB and directivity of 5.55dBi at resonant frequency of 4.11THz. It has input impedance of 50.62 ohms that is required for minimal antenna return losses. The antenna has been designed and simulated through CST Microwave Studio 2014. The performance of terahertz microstrip patch antenna has been analyzed in terms of impedance bandwidth (THz), return loss (dB), directivity (dBi), gain(dB), HPBW(degrees) and impedance (ohms). The presented antenna design can be used for detection of plastic explosive SX2 at resonant frequency of 4.11 THz.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

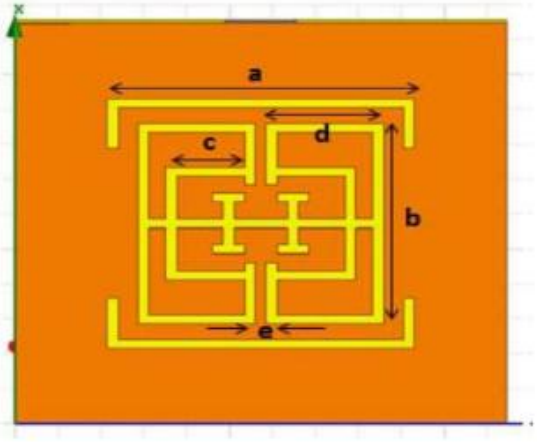
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE50

TITLE OF THE PROJECT: CSRR loaded microstrip transmission line with stopband characteristics

FACULTY GUIDE: Mr.N.Darwin




**Abstract :**

Microstrip transmission line implemented using square shape vasalego materials popularly known as metamaterials. The different types of structures are designed and loaded into the microstrip transmission line using high frequency commercial software (HFSS) and the simulations were made using the same. The simulated results of proposed structure exhibits three stopbands one from 2.17 GHz to 2.30 GHz, second from 3.25 GHz to 4.11 GHz and third one from 5.36 GHz to 6.61 GHz with resonant frequencies of 2.24 GHz, 3.6 GHz and 5.72 GHz and insertion loss of -19 dB, -34 dB and - 46 dB respectively. This structure can be implemented in designing of stopband filter as it provides better peak rejection.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

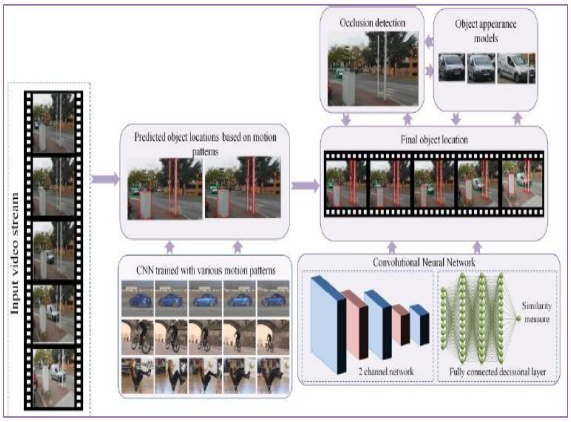
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE52

TITLE OF THE PROJECT: Personal assisstance with object detection

FACULTY GUIDE: Ms.J.Dolly Irene




**Abstract :**

We present our preliminary results from the design process for developing the Worcester Polytechnic Institute's personal assistance robot, FRASIER, as an intelligent service robot for enabling active aging. The robot capabilities include vision-based object detection, tracking the user and help with carrying heavy items such as grocery bags or cafeteria trays. This work-in-progress report outlines our motivation and approach to developing the next generation of service robots for the elderly. Our main contribution in this paper is the development of a set of specifications based on the adopted user-centered design process, and realization of the prototype system designed to meet these specifications.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

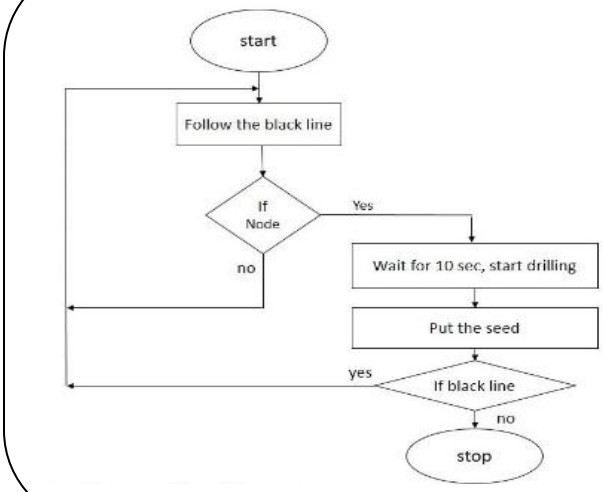
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE55

TITLE OF THE PROJECT: Seed implantation for vertical farming robot

FACULTY GUIDE: Mr.E.Dilliraj




**Abstract :**

In the current scenario most of the countries do not have sufficient skilled manpower specifically in agricultural sector and it affects the rowth of developing countries. So it's a time to automate the sector to overcome this problem. The plantations of seeds are automaticallydone by using DC motor. The distance between the two seeds are controlled and varied by using Microcontroller. It is also possible to cultivate different kinds of seeds with different distance. Also the project consists of sprinkler, which would be used for reducing the wastage of fertilizers that is done by spraying appropriate amount of fertilizers equired for the particular crop. The sprinkler would sprinkle on the senses from wheel movement and the on and off of the sprinkler would be ontrolled by Microcontroller. When the Robot reaches the end of the field we can change the direction with the help of remote switches. The whole process is controlled by Microcontroller.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

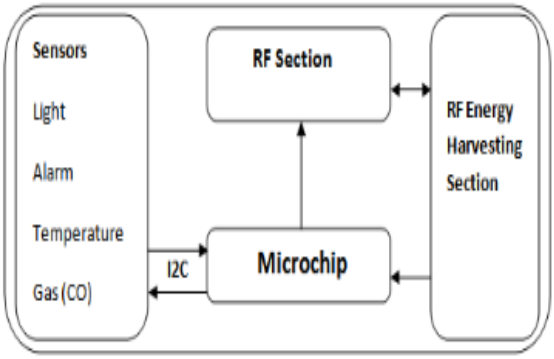
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE57

TITLE OF THE PROJECT: Smart Warehouse

FACULTY GUIDE: Mr.J.Arunprasath




**Abstract :**

With the development of enterprises and the constant demands of the product diversity, traditional warehouse management model cannot meet that, due to its heavy workload and low efficiency. This paper presents a new type of intelligent warehouse management system - Smart Warehouse Management System based on the IOT, and expounded the principles and structure of it. This system has great advantages compared with the traditional mode, and we expect good prospects for its development.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

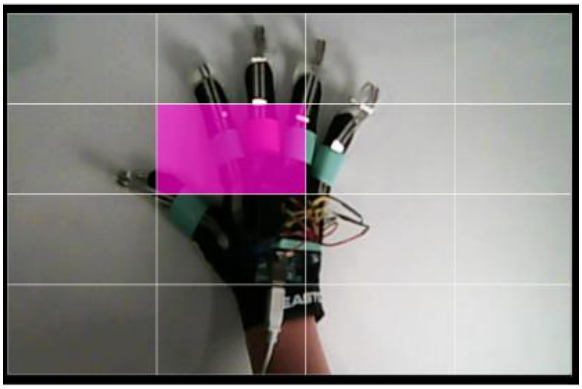
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE58

TITLE OF THE PROJECT: Magic Gloove

FACULTY GUIDE: Ms.Sreejavijay




**Abstract :**

The Magic Glove is a wearable touch sensitive musical instrument similar to a drum machine in use and application. A user controlling the device can generate music from predetermined sound libraries which at time of demonstration included sound sets in the genres of jazz, dubstep and classical. Audial feedback is provided to the user and otentially an audience, and visual and physical feedback are provided primarily to the user. The project was implemented with pressure sensors, an Arduino microcontroller, a standard web camera, software built on ChucK, Java, Openframeworks, and several sound samples from


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID:4ECE59

TITLE OF THE PROJECT: Gesture Controlled hoverboard

FACULTY GUIDE: Ms.J.DollyIrene


**Abstract :**

In this wireless gesture controlled robot project we are going to control a robot using hand gestures. This is an easy, user-friendly way to interact with robotic systems and robots. An accelerometer is used to detect the tilting position of your hand, and a microcontroller gets different analogue values and generates command signals to control the robot. This concept can be implemented in a robotic arm used for welding or handling hazardous materials, such as in nuclear plants.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

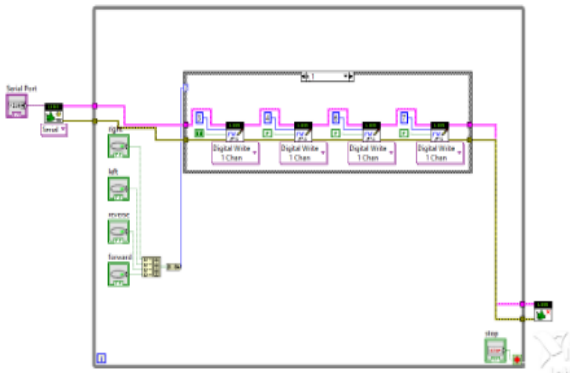
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE28

TITLE OF THE PROJECT: Wireless Survelliance rescue robot

FACULTY GUIDE: Ms.P.Kalpanadevi




**Abstract :**

Surveillance and inspection cameras play an important role in security and monitoring applications. Various cameras are designed for such purpose including Biometric surveillance cameras, Aerial surveillance cameras and payload surveillance cameras. As an extension to the domain of surveillance cameras, in our work we have designed a new prototype spy ball that is capable of transmitting wireless video and audio signals. The spy ball also contains a radio controlled navigation system which can assist in moving the ball in different directions. The ball can be used as a surveillance device and hence it is made shock proof. This ball also supports its personal video streaming application that contains different options for video capturing and recording facility. Upon testing this ball on various platforms, excellent video capturing with stability is achieved.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

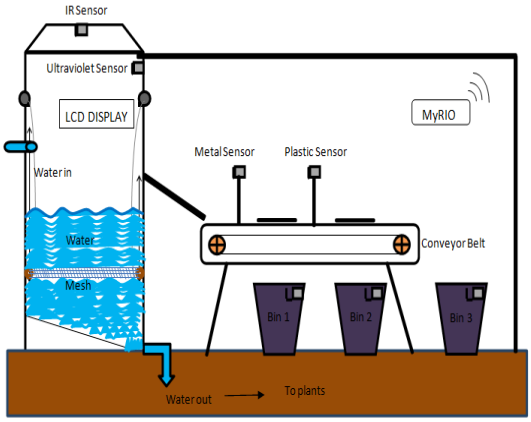
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE26

TITLE OF THE PROJECT: E-Waste Managemant

FACULTY GUIDE: Ms.P.Kalpanadevi




**Abstract :** A Smart Trash Bin segregates wastes by itself as degradable wastes and no-degradable wastes with the help of sensors and motors, interfaced with NI myRIO.Rapid changes in technology, low initial cost, and planned obsolescence have resulted in a fast-growing surplus of wastes all around the globe. In most places in India, garbage is dumped as one, mixing degradable and non degradable wastes, causing the spread of a lot of epidemics. People dump wastes on roadsides, which is not picked regularly by the people responsible. In India, the total generated is expected to cross 800,000 tons in 2012. This figure is expected to grow at a rate of 30 – 50 % year on year. With correspondence to the *Swachh Bharath* Scheme of our Honourable Prime Minister to make India clean and green, this automatic waste sorting trash bin is an initiative taken by us to make it more commendable. Separating the wastes into 2 categories- degradable and non-degradable will be taking place in an effective closed manner, thereby reducing the open decomposition of organic wastes, thus curbing the growth of microorganisms.

**Achievements:**

Project Design Contests: Yes

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

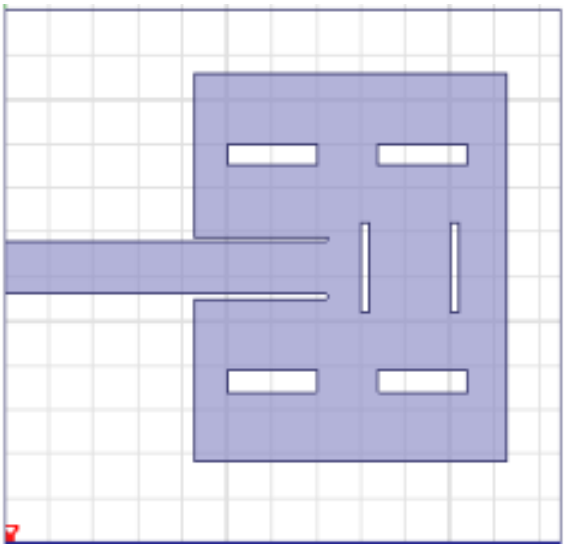
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE24

TITLE OF THE PROJECT: Design of roman letter shaped microstrip patch antenna for wifi application

FACULTY GUIDE: Mr.J.Arunprasath




**Abstract :**

From the last few decades, there is a tremendous development and usage has been taken place on Wi-Fi systems. This Wi-Fi system makes use of various antennas such as omnidirectional and directional for their applications. Among various antennas, Microstrip patch antenna emerges as a trending technology that supports satellite applications and numerous wireless applications like WLAN, Wi-Fi etc. The Microstrip patch antenna is broadly spread due to its small size, ease of installation, less weight, low profile and performance. The proposed model antenna is used for Wi-Fi applications. In designing this antenna we have selected the substrate material FR4 epoxy with ε= 4.4 and tuned to the frequency of 4.9 GHz. Finally,we analyzed the performance of the antenna by various metrics like VSWR, Radiation pattern, Directivity, Return loss, Gain using HFSS software.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

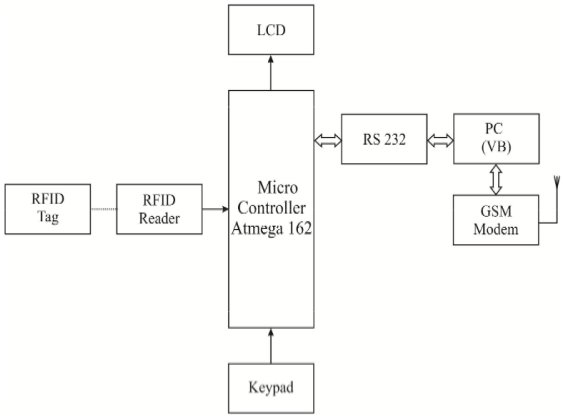
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE20

TITLE OF THE PROJECT: RFID based library management svstems

FACULTY GUIDE: Ms.Sreejavijay




**Abstract :**

RFID systems are becoming very popular nowadays as they play a very vital role in reducing thefts with less human effort. Industries, shopping malls and departmental stores have started using RFID tags and readers inorder to reduce the theft. Nowadays RFID systems have become an integral part of day-to-day life. RFID in libraries are a developing technology and is being implemented in small in small andmedium sized libraries. Implementation of RFID will help in reducing the work burden of the administrator as well as the user in arranging and searching the books respectively. In the present systems employed there are special methodologies for arrangement of books, journals, DVDs and so on. These techniques need to be strictly followed inorder to help the users find their book or their requisites. This paper helps in finding a solution to this tedious problem faced by most libraries in an easy way.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

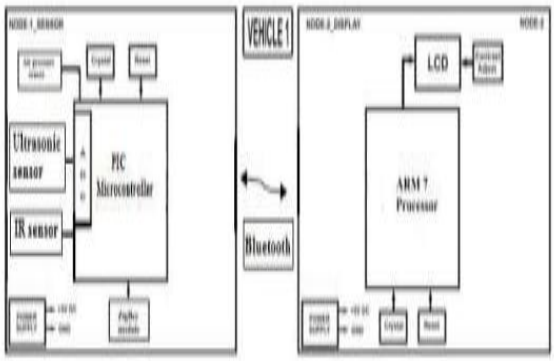
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE15

TITLE OF THE PROJECT: Multisensor fusion emergency alert for submarine communication using ELF

FACULTY GUIDE: Ms.M.priya





## Abstract :

Active safety is an important trait of a modern vehicle to provide precaution warning or compensatory control before the pre-crash stage of vehicles safety. All vehicle signal and information are acquired by several in-vehicle sensors , and integrated in vehicle gateway through in-vehicle or vehicle-to-vehicle communications. The information exchanged among the host and surrounding vehicles provide comprehensive vehicle and driving status of each vehicle, so the driver can drive vehicle more safely with the cooperative driving mechanism. The demonstration system consists of a vehicle gateway, which is based on ARM core processor, PIC microcontroller, Bluetooth for I/O control and system management for intensive computation of information fusion and ZigBee for wireless communication. After reaching within the communication limit, the vehicles set time synchronization and then exchange vehicles information. Which consists of following phases path prediction and risk assessment. The risk assessment evaluates the possibility of car crash and transmit the warning message to its surrounding vehicles, if the risk level of vehicle is raised beyond a threshold. The cooperative driving is satisfied by sharing the vehicle information and emergency warning through wireless communication, so a driver can be alert of the dangerous situation and also be suggested an satisfactory response earlier.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

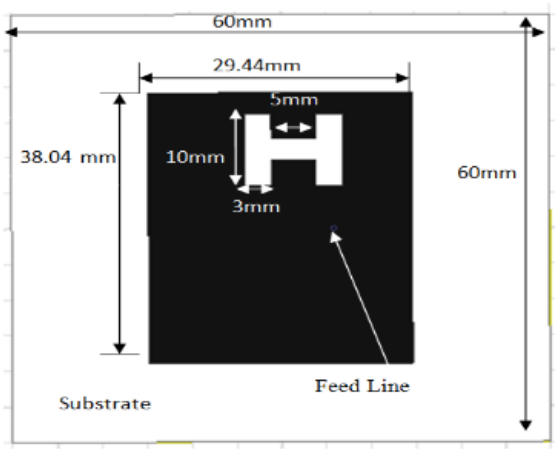
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE12

TITLE OF THE PROJECT: A H-Shaped microstrip patch antenna for wireless MIMO applications

FACULTY GUIDE: Mr.T.Rubeshkumar




**Abstract :**

A compact concaved H-shaped patch antenna for dual-band applications with improved bandwidth and isolation characteristics is presented in this paper. The proposed antenna resonates at multiband of 3.2 GHz and 4.9 GHz frequencies for VSWR ≤1.32, with animpedance bandwidth of 70%. A 2×2 MIMO system is developed using the proposed antenna giving an excellent isolation of 48 dB between the two antennas. The developed antenna system can be widely used for the 4G, WLAN and Wi-MAX applications. The proposed antenna is a good choice for MIMO systems operating for several wideband applications.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Published in UGC approved International Journal.

**Social Media Reach:**

Youtube : Nil

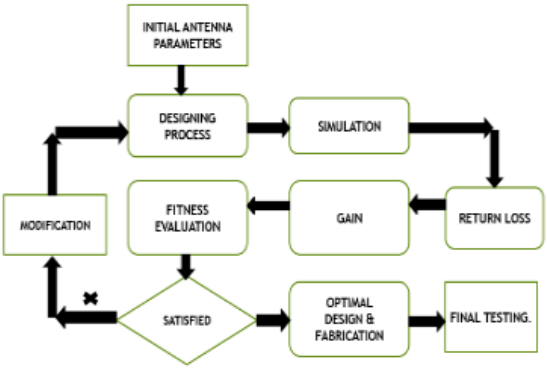
Facebook : Nil

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID: 4ECE01

TITLE OF THE PROJECT: Design of H- shaped slot multiband antenna for LTE application

FACULTY GUIDE: Mr.T.Rubeshkumar




**Abstract :**

An efficient design for H-shaped slot antenna has been proposed which resonates for 2 to 5 GHZ. As the technology becomes more prominent the demanding need of designing an antenna for multiple applications is greatly increased. To enhance the developing technology, H-shaped slot antenna has been designed to provide multiband applications like WIFI, Bluetooth, WLAN, LTE. Here the patch is sketched for a thickness of 2 mm, length of 29 mm and a width of 38 mm. The prototype of the proposed antenna has been fabricated and measured results show that narrow band operation has been obtained for multiple frequencies. The substrate material of the antenna is Flame Retardant-4 (FR-4), with the relative permittivity of 4.4. The antenna structure has been modelled and its performance has been evaluated using an Advanced Design System (ADS) software.

**Achievements:**

Project Design Contests: Nil

Symposium: Nil

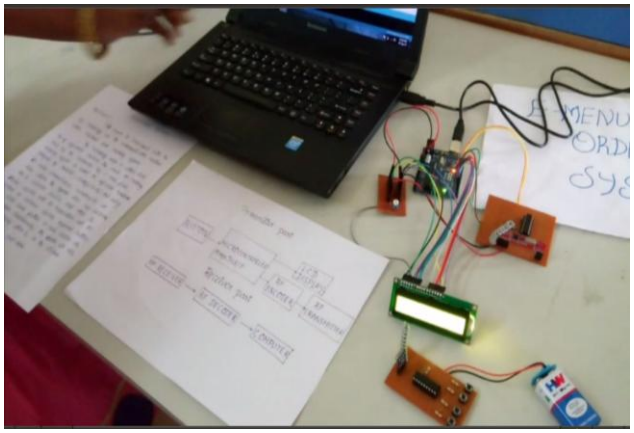
Publications: Published in UGC approved International Journal.

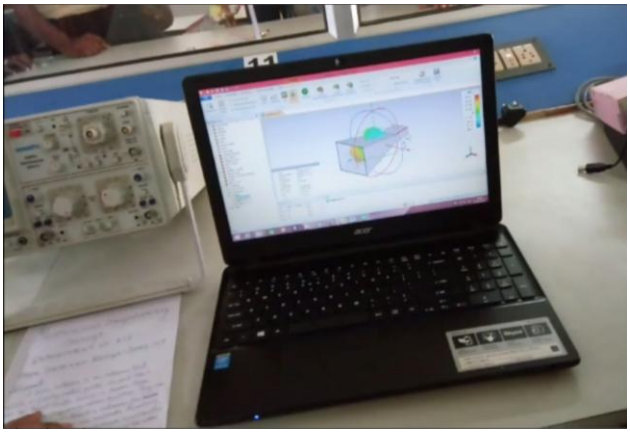
**Social Media Reach:**

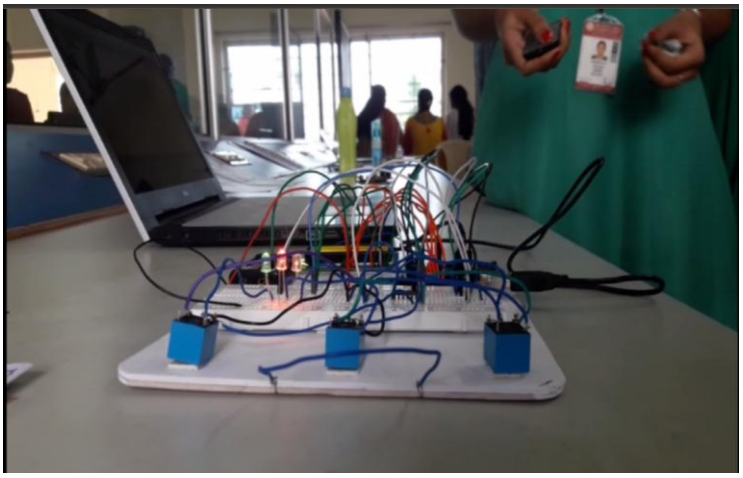
Youtube : Nil

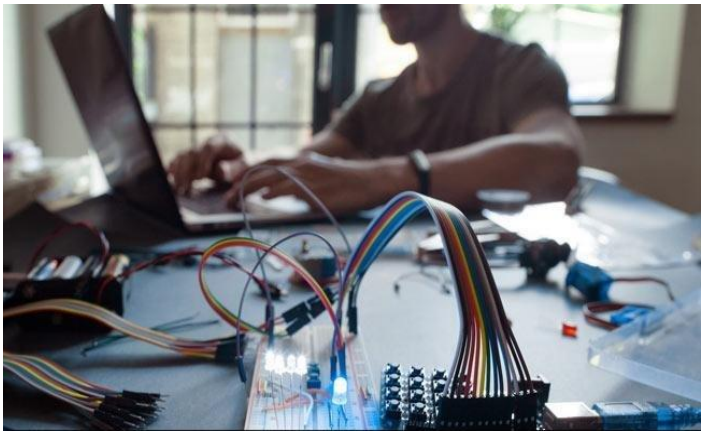
Facebook :Nil

# DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING









**28.02.2018**

| Department | Mini project Coordinator | Domain | No. of Mini projects | Total |
|---|---|---|---|---|
| EEE | Ms.S.Shobana | Instrumentation & Control | 24 | 37 |
| | | Green Energy | 5 | |
| | | Power Electronics | 5 | |
| | | Power Simulation | 1 | |
| | | Professional Lighting | 2 | |

**MINIPROJECT EXHIBITION DATED 28TH FEB 2018**

TEAM ID-PEC/EEE/17-18/EVEN/EEE01

TITLE OF THE PROJECT- GESTURE CONTROLLED ROBOT FOR VEHICLE

FACULTY GUIDE: C.RAMESH

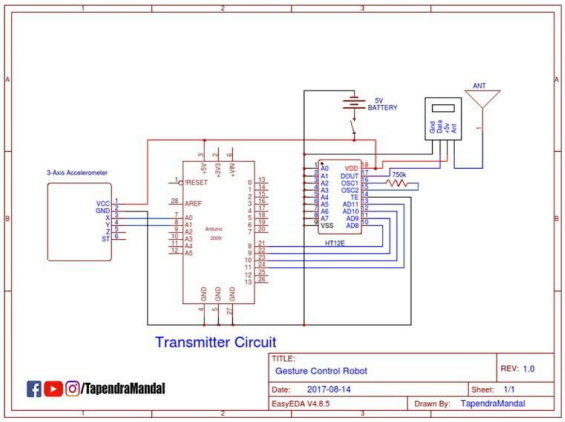

ARUN MUTHU

S V SUGAN

SUDHAKAR B

RAKESH

SATHISH KUMAR C.D



**Abstract :(10 lines)**

*To* increase the use of robots where conditions *are not* certain such as firefighting or rescue operations, we can use these robots to perform the task. In this way decisions are taken according to the working conditions by the operator and the task is performed by the robots thus we can use these robots to perform those task that may be harmful for humans. It consists of mainly two parts, one is transmitter and another part is receiver the transmitter will transmit the signal according to the position of accelerometer and your hand gesture and the receiver will receive the signal and make robot move in respective direction.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/EEE02

TITLE OF THE PROJECT- ARDUINO BASED SECURING PROJECT USING CAYENNE

FACULTY GUIDE: MS.MADHUMATHI

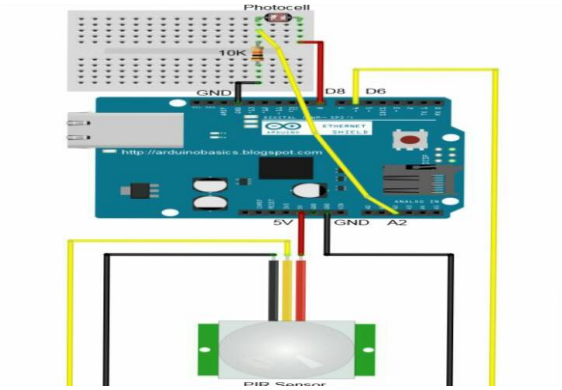

BALA MURALI M

BHARATH KUMAR.N

SWETHA.S

M.PAVITHRA

VIGNESH



**Abstract :(10 lines)**

Smart security has become absolutely pre-eminent in daily life of household and industrial works. Now-a-days internet plays a vital role in every area, so integrating sensors technology with an IOT environment could resolve the security issues of society to a great extent. It will resolve various society issues like unauthorized intruder entry, fire detection ect., Through this project a continuous monitoring of the home/apartment is possible. The main drawbackof existing technology are cost and range. This system is cost effective, reliable and has low power consumption.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/EEE03

TITLE OF THE PROJECT- SMART DRIP IRRIGATION

FACULTY GUIDE: Ms.S.Shobana

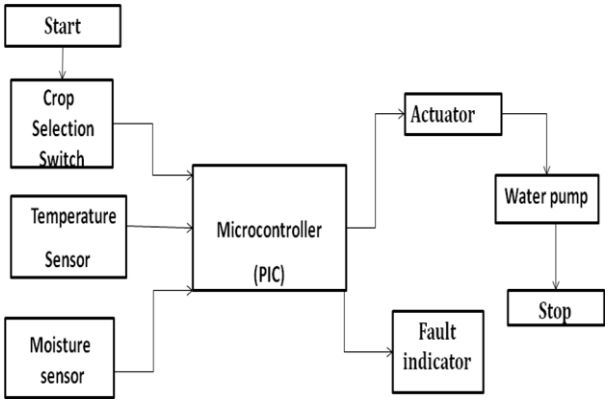
S.DHILIP KUMAR

M.BALAJI

CHITHRA.R

ANUSHYA SRI.B

RAHUL SAI .K




**Abstract :(10 lines)**

In the conventional irrigation system, farmers have to manage the irrigation system by manually monitoring and approximately predicting the soil and weather conditions.

In the proposed system, the water is programmed to drip slowly and directed to the roots of the plants through a programmable network of valves, pipes, tubing and emitter.

Moisture and temperature are monitored by precise sensors and this method avoids crop damage due to water logging thereby increasing crop productivity.

This drip irrigation system has the potential to conserve water by reducing the water consumption upto 50%.

It prevents soil erosion and retains the natural soil fertility**.**

**Achievements:**

Project Design Contests:

SMART HACKATHON FIRST ROUND SELECTED

Symposium: KANCHIPURAM UNIVERSITY

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/EEE04

TITLE OF THE PROJECT- ENERGY AUDIT

FACULTY GUIDE: Dr.K.C .JAYASANKAR


R.ANANDA KRISHNAN

M.DINESH KUMAR

SENTHIL KUMAR.R

BALAJI M

CHAITANYA KUMAR REDDY.Y




**Abstract :(10 lines):**

To minimize energy costs / waste without affecting production¬The fundamental goal of energy management is to produce goods and provide services with the least cost and least environmental effect. “The strategy of adjusting and optimizing energy, using systems and procedures so as to reduce energy requirements per unit of output while holding constant or reducing total costs of producing the output from these systems” The objective of Energy Management is to achieve and maintain optimum energy procurement and utilization, throughout the organization and: & To minimize environmental effects.

Need for Energy Audit In any industry, the three top operating expenses are often found to be energy (both electrical and thermal), labour and materials. If one were to relate to the manageability of the cost or potential cost savings in each of the above components, energy would invariably emerge as a top ranker, and thus energy management function constitutes a strategic area for cost reduction.

Energy Audit will help to understand more about the ways energy and fuel are used in any industry, and help in identifying the areas where waste can occur and where scope for improvement exists¬quality


**Achievements:**

Project Design Contests:

Symposium:

Publications:

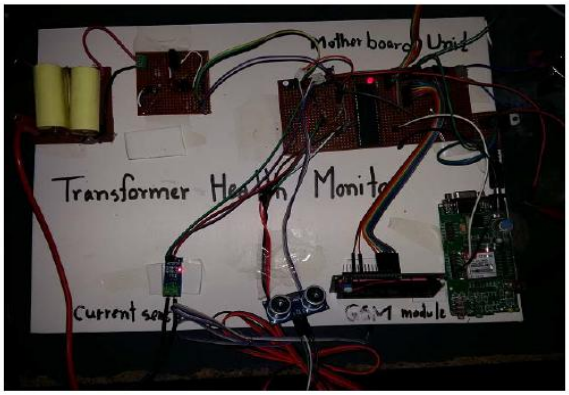
**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/EEE05

TITLE OF THE PROJECT- REAL TIME TRANSFORMER HEALTH MONITORING SYSTEM USIND GSM TECHNOLOGY




FACULTY GUIDE: MR.K.ANAND

ANNAPALLI BHANUCHAN

VIJI

KURRI HAREESH KUMAR

SUNIL KUMAR

GEETHANJALI

**Abstract :(10 lines)**

With the progress and development of national economy as well as power system, reliability and safety issues of power system have been more important. Development of distribution Transformer Health Monitoring System (THMS)has been done in that reason. Distribution transformer is the most vital asset in any electrical distribution network and therefore it needs special care and attention.
This THMS can monitor the health status of the distribution transformer in real time aspect. As a large number of transformers are distributed over a wide area in present electric systems, it's difficult to monitor the condition manually of every single transformer. So automatic data acquisition and transformer condition monitoring has been an important issue.
This project presents design and implementation of a mobile embedded system to monitor load currents, over voltage, transformer oil level and oil temperature. The implementation on-line monitoring system integrates Global Service Mobile (GSM) Modem, with single chip microcontroller and sensors.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/EEE06

TITLE OF THE PROJECT- FLOOD MONITORING SYSTEM USING IOT

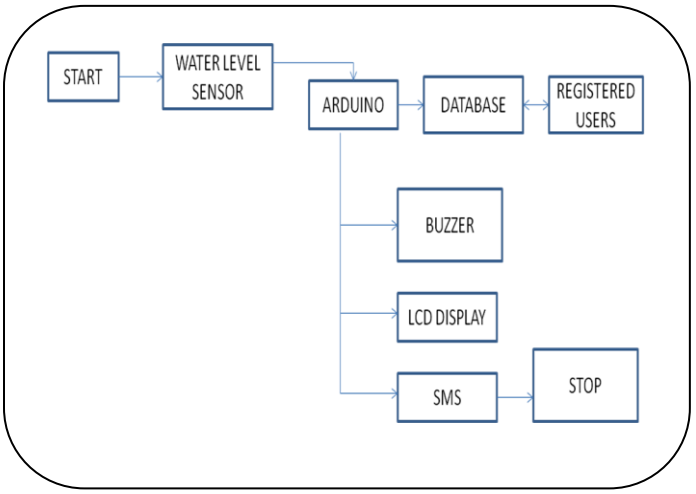

FACULTY GUIDE: MS.M.PREETHA

D.ARUN

E.NARESH

R.GOKULNATH

M.MUTHUSABARI



**Abstract :(10 lines)**

The flood occurred in Chennai during 2015 made the people to stay on the rooftop nearly five days and had taken up to 269 lives. Over 4000 soldiers had worked to rescue the people. For the safety and relief of the people from this kind of disasters, we have implemented flood warning systems to reduce their stress from the disaster.

In the existing system, information of water level is broadcast to the users without indication of dangerous levels which is one of the drawback towards precautionary measures during floods causing flood disaster.

In the proposed system, water level is measured and compared with the safe water levels at frequent intervals during heavy rains. Any abnormal measure, alerts the respective authorities and the neighbouring public through SMS and Broadcast messages.


**Achievements:**

Symposium:

KANCHIPURAM UNIVERSITY

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/EEE07

TITLE OF THE PROJECT- AUTOMATED DIGITAL ENERGY METER

FACULTY GUIDE: MS.A.MALLIGA

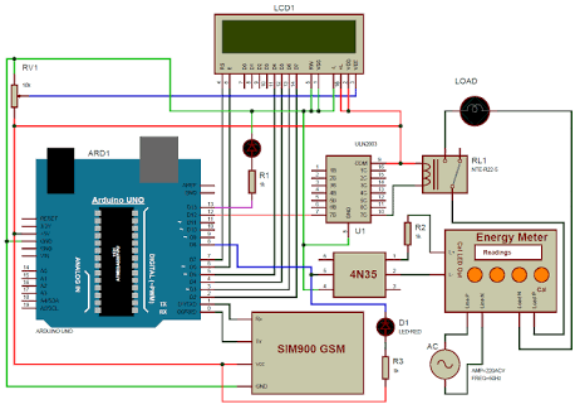
RUBESH.R.M

RAKESH.R

KAVYA.A

NANDHINI.V

RANJITH KUMAR




**Abstract :(10 lines)**

The technology of e-metering (Electronic Metering) has gone through rapid technological advancements and there is increased demand for a reliable and efficient Automatic Meter Reading (AMR) system and simple low cost wireless GSM energy meter and its associated web interface, for automating billing and managing the collected data globally.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/EEE08

TITLE OF THE PROJECT -DEVELOPMENT OF ONBOARD DIGITAL FUEL GAUGE FOR CAR


FACULTY GUIDE: MS.SHANTHINI MERLIN

MOHAN RAM.L

MONISH BALAJEE.K

REVANTH KUMAR

R.DINESH

K.INIYAVAN

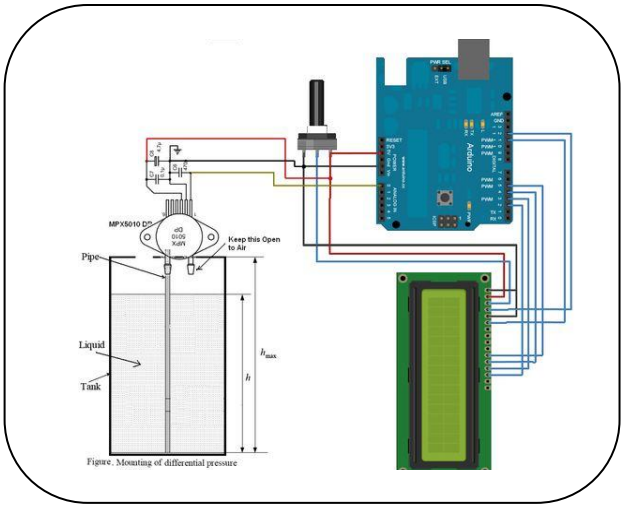



Figure. Mounting of differential pressure


**Abstract :(10 lines)**

Design and implementation of digital fuel gauge which measures the accurate level of fuel adding while fuel filling process. Now-a-days all fuel bunks having types of digital displays unit in order to display the value of fuel adding to the vehicle. But we don't know whether they adding accurate value or not. In this paper we have proposed a technique to measure the amount of fuel available in tank during static as well as dynamic condition. This system digitally displays the level of fuel inside the tank by using load sensor, flow meter and vibration sensor and these sensors are interfaced with a development board- arduino. Thus, it is an efficient system to detect the fuel volume in the fuel tank, to get instantaneous reading of fuel volume and to avoid petroleum thefts at the various petrol pumps at the time of filling of tanks.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/EEE09

TITLE OF THE PROJECT-WEB APP DEVELOPMENT FOR SOLAR RADIATION


FACULTY GUIDE: Dr.K.C.JAYASANKAR

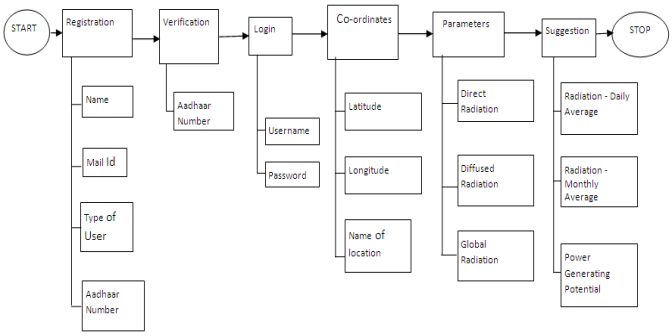
ADHITHYAN.V

GOWTHAM.S

VIJAY.V

THULASIRAM.K.R

BHUVANESH.R



**Abstract :(10 lines)**

Renewable Energy is the booming technology of the era, requiring more utilisation of Renewable Energy Resources. In Arunachal Pradesh, with 2 numbers of 140KWp standalone Solar PV systems and many villages illuminated through SPV systems[1]. Hence, it becomes necessary for every individual to estimate the solar radiation and to understand the power generating potential of a particular place using mobile app.

In the existing system, the solar radiation data for specific geographical locations are available in the web page only and is not available as a Mobile Application.

Hence, it is proposed to develop a mobile application to retrieve radiation data based on the fed geographical locations with the help of Native tool kits viz. Android Studio, Windows phone app code and Apple XCode tool**.**


**Achievements:**

Symposium: ICTACT ACADEMY

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EEE/EEE10

TITLE OF THE PROJECT- AUTOMATIC CAR PARKING USING PLC

FACULTY GUIDE: M.PREETHA

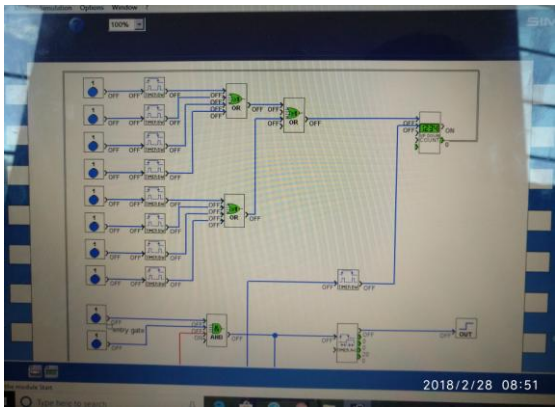
SHAIK AKMAL HUSSAIN

M.S.SUMANTH REDDY

KALYAN

SRIRAM

DILLI BABU




**Abstract :(10 lines)**

The main purpose of this project is to design and implement an intelligent car parking system. The proposed system works on three modes such as ON, OFF and EMERGENCY. The system developed is able to sense the presence of the vehicles standing at the main car parking gate through an IR sensor. These IR sensors give their output to the PLC (programmable logic controller). Due to lack of parking spaces and skilled labour, there is a global shift towards the automatic car parking system to calculate accurate space available for car and revenue collection as a parking fee. This new scheme provides an improvement and reliability in the current car parking system and this system can be implemented easily because it is very economical as it uses solar panel for its power consumption and also the cheap IR sensor reduces the implementation cost.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/EEE11

TITLE OF THE PROJECT:-AIR POLLUTION MONITORING SYSTEM

FACULTY GUIDE:J.RAJESH

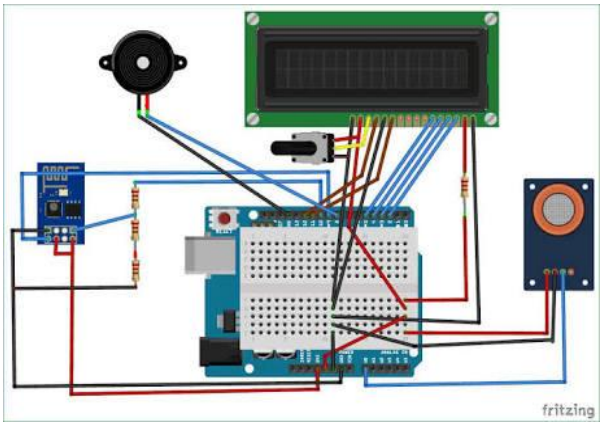
MATHAN.S

SOUNDARARAJAN.S

KARTHIK .A.H

RAJPRIYA.D

PREETHA .V




**Abstract :(10 lines)**

- An Environmental Air Pollution Monitoring System(**EAPMS**) for monitoring the concentrations of major air pollutant gases has been developed.
- This system measures concentrations of gases such as CO,NO2,SO2 and O3 using semiconductor sensors.
- The smart transducer interface module(**STIM**) was implemented using the devices like arduino.
- Further , the EAPMS is capable of warning when the pollutant levels exceed predetermined maxima.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/EEE12

TITLE OF THE PROJECT- ROBO ARM

FACULTY GUIDE: P.MANIKANDAN

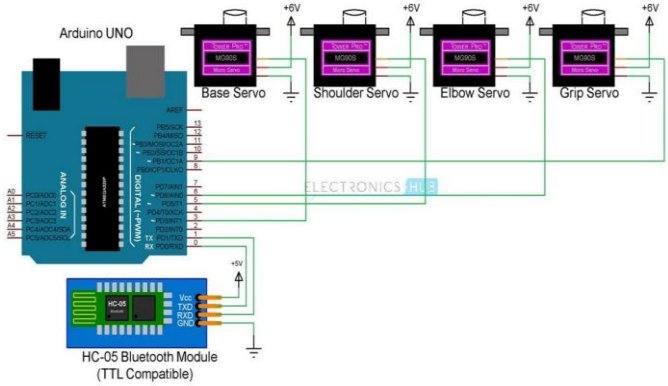
ARUN KUMAR

THULASIRAMAN B

PRAVIN.K

SUDHAKAR.S

PREM KUMAR.R




**Abstract :(10 lines)**

A simple, 3D Printed, Android Phone based, Arduino & Bluetooth Controlled Robotic Arm is designed and developed in this project. We will now see the operation and working of this Robotic Arm. Install the Application in your Android Phone and provide necessary permissions to access the device's Bluetooth. If the Bluetooth Module (HC-05) is not paired with the mobile, pair it using the Bluetooth Settings of the Phone. Once the device is paired, open the App and it will automatically list out the paired Bluetooth devices. Select the correct Bluetooth Module and if everything goes well, you will enter into the main control panel. Here, you can see controls for the four servo motors of the Robotic Arm i.e. Base, Shoulder, Elbow and Grip. Use the arrow keys of the respective Servo motor and control the robotic arm. This part of the working is the Manual Operation of the Robotic Arm, where every movement must be manually adjusted.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/III/13

TITLE OF THE PROJECT- ELEPHANT MONITORING SYSTEM

FACULTY GUIDE: MS.S.SHOBANA

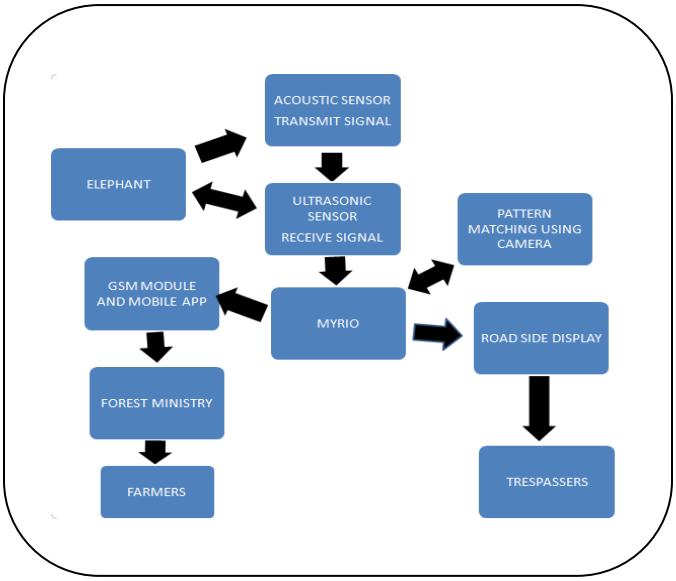

LOKESH

IBRAHIM BASHA

KARTHIKEYAN

LEENA SAI

MONICA



**Abstract :(10 lines)**

There is no effective communication regarding the elephant conflicts in Pathways/Fields to the trespassers and the farmers which causes frequent and enough damage to the public, though there are very primitive methods for identification and intimation. In this proposed work, the identification of elephants is initially done by the acoustic sensor which is augmented by the ultrasonic sensor, which in turn controls the direction of the camera. The camera captures the image of the elephant and recognizes it by pattern matching and the information is broadcast to the farmers, trespassers and travelers.


**Achievements:**

Project Design Contests:

Technical Premier League.

**Social Media Reach:**

Youtube : https://youtu.be/LZWqFrRUbT0

Facebook :

TEAM ID- PEC/EEE/17-18/EVEN/EEE14

TITLE OF THE PROJECT-COUNTING/DECOUNTOING OF PASSENGERS IN BUS

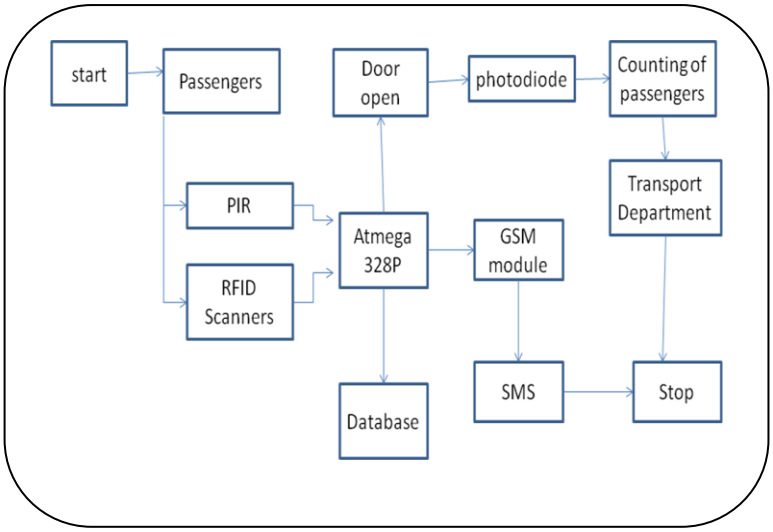
FACULTY GUIDE: MS.S.SHOBANA

A.M.ARUN SELVAN

V.ARUN PRAVEEN

SANTHOSH

MIDHUN KUMAR




**Abstract :(10 lines)**

EXISTING SYSTEM

In the current scenario, the major unsolved problem is the safety and ticketing issues in passenger buses. The existing system is a primitive manual way of ticketing .

PROPOSED SYSTEM

In the proposed system, the door opening is automated based on the availability of passengers. Ticketing system is automated using Aadhar card and virtual payment system. The number of passengers are controlled automatically and the statistics of the travelling passengers from the starting point to the destination.

**Achievements:**

Symposium:

KANCHIPURAM UNIVERSITY

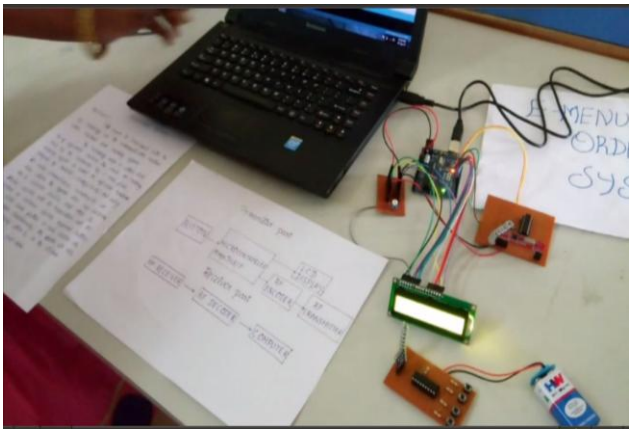
**Social Media Reach:**

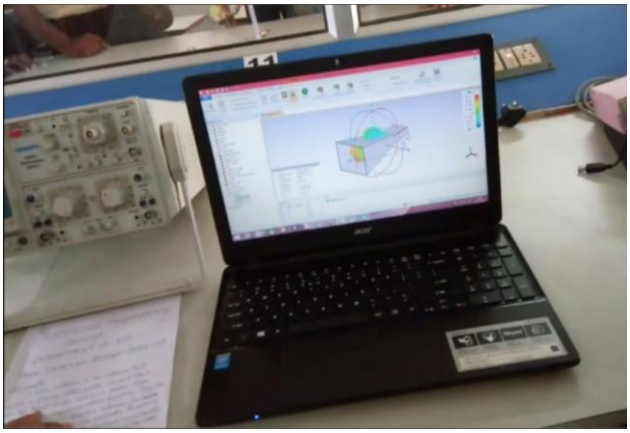
Youtube :

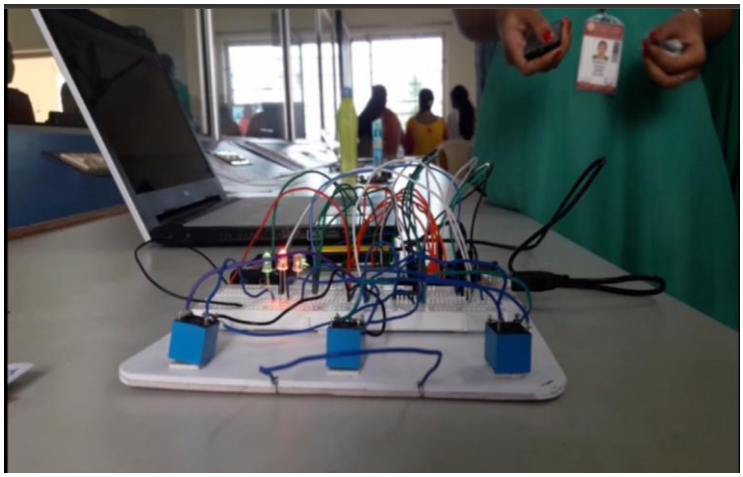
Facebook :

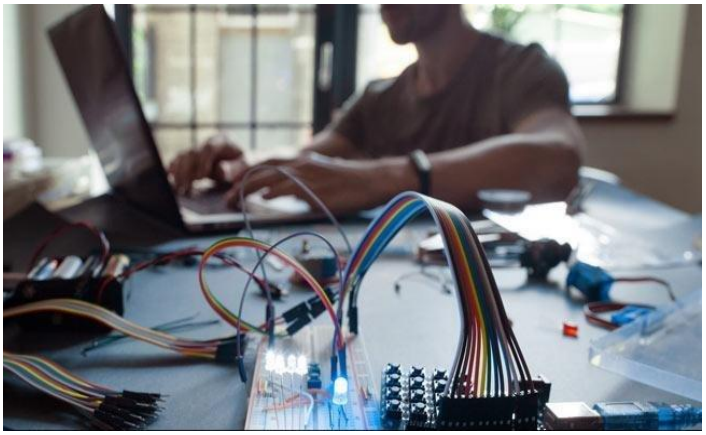
# DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGG.

## EVEN SEMESTER









**28.02.2018**

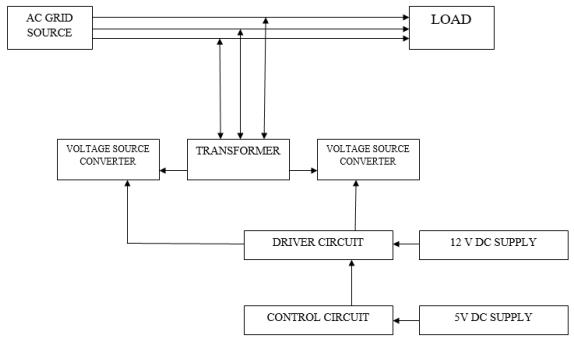
| Department | Mini project Coordinator | Domain | No. of Miniprojects | Total |
|---|---|---|---|---|
| EEE | Ms.S.Shobana | Instrumentation & Control | 24 | 37 |
| | | Green Energy | 5 | |
| | | Power Electronics | 5 | |
| | | Power Simulation | 1 | |
| | | Professional Lighting | 2 | |

**PROJECT EXHIBITION DATED 28TH FEBRUARY 2018**

TEAM ID-PEC/EEE/17-18/EVEN/II/4EEE01

TITLE OF THE PROJECT**: A SERIES COMPENSATOR BASED ON CASCADED TRANSFORMER COUPLED WITH THREE PHASE BRIDGE CONVERTER FOR POWER QUALITY IMPROVEMENT**

**Block Diagram:**




FACULTY GUIDE: **Mr.P. MANIKANDAN**

M.KRISHNA

M.KRISHNA KUMAR

B.LOKESH

**Abstract :(10 lines)**

The paper presents about shunt compensator to deal with voltage sags. Such a device can be considered as a dynamic voltage restorer or a shunt active power filter. The MSC can improve the power quality of loads located in stiff systems. The configuration is based on three-phase Bridge converters connected by means of cascaded single-phase transformers. This arrangement permits the use of a single dc link. The topology permits generating a high number of levels in the voltage waveforms with a low number of power switches in comparison with a classic topology. The multilevel waveforms are generated by the converters through a suitable pulse width modulation strategy that takes into consideration the transformer turns ratios. It is worth noting that either the order of the stages or transformers polarity can be modified to change the rated switching frequency in the legs with higher voltage or higher current. This aims to indicate an acceptable figure of merit to reflect how far semiconductor losses of proposed MSC are faced to losses estimated of conventional one. Such a tool was used with calibration parameters that give an equivalent loss estimation compared to the conventional method to estimate losses.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE02

TITLE OF THE PROJECT- **FLYBACK CONVERTER FED CURRENT SOURCE INVERTER USING PHOTO VOLTAIC**FOR AUTOMATIC BRAKE SYSTEM

FACULTY GUIDE: **MRS.A.MALLIGA**

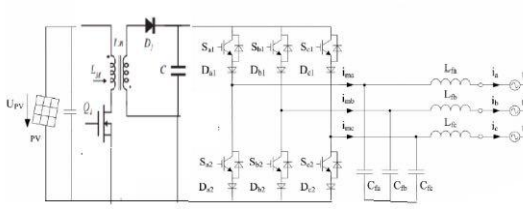

I.JESUDOSS SAMUEL

S.HARI KRISHNA

R.JAINESH


**Block Diagram:**

Modified circuit




**Abstract :(10 lines)**

- Solar photovoltaic power generation system is one of the burning research fields these days ,even governments are also making plans toward increasing the amount of power generation from renewable energy sources because in future viability and crisis of conventional energy sources will increase .
- This project deals with the design and hardware implementation of a simple and efficient solar photo voltaic power generation system for stand alone system
- Single stage three phase current source photovoltaic inverter with high voltage transmission. An improved zone SPWM control strategy and an active clamped sub circuit.
- Solar Photovoltaic (PV) power generation system is comprising several elements like


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE03

TITLE OF THE PROJECT- **A HIGH VOLTAGE GAIN DC-DC CONVERTER WITH A VOLTAGE MULTIPLIER FOR ELECTRIC VEHICLE POWERMANAGEMENT**

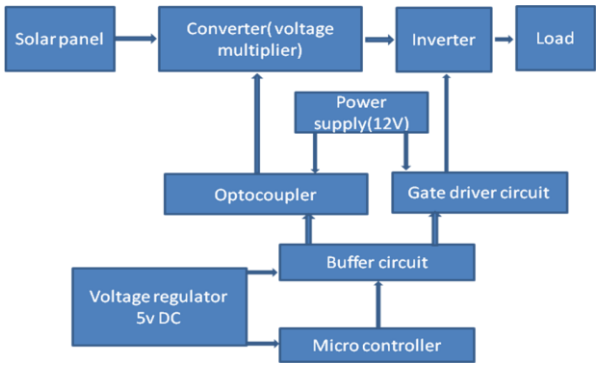
FACULTY GUIDE: **Mrs.M.PREETHA**


KARTHIK.V

KIRAN KUMAR.R

LOKESHWARAN.R


**Block Diagram :**





## Abstract :(10 lines)

- This project proposes a high-step-up interleaved converter with a voltage multiplier, which is suitable for electric vehicle power management applications.
- The proposed converter resembles a two-phase interleaved boost converter on its input side while having a voltage multiplier (VM) on its output side.
- This converter offers continuous input current, which makes it more appealing for the integration of renewable sources like solar panels. the proposed converter is capable of drawing power from either a single source or two independent sources.
- The VM used offers low voltage ratings for capacitors that potentially leads to size reduction.High-step-up interleaved converters play an important role in renewable energy sources such as fuel energy systems, DC-back up energy system for UPS, high intensity discharge lamp and auto mobile applications.
- Renewable energy sources such as photo voltaic energy are available in both clean and economical due to new advancement in technology and use of good and efficient cells.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE04

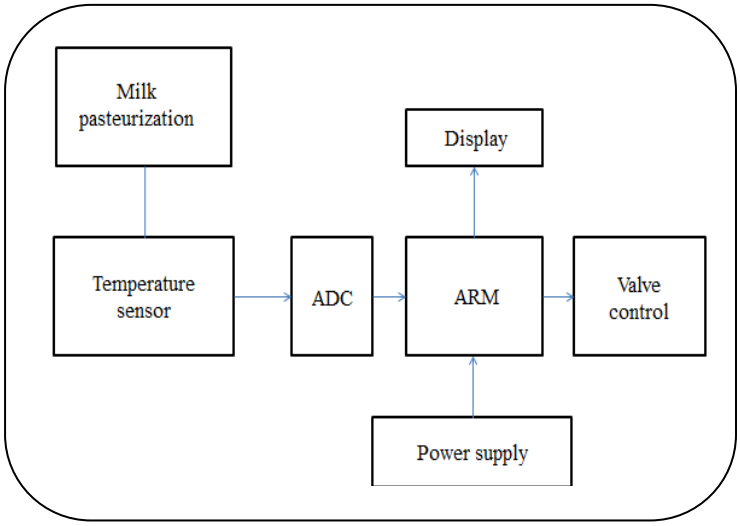
TITLE OF THE PROJECT- **MILK PRODUTS MONITORING SYSTEM FOR DETECTION OF MICROBIAL ACTIVITY USING ARM PROCESSOR**

FACULTY GUIDE: **Mr.K.ANAND**


P.DHEENA DHAYALAN

G.DILLI BABU

T.ELANGO



**Abstract :(10 lines)**

Food safety is a scientific discipline describing handling, preparation and storage of foods in ways that prevent food borne illness. This includes number of routines that should be followed to avoid potential health hazard. Recent studies highlight that raw milk contain pathogenic organism which could results in illness if consumed. Hence it is necessary to develop tools for real-time and smart sensing for qualitary monitoring and so to make appropriate and timely decisions.If the raw milk is stored for longer time the milk will rapidly develop the signs of spoilage like raw smell an off-white or yellowiesh tinge colour due to the rapid growth of bacteria. Hence there is a need for monitoring system to detect and identify the spoilage of milk and produce a health product. Therefore this work helps in early detection of toxic substance in milk to produce a healthy product. The proposed prototype is an ARM based monitoring unit which monitors the unwanted ingredients present in the tested milk with the help of TGC Gas sensor.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE05

TITLE OF THE PROJECT-**SINGLE SWITCH NON-ISOLATED TRANSFORMERLESS**

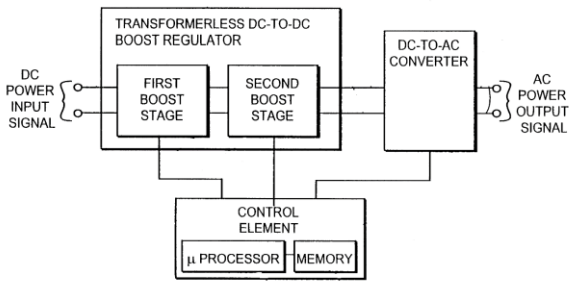
FACULTY GUIDE: Mr.P.MANIKANDAN


K.BIKASH KHATI

D.PAVAN KRISHNA

S.DEEPAK BHARATH


**Block Diagram :**





**Abstract :(10 lines)**

- A transformerless buck–boost dc–dc converter is proposed in this project.
- The presented converter voltage gain is higher than that of the conventional boost, buck–boost, CUK, SEPIC, and ZETA converters, and high voltage can be obtained with a suitable duty cycle.
- In this converter, only one power switch is utilized. The voltage stress across the power switch is low. Hence, the low on-state resistance of the power switch can be selected to decrease conduction loss of the switch and improve efficiency.
- The presented converter has simple structure, therefore, the control of the proposed converter will be easy.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE06

TITLE OF THE PROJECT: **ISOLATED CUK CONVERTER FOR BRUSHLESS DC MOTOR DRIVES**

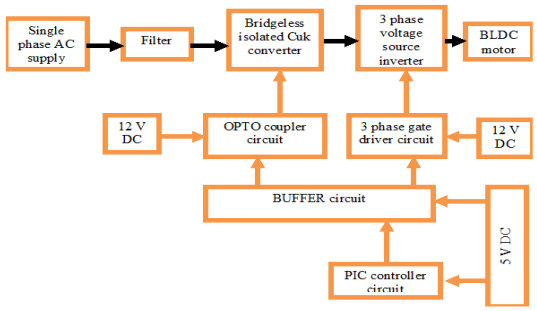
FACULTY GUIDE: **MS.M.PREETHA**


**J.ARUN**

**S.AJITH KUMAR**

**N.BALA KRISHNAN**


**Block Diagram :**





**Abstract :(10 lines)**

- The proposed project aims for the suppression of torque ripples and improvement of power factor in BLDC motor.
- To achieve this a CUK converter is used to boost the input voltage of three phase bridge inverter resulting in continuous current to the BLDC motor.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE07

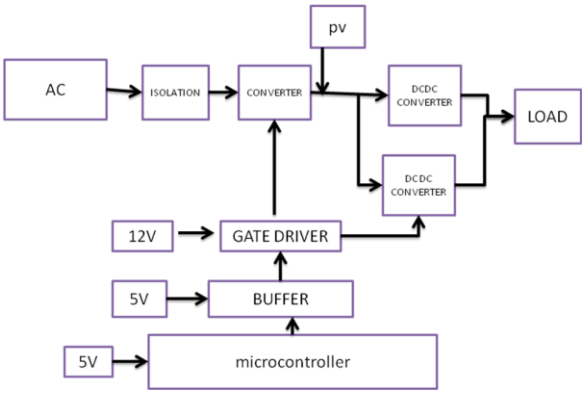
TITLE OF THE PROJECT- COST EFFECTIVE AND ENERGY EFFICIENT ELECTRIC VEHICLE CHARGING SYSTEM.

FACULTY GUIDE: MR.J.RAJESH


J.BALAJI

B.GOUTHAM

L.JAGADEESH



**Abstract :(10 lines)**

- It deals with novel balancing approach for an electric vehicle by split dc charging station enabled by a grid-tied neutral-point-clamped converter.
- The presence of an energy storage stage with access to both of the dc buses to perform the complementary balance.
- To reduce the hardware requirements of the system and maximize the usage of the ESS, the presence of an energy storage stage, interfaced with a three-level dc–dc converter, provides the supplementary balancing ability required.
- The alternate switching sequence allows performing the complementary balancing while keeping the current free of even-order harmonics. This allows the use of the rectifier and the fast chargers.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE08

TITLE OF THE PROJECT- AVANTGRADEE-BIKE

FACULTY GUIDE: MR.J.RAJESH

BALACHANDAR.K

BALACHANDAR.S

BALU ASHOK

**Abstract :(10 lines)**

In the present situation energy crisisis an important Unsolvable problem so we must find someother ways to trust all Sources such as solar energy,hydropower, tidalpower, wind Power, etc. so we are stepping with the solarenergy, and we Have planned to built a solarpowered electric vehicle in saving The senon-renewable sources of energy.The basic principle of Solar powered electric vehicle is to use energy that is stored in a Battery during day time and after charging it from a solarpanel. The charged batteries were used to drive the motor and move The vehicle in reverse or forward direction. This solar powered Electric vehicle consists of Photo Voltaic(PV)Panel,DC-DC Converter, BrushlessDCMotor and BrushlessDC motor as a Generator, ElectricVehicle. ThePhotoVoltaic(PV)panelcovert The sun's energy directly to electrical energy and the generator Which convert mechanical energy into electrical energy and they May be connected either in parallel or series, and it charges the Solar power to the batteries.The DC voltage from the PV panel is Then boosted up using a boost DC-DCconverter, and then an Inverter, where DC power is converted to AC power, ultimately Runs the Brushless DC motor. In the solar power avant gradee- Bike includes fingerprint for starting and stopping, TPMS(tire pressure monitoring sensor), solarpanel, battery levelvoice Indicators. During this conversion many losses take place and Hence the net output is very less and lasts for shorter duration. The vehicle designed is controlled by ELECTRICAL and by ELECTRONICS. This idea, in future, may help protect our fuels from Getting extinguished.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

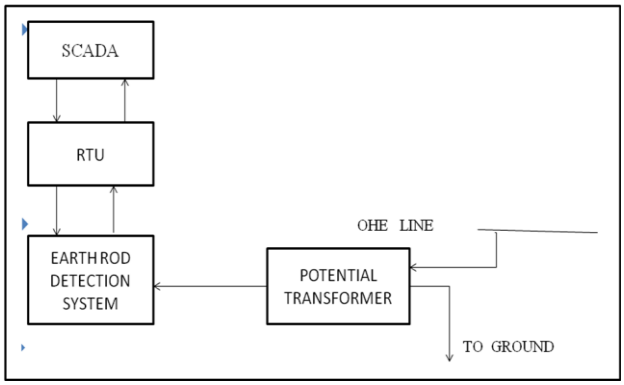
**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE09

TITLE OF THE PROJECT **:DESIGN AND PROTOTYPE IMPLEMENTATION OF SYSTEM DETECTING MAINTENANCE EARTH ROD ON OVERHEAD LINES IN TRACTION NETWORK**




FACULTY GUIDE: Ms.T.MATHUMATHI,

AARTHI
SWETHA.J.M

BANUMATHI.
P.V

GOBIYA.P

**Abstract :(10 lines)**

Unlike transmission lines, Traction OHE line requires more maintenance. In metros it is even more complicated due as there exist structures above OH lines. During maintenance it is mandate to provide earth rods on OH lines to avoid electrocution due to induction voltage and false operation by operator. In metro system Energisation of Traction OH lines is done remotely through SCADA system from Operation control Center by Traction Power Controller (operator). During energisation it is duty of Traction Power Controller (operator) to get confirmation from filed staff for removal of earth rod. There has been a regular incident of human error leading to energisation of Section with earth rods unremoved. This poses heavy risk for operation team and also stresses the system. hence a it warrants a system to detect the presence of earth rod on Section before energisation. The system proposed uses a electronic circuit to that injects a current in to the secondary of potential transformer which responds differently when the primary circuit is open circuited and close circuited. Based on the output of system designed Interlock in shall be provided in RTU preventing Operation of circuit breakers.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

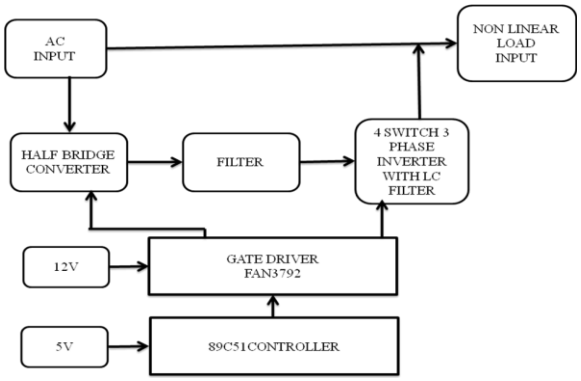
TEAM ID-PEC/EEE/17-18/EVEN/4EEE10

TITLE OF THE PROJECT POWER QUALITY IMPROVEMENT USING UNIFIED POWER QUALITY CONDITIONER

FACULTY GUIDE: Mr.ANAND

BHUVANESWARI.J

KAVITHA.R




**Abstract :(10 lines)**

This project deals with the deployment of a local three-phase four-wire (3P4W) electrical power distribution system (EPDS), using a single- to three-phase unified power quality conditioner (UPQC) topology, called UPQC-1Ph-to-3Ph.

The topology is indicated for applications in rural or remote areas in which, for economic reasons, only EPDS with single wire earth return are accessible to the consumer. Since the use of three-phase loads is increasing in these areas, access to a three-phase distribution system becomes preponderant.

By adopting a dual compensation strategy, the proposed UPQC-1Ph-to-3Ph is able of draining from the single-phase electrical grid a sinusoidal current and in phase with the voltage, resulting high power factor.

Furthermore, the system is also able to suppress grid voltage harmonics, as well as to compensate for other disturbances, such as voltage sags. Thus, a 3P4W system with regulated, balanced and sinusoidal voltages with low harmonic contents is provided for single- and three-phase loads.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE11

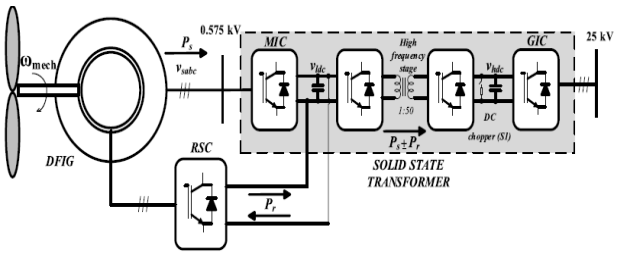
TITLE OF THE PROJECT:- **IMPLEMENTATION OF ZETA CONVERTER WITH WIND ENERGY CONVERSION**

FACULTY GUIDE: **K.ANAND**


**K.DHANALAKSHMI**

**K.ISHWARIYAA**


**CIRCUIT DIAGRAM:**





**Abstract :(10 lines)**

The project deals with Small-scale wind energy conversion systems have become a rising trend due to increased demand for green and secure electricity supply, especially in remote areas. Reduced complexity and switching losses, low cost, weight, and volume and high reliability are the main merits gained from implementing such reduced switch-count systems.. The three Phase inverter and diode bridges can be scaled for different power levels using pin-to-pin compatibility of power devices (and modules) rated for different currents and standard dimensions of heat sinks. At the same time, Zeta dc–dc converters and grid-side filters utilize custom magnetic components and thus have limited scalability. They could be designed for standardized power levels to reduce production costs with modular design. A space vector modulation (SVM) is used for controlling corresponding pulses to the inverter. To this end, this paper proposes a new three-phase dc-ac power converter topology for diversified applications based on Zeta dc-dc converter.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

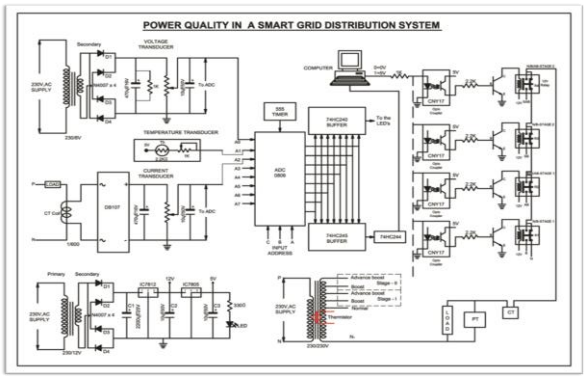
**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE12

TITLE OF THE PROJECT- **A POWER QUALITY IN A SMART GRID DISTRIBUTION SYSTEM**




FACULTY GUIDE:
**DR. K.C.JAYASANKAR**

ABIRAMI.P

GAYATHRI.S.J

BHUVANESWARI.S

**Abstract :(10 lines)**

A smart grid is an evolved grid system that manages electricity demand in a sustainable, reliable and economic manner .Today , existing grids are under pressure . Our project is mainly focused on distribution of quality of power . In this project it is planned to provide a transformer with multiple taps and selecting the taps required for the moment will be automatically selected by the on load tap change over system. Here, voltage transducers are used to sense the change in voltages, ADC will convert the analog signals into digital signals. These digital signals are interfaced with computer which in turn operates the on load tap changers. Suitable taps are selected and its driver relays are operated by the computer through opto-coupler and switching transistors . In this project a computer acts as a controller with the aid of the C software .

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

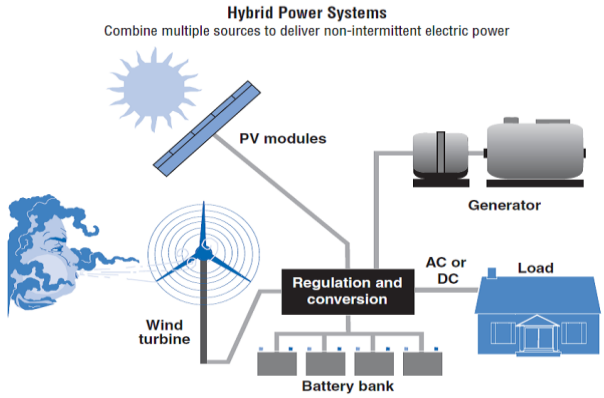
Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE13

TITLE OF THE PROJECT- **VOLTAGE PROFILE IMPROVEMENT IN A HYBRID DISTRIBUTION SYSTEM USING ETAP**

FACULTY GUIDE: Ms.MATHUMATHI.T

K.JOTHY PRASANTH




**Abstract :(10 lines)**

- To design and analyse the integration of high PV and wind penetration into the Distribution system.this integration have been carried out on 33kv and 14 bus node test in the distribution feeder.
- To show the load flow analyis and impact of adding DG in the medium voltage distribution network using ETAP software.
- Renewable energy resources are present a high potential to fulfill the global increasing power demands. In distribution side ,high absorbs the reactive power so it must be equalize by renewable energy to improve the voltage level in the distribution network.
- Additionally, in order to examine the grid performance during this conditions.
- In ETAP software ,Adaptive Newton-Raphson method was used in the distribution network.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/3EEE14

TITLE OF THE PROJECT- **Transformer Cooler Control Automation And Condition Monitoring System Using PLC And HMI Modules**

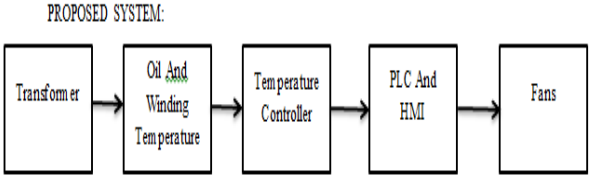
FACULTY GUIDE

**R.PREETHI**

**B.SHALU ZAREEN**

**M.VISALAKSHI**

**Block Diagram:**




**Abstract :(10 lines)**

Transformer plays a vital role in transmission and distribution system. There are many problems associated with power loss in transformer but this project mainly focuses on efficient cooling system design. We have proposed an intelligent cooling system based on Programmable Logic Controller (PLC) which eliminates the problem of manual transformer cooling control system by automatically switching ON and OFF. This switching is PLC controlled and thus minimizes the errors caused by human intervention. PLC logic is used for controlling all the components which are involved in the cooling system control cubical of transformer and it also uses the component only when needed, this reduces the wastage of power and unnecessary operations. We have also focused upon proper utilization of standby bank by means of periodic switching. Human Machine Interface (HMI) can also be used for complete visualization of the process in the control room. Along with this, continuous monitoring and data recording is simultaneously done.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE15

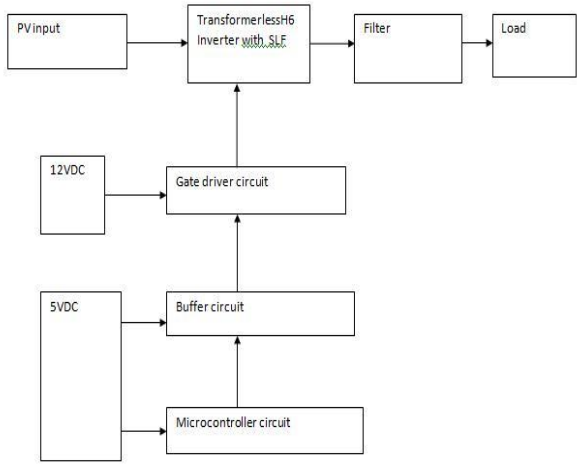
TITLE OF THE PROJECT:- ZERO-VOLTAGE-TRANSITION FULL-BRIDGE TOPOLOGIES FOR TRANSFORMERLESS PHOTOVOLTAIC INVERTER

FACULTY GUIDE: A.Malliga

M.Parimala

A.B.Priya

K.Pavithra




**Abstract :(10 lines)**

**A**bstract-In this project, low leakage current and high efficiency are two main important factors for the transformer less photovoltaic inverter. This transformer less inverter topologies it has superior efficiency owing to saving the transformer, but the switches are still on a hard state at present. This project presents a novel zero-voltage transition (ZVT) concept for the full bridge transformer less PV inverter topologies. This transformer less topology operation causes low leakage current. For achieving zero turn on and turn off condition high frequency main switch and for zero current turn on and turn off the auxiliary switch is achieved by using two resonant tank. This operation is efficient, simple due to transformer less operation. Here high frequency common mode voltage is avoided by soft switching. For this inverter operation H6 inverter and unipolarSPWM technique is used. Finally, the validity of ZVT concept is verified by a ZVT-H6-I prototype rated at 100 kHz and 1kW.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

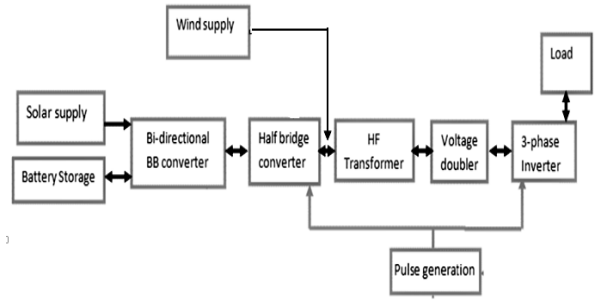
TEAM ID-PEC/EEE/17-18/EVEN/4EEE16

TITLE OF THE PROJECT- **HYBRID CONVERTER FOR**

FACULTY GUIDE: **S.SHOBANA**

**P.REVATHI** **D.VAISHALI** **U.SASIREKHA**

**Block Diagram:**




**Abstract :(10 lines)**

In this project, a control strategy for power flow management of a grid-connected hybrid PV-wind-battery based system with an efficient multi-input transformer coupled bidirectional dc-dc converter is presented. The proposed system aims to satisfy the load demand, manage the power flow from different sources, inject surplus power into the grid and charge the battery from grid as and when required. The proposed converter architecture has reduced number of power conversion stages with less component count, and reduced losses compared to existing grid-connected hybrid systems.

This improves the efficiency and reliability of the system. Simulation results obtained using MATLAB/Simulink show the performance of the proposed control strategy for power flow management under various modes of operation.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE17

TITLE OF THE PROJECT- **ATM SMART SECURITY SYSTEM**

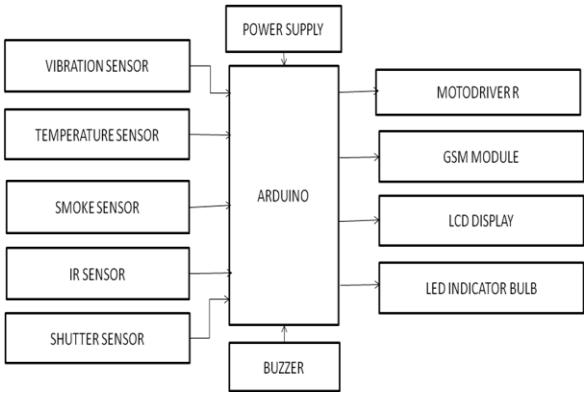
FACULTY GUIDE: **MS.S.SHOBANA**

**R.SANGEETHA**

**B.SAILAKSHMI**

**A.SANGEETHA**

**Block Diagram**




**Abstract :(10 lines)**

This project presents an Automated Teller Machine(ATM) surveillance system which is a smart system based on embedded technology and incorporates various sensors to continuously monitor its surroundings for suspicious activities like physical attack , fraud and theft that might damage the ATM and people nearby. Also discussed is the security and safety measures that can be implemented to prevent such raids by proper surveillance. This project also analyses the different forms of physical attacks on ATM's and discusses the methods that are used to detect the foray , commence proactive measures and tip-off officials through GSM network . We also discuss about the implementation of the proposed system ,the sensors and the other supporting hardware that are being used to deploy this system .The proposed system thus heightens the security of ATM's against imminent attacks effectively

.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE18

TITLE OF THE PROJECT- INDUSTRIAL PROJECT

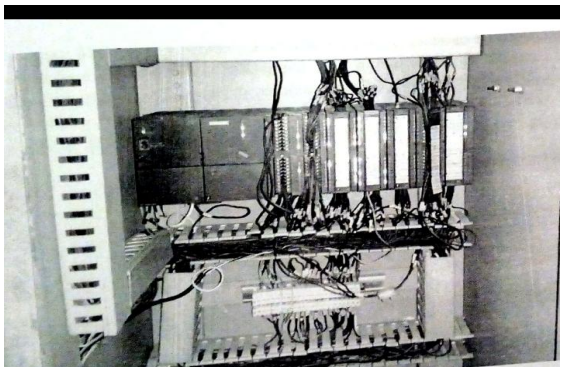
FACULTY GUIDE: Dr.K.C.JAYASHANKAR

K SUJITH

R VAMSI KRISHNAN

N VISHNU

**Block Diagram :**



**Abstract :(10 lines)**

This project presents automation of az11 machine by replacing complex wire connections with PLC technique. Now a days , in most industries automation plays an important role which reduces cost , human interface and increases safety in working conditions.

This project describes about automation using PLC which results in the reduction of work force , number of contactors , saves time and energy . The main objective of this project is to design and implement PLC logic using ladder logic diagram where the fault occurance can be easily identified by the glow of LED in S7 300 processor. Controlling and monitoring of important parameters of S7 300 processor are done at the same time.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE119

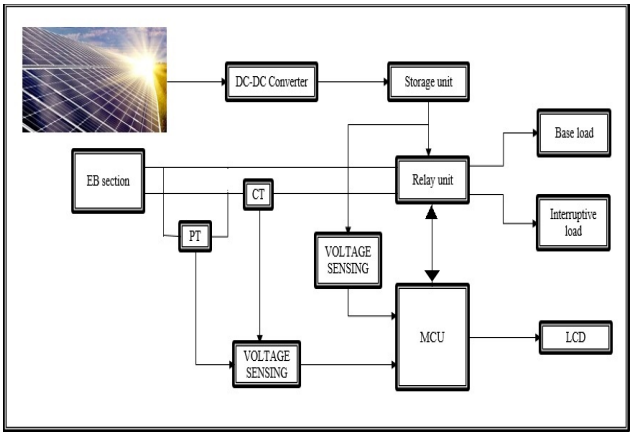
TITLE OF THE PROJECT- AN INTELLIGENT DEMAND SIDE MANAGEMENT WITH RENEWABLE ENERGY INTEGRATION FOR SMART HOMES BASED ON

FACULTY GUIDE: Ms. S. SHANTHINI MERLIN


C. Simon
Rock King

V. Tarun Raj

V. Praveen



**Abstract :(10 lines)**

Global energy demand is increasing rapidly, thus widening the demand-supply gap.
In traditional grids, utilities cater this situation by increasing the total generation capacity as a function of peak demand. However the resulted system by a large part is unutilized.
Price based load management system consider flattening demand fluctuation. Both the customer and the utility will get the benefits.
The model is simulated in TOU pricing environment for three cases:
(i) Traditional homes, (ii) Smart homes & (iii) Smart homes with renewable energy sources (RES) Simulation results shows that the proposed model optimally schedules the appliances resulting in electricity bill and peaks reductions, Real Time Pricing (RTP) combined.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE20

TITLE OF THE PROJECT- **A NINE SWITCH THREE PHASE**

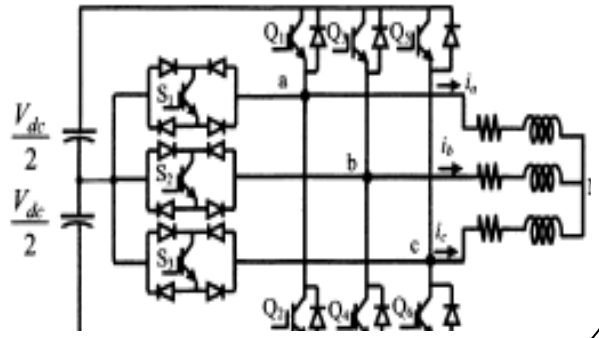
FACULTY GUIDE:**Dr.S.KRISHNA KUMAR**


M.PREM KUMAR

J.SRIRAM JAYARAMAN

S.YUVARAJA


**Block Diagram:**





**Abstract:**

- The multilevel voltage source inverters unique structure allows voltage to reach high voltages with low harmonics with out use of transformers or series connected synchronized switching devices.
- The general function of the multilevel inverter is to synthesize a desired voltage from several levels of dc voltages. For this reason multilevel inverters can easily provide the high power required for a large electric drives.
- As the number of switches increases the synchronized output waveform has more steps, which produces a staircase waveform that approaches a desired waveform.
- Also as more steps are added to the waveform the harmonic distortion of the output wave decreases approaching zero as the number of levels increases.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE21

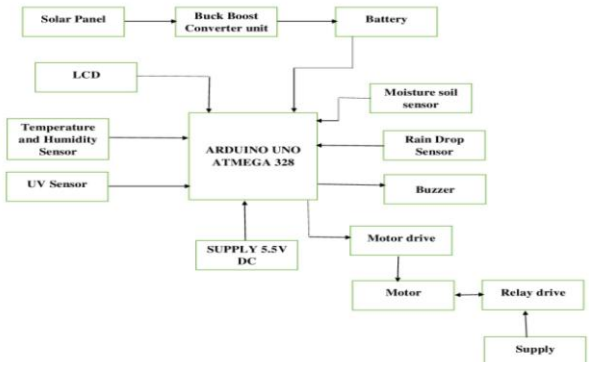
TITLE OF THE PROJECT**LOW COST PV BASED IRRIGATION PUMP SYSTEM**

FACULTY GUIDE : Ms. S. Shobana


R MADHAN RAJ

S MOHAN KUMAR

K MOHAN KUMAR



**Abstract :(10 lines)**

- Agriculture plays a vital role in developing countries. In India, most of population depend on agricultural farming. Many issues hindering the development of agriculture in developing countries.
- Hence the project aims at making agriculture smart using automation and IOT technology. The development of photovoltaic (PV) energized irrigation pump employing a switched reluctance (SR) motor with a cascaded boost-buck (Bo-Bu) converter as a power conditioning stage.
- The utilized DC-DC converter as power conditioning stage comprises of a boost converter followed by a buck converter with proper voltage control. It performs the functions of maximum power point tracking (MPPT).
- The highlighting feature of this project includes smart irrigation with smart control and intelligent decision making based on accurate real time field data.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE22

TITLE OF THE PROJECT- **A DUAL BUCKBOOST AC-DC CONVERTER WITH DC NANOGRID USING THREE TERMINAL OUTPUT**

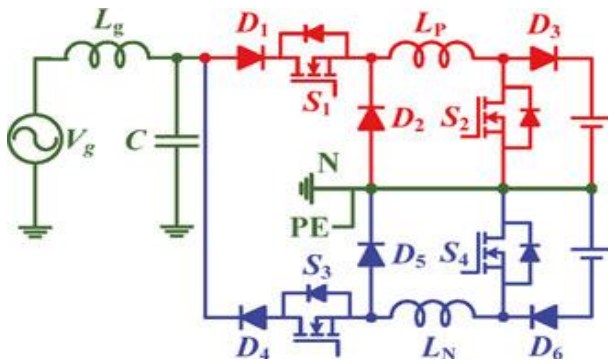
FACULTY GUIDE: P.MANIKANDAN


V.PAVAN KUMAR

K.YUVARAJ

R.SOMESH


Block Diagram :





**Abstract :(10 lines)**

- Due to the widely used dc characterized loadsand more distributed power generation sources, the dc nanogrid becomes more and more popular, and it is seen as an alternative to the ac grid. For safety considerations, the dc nanogrid should provide reliable grounding for the residential loads such as the low-voltage ac power system.
- There are three typical grounding configurations for a dc nanogrid are the united grounding, the unidirectional grounding, and the virtual isolated grounding. Each grounding configuration has its own specifications to ac/dc converters. In this paper, a dual-buck–boost ac/dc converter for use in the united-grounding-configuration-based dc nanogrid with three terminal outputs is proposed.
- The working principle of this converter is presented in detail through analyzing the equivalent circuits. Experiments are carried out to verify the theoretical analysis.


## Achievements:

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-PEC/EEE/17-18/EVEN/4EEE23

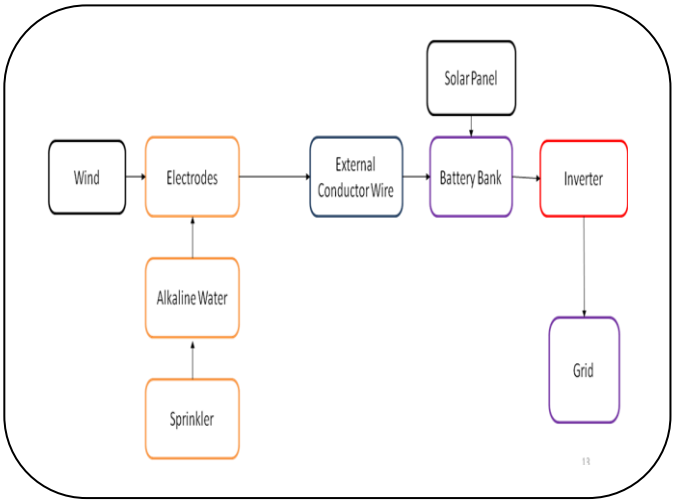
TITLE OF THE PROJECT- **MODELLING OF ELECTROSTATIC WIND ENERGY CONVERTER WITH SOLAR PANEL DESIGN**

FACULTY GUIDE: Ms. SHANTHINI MERLIN


K.NAVEEN KUMAR

A R SHRRE VISHNU

PADMESH.B



**Abstract :(10 lines)**

- This Project presents a procedural & practical approach in the conversion of Electrostatic Wind energy to Electrical Energy without any moving parts i.e. Mechanical processes are not involved.
- The increasing global demand for energy has the interest for various forms of renewable energy production, including wind energy.
- The electrostatic wind energy converter in which wind energy is converted to electrical energy, by letting the wind to move against charged particles with direction of an electric field merged with solar panel design.
- In COMSOL Multiphysics we have used it for modeling and simulate electrostatic wind energy system with theoretical equations and real time data wind data.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

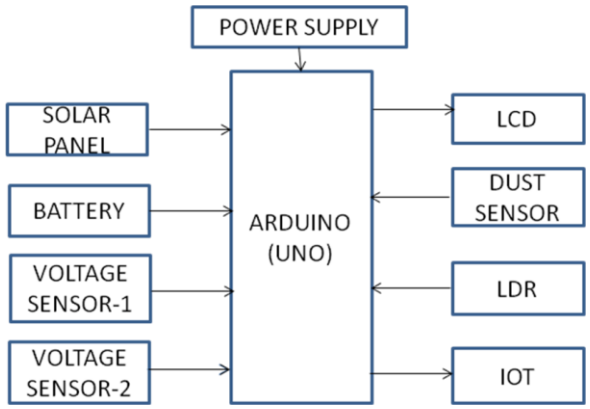
Facebook :

TEAM ID- PEC/EEE/17-18/EVEN/4EEE23

TITLE OF THE PROJECT- **SOLAR PANEL AND BATTERY STREET LIGHT MONITORING AND CONTOLLING SYSTEM USING IOT**


FACULTY GUIDE: **DR.S.KRISHNAKUMAR**

**M.MONISHA** | **R.NANDHINI** | **E.SUREKHA**



**Abstract :(10 lines)**

- The use of single power solar system in generation of electricity for streetlights now-a-days is widely used.
- The use of current sensor and voltage sensor using voltage divider circuit with IoT(Internet of Things) allows to monitor both the battery and the solar panel.
- The information from the current sensor and voltage sensor then processed by a microcontroller.
- This system provides an overview of the development and standardizations of connectivity solutions for monitoring the solar panel with internet of things.
- It also highlights key connectivity technologies and platforms that have the potential of driving the next industrial revolution with Internet of Things (iot).


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID- PEC/EEE/17-18/EVEN/4EEE25

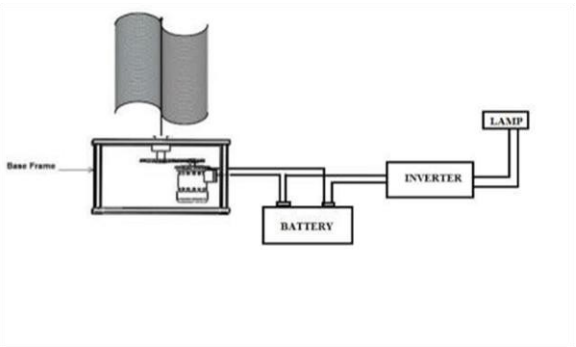
TITLE OF THE PROJECT- **VERTICAL AXIS WIND TURBINE FOR POWER GENERATION IN HIGHWAY LIGHTING**

FACULTY GUIDE: **Dr. S. KRISHNA KUMAR**

V.SIVARAM CHANDAR

S.RAJ KUMAR

S.SAN ANIL




**Abstract :(10 lines)**

- In recent years, worldwide energy crisis is emerging accompanied by high global emission and hence research and development activities are carried out in the field of wind and solar energy which are of renewable energy resources.
- The vertical axis wind turbine replaced the horizontal axis wind turbine because HAWT are not used for household purposes but VAWT can operate in low wind condition and also serves for household purposes.
- This design should have the higher efficiency when compared to the HAWT and contribute to its steady growing popularity for the purpose of mass utilization in the near future as a reliable source of power generation.
- The Vertical axis wind turbine is used to generate the DC power and fed to the power

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID- PEC/EEE/17-18/EVEN/4EEE26

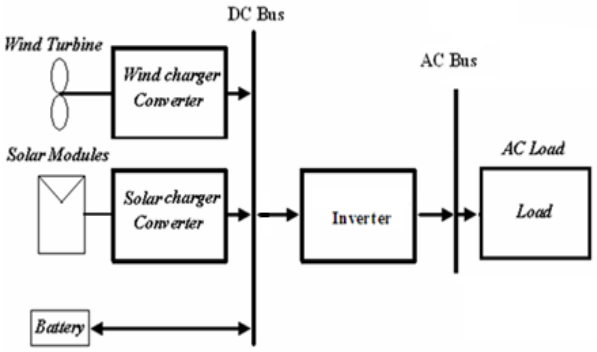
TITLE OF THE PROJECT- **ENERGY MANAGEMENT**

FACULTY GUIDE: **Dr.S.Krishna Kumar**


**L.MURALI**

**S.POOMANI**

**R.SAKTHI MAARAN**



**Abstract :(10 lines)**

A hybrid wind solar energy system with battery storage and its controls are done in this project. The system consist of a wind turbine, a solar panel, a battery storage unit and a set of loads. A power electronics interface, convertors, is used to integrate the renewable energy sources and the storage device to main DC-bus feeding a single phase AC load. The main challenge of the hybrid system is to maintain the load demand under constraints. In order to maintain the seasonal changes in the resource an battery storage is used to store the excess energy and to provide reliable energy. The controllers uses is to ensure a proper control and coordination between all the sources of the system.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

# DEPARTMENT OF INFORMATION TECHNOLOGY

**PRATHYUSHA ENGINEERING COLLEGE**

**DEPARTMENT OF INFORMATION TECHNOLOGY**

**SUMMARY LIST OF MAJOR/MINI PROJECTS DOMAINWISE**

| Department | Project Coordinator | Domain | No. of Miniprojects | Total |
|---|---|---|---|---|
| INFORMATION TECHNOLOGY | Ms.C.KAMATCHI | Web Technology | 7 | 30 |
| | | Networking | 2 | |
| | | Intelligent System | 6 | |
| | | Mobile Application | 9 | |
| | | Data Mining | 4 | |
| | | Cloud Computing | 2 | |

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT7

TITLE OF THE PROJECT

**FARMERS ASSISTANT USING IOT BASED SMART IRRIGATION AND TRESSPASSERS**

FACULTY GUIDE: **Dr.P.Chitra**


**Name1:** **Magendran**

**Name2:** **S.Magesh**

**Name3:** **D.Raja**



**ABSTRACT**

Water scarcity and field monitoring are big concern at recent times. This project is used to irrigate the farmland and also protect the field from trespassers. In an efficient manner with an automated irrigation system based on a water capacity needed for a particular plant will be irrigated. Soil moisture sensor is used to find moisture level in the field and based on this a periodic notification is displayed to the farmer and the system will automatically switching the console of the motor pump. For field monitoring a motion sensor is used. During trespassing, a notification is passed to the farmer and he can control his farming field.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: IJCRT, Vol 6, Issue 1

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT8

TITLE OF THE PROJECT

**AUTOMATED GAS LEVEL MONITORING, BOOKING AND LEAKAGE DETECTOR FOR HOME SAFETY**

FACULTY GUIDE: **Mr.A.SUBBARAYDU**


**Name1:**

**M.Pavithra**

**Name2:**

**M.Sushmitha**



**ABSTRACT**:

The main objective of our project is to provide automatic booking of LPG gas and detection of leakage in the gas and alerting the user. The level of the gas is monitored by the load sensor and if it is below the sensor threshold value an automatic message is send to the gas service provider. The leakage is detected by the Mq2 gas sensor and it is notified to the user through sms notification and the gas is automatically turned down to prevent fire accident. The booking of the gas is monitored by IOT.


**Achievements:**

Project Design Contests: ICT

Symposium: Nil

Publications: IEEE Conference

**Social Media Reach:** Nil

Youtube : yes

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT9

TITLE OF THE PROJECT

**DETECTION AND PREDICTION OF DIABETES MELLITUS USING ASSOCIATION**

FACULTY GUIDE: **Ms.J.OMANA**


**Name1:** **S.Sujithra.**

**Name2:** **S.Vishali**

**Name3:** **Yuvashree**



**ABSTRACT**

Diabetes mellitus is a chronic disease, lifelong condition that affects the body's ability to use the energy found in food. The level of morbidity and mortality due to diabetes and its potential complications are enormous and pose significant healthcare burdens. It is a complex and time consuming task in detecting the risk of acquiring diabetes mellitus when a large amount of data is manually processed in the clinical environment. The objective of this paper is to simplify the process of analysing and detecting the risk of developing diabetes. Patients' details are gathered and stored in the form of Electronic medical record (EMR). Association rule mining and decision tree induction are applied to the records stored, in order to obtain the set of rules that are to be satisfied. C4.5 or Support vector machine is used to classify the data set accordingly and summarization techniques are used to summarize resultant possibility of acquiring diabetes.


**Achievements:**

Project Design Contests: Nil

Symposium: Paper Presentation

Publications: IJARIIT, Vol 4, Issue 1

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT1

TITLE OF THE PROJECT

**MOBILE APP FOR SANSAD ADARSH GRAM YOJANA**

FACULTY GUIDE: **Ms.C.KAMATCHI**


**Name1:** **F.Jason christopher**

**Name2:** **Neha Bhaskar**

**Name3:** **R.Pratheesha**



**ABSTRACT:**

This paper describes about creating a mobile application that is desired to create an awareness among the people about Sansaad Adarsh Gram Yojana (SAGY) and its purpose to public. The application details on the 5 major development plans under SAGY (Personal, Human, Economic, Social, Environment) and various other details (MP Details, Village Details, Schemes, Notification, Gallery and Organization Associated). It also maintains information regarding past, ongoing and future events. The future events are notified to the users via non-intrusive push notifications. The various schemes of SAGY are grouped into 31 categories. The user selects one of these 31 categories while registering into the application. Notifications are sent to the users based on the category they select. The objective of these schemes are to bring the perception of Mahatma Gandhi of bringing developed villages into existence.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: IJSRD,Vol 5, Issue 12

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MINIPROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT2

TITLE OF THE PROJECT

**SENTIMENTAL ANALYSIS USING SOCIAL MEDIA RESPONSE FOR A PARTICULAR PROGRAM**

FACULTY GUIDE: **Mr.I.MOHAN**


| Name1: | Name2: | Name3: | Name4: |
|---|---|---|---|
| AJITHK UMAR B | SURESH KUMAR .G | UDHAY AKUMAR .B | VIGNESHWARAN |



## ABSTRACT

Sentiment analysis or opinion mining is the computational study of people's opinions, sentiments, attitudes, and emotions expressed in written language. It is one of the most active research areas in recent years. Its popularity is mainly due to Social media like Facebook, Twitter, YouTube review videos, is the platform, where people express their frank opinions and thoughts about any event or program. To understand the feedback of the viewers, social media is employed as the best tool. Twitter is the world's most powerful and the 9th widely viewed social media platform. To analyse the sentiments for a channel program, a twitter API is created to extract tweets and preprocess them, to analyse the sentiments through the back-end process. Finally, the sentiment analysis is visually represented in different perspectives of sentiments, which can easily aid the enhancement of quality of the program, to provide the best entertainment and satisfy the audience.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: JNCET, Vol 8, Issue 3

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT3

TITLE OF THE PROJECT

**SYMPTOMS BASED CLINICAL DOCUMENT CLUSTERING**

FACULTY GUIDE: **Mr.I.MOHAN**


**Name1:**

**HRITHU SATHISH**

**Name2:**

**KRUBA GAYATHRI S**



## ABSTRACT

This paper helps us to understand the various data mining technologies used in diagnosing heart disease in patients. Datasets of patient details are collected with correspondence to the risk factors with which the medical practitioner can predict the disease before it occurs. The term mining means bringing out patterns which are hidden and previously unidentified for better grasp of the particular problem. Several data mining techniques such as the Classification algorithms like Decision tree, Genetic algorithm, Neural network, Artificial intelligence, Naive Bayes, and Clustering algorithms like SVM, K-means and KNN are the techniques that are utilized in this process. Many models for this prediction system are developed, comparisons are made and the accuracy level of every model is provided.


**Achievements:**

Project Design Contests: Nil

Symposium:

Publications: JNCET, Vol 8, Issue 2

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT4

TITLE OF THE PROJECT

**REAL TIME ASSISTANCE IN INDIAN AGRICULTURE**

FACULTY GUIDE: **Ms.M.D.BOOJIMA**


**Name1:** **KAVYA V**

**Name2:** **KEERTHANA D**

**Name3:** **LAKSHMI PRIYA P**



**ABSTRACT**

Mobile or smart phones are becoming an essential device for all types of people irrespective of age group and literacy. This can improve the condition of Indian agriculture but also the life and working conditions of the farmer. Advances in Information and Communication Technology (ICT) are promoting agriculture in India. Computational power and interconnection capacities have contributed smart phones and tablets to become an essential tool in agricultural sector. Our agriculture project using mobile application discuss everything about providing notifications on various agricultural updates as per user requirements , crop cultivation based on humidity of the environment , provides experts suggestion during cultivation on his/her mobile phones. The updates v aries from rate of product to stocks of other products in the market, this is helpful for farmers around the state. This app updates is mainly concerned about specific group of customers which is farmers, its update status on a particular product is as per the user choice.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: IJCRT, Vol 6, Issue 1

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT5

TITLE OF THE PROJECT

**SECURE AUDITING AND DEDUPLICATING DATA IN CLOUDSENSOR**

FACULTY GUIDE: **Ms.M.D.BOOJIMA**


**Name1:**

**LAKSHMI PRIYA K V**

**Name2:**

**SUHASH INIPRABHU .B**

**Name3:**

**VISHALI .J**



**ABSTRACT:**

Cloud computing is an online data centre for providing a large amount of computing and storage resources for various service applications with high quality. However, cloud users no longer possess their data in a local data storage infrastructure, which would result in auditing for the integrity of outsourced data being a challenging problem. To help the users complete verification of the integrity of the outsourced data has become a key issue. The secure Encryption and de-duplication techniques are used to solve this problem, from which the users can resort to a third-party auditor (TPA) to check the integrity of outsourced data and Encryption algorithm MD5 is used to secure the data outsourced. The duplication of data has been avoided using the De-duplication techniques by comparison of files in the user database using php ,this will enhance the memory efficiency of the storage and the processing time is reduced.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: IJRASET. Vol6. Issue 11

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT6

TITLE OF THE PROJECT

**CHILD ABDUCTION ALERTING SYSTEM IN HOSPITALS USING GSM AND PIR**

FACULTY GUIDE: **Ms.B.S.LIYA**


**Name1:** AKASH J

**Name2:** ARUN KUMAR K

**Name3:** MANOJ KUMAR V



## ABSTRACT:

Security is the most important thing concerned in the day-to-day life. Safety and security of the new born baby is the concept of the child abduction alerting system. The system focuses on the alerting and tracking the motion of the abducted child in hospitals. PIR sensors are used to detect the motion of the cause or any activity that when the child get abducted. The GSM modem is use to send the alert message to the parents or the hospital management when the child was abducted by the thieves. In this the tracking of the abducted child is tracked by using the Bluetooth device and Smart phone. The PIR sensor sense the presence of the intruder and the Controller reads the signal from the sensor, if the intruder is detected it turns on the buzzer and sends the alert message to the predefined number through the GSM. The system consists of MQ135 and temperature sensor to detect the temperature and Air Quality in the room.



**Keywords:** PIR sensor, GSM module, Arduino UNO.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: IJCRT, Vol6, Issue 1

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 16TH SEPTEMBER 2017**

TEAM ID-4IT10

TITLE OF THE PROJECT

**THE CHALLENGES AND COUNTERMEASURES OF TEACHING PROGRAMMATIC IN HIGHER**

FACULTY GUIDE: **Mr.R.SIVAKUMAR**


**Name1:** **RAGAVI .M**

**Name2:** **SANGEETHA.B**

**Name3:** **SOWMIYA .S**



## ABSTRACT:

The main aim of this project is to find the best pedagogy to be used and implemented in the current education system. Based on the evaluation the results are being generated. Pedagogy is the discipline that deals with the theory and practice of teaching. The existing pedagogy practices are adaptive teaching, cross learning, computational thinking, incidental thinking etc., Questionnaires are given to the students and graph is generated based on their results. Our aim is to find the best pedagogy practices to be implemented for higher education.



***Key words:*** Pedagogy, Education System, Cross Learning


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: IJSRD, Vol 5, Issue 12

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT11

TITLE OF THE PROJECT

**DEVICE FREE HUMAN BODY FALL DETECTION TO AID SENIOR CITIZEN**

FACULTY GUIDE: **Ms.J.OMANA**


| Name1: | Name2: | Name2: | Name2: |
|---|---|---|---|
| EDWIN DANIEL R | KARTHICK RAJA A | K.PRAVEEN KUMAR | SURESH .G |



**ABSTRACT**

For the elderly people the rate of death due to the fall is increased recently. CDC (Centers for Disease Control and Prevention) stated that falls are one of the major cause for both the fatal and non-fatal injuries. Simple fall such as slipping may seem harmless but they can actually lead to severe injury or death in the senior citizens. CDC created the STEADI (Stopping Elderly Accidents, Deaths, and Injuries) initiative to make fall prevention routine. Physical activity and inactivity mechanisms differ and it is not maintained properly. In addition, physical activity primarily prevents accidents soon to make precaution. In our system, we are implementing system where the complete activities of the patient are monitored using advanced Accelerometer sensor, the predefined alert of the patient can be determined and alert can be done to the patients. Here, accelerometer sensor is placed on the body. Motion tracking devices designed for the low power, low cost, and high-performance requirements of smart wearable sensors. In this the determined data is given to the data processing unit. The sample test has been done on the people, various gestures are predefined and it will investigate the body activities and it will through the data samples from the processing unit.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: IJSRD, Vol 5, Issue 11

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT12

TITLE OF THE PROJECT

**A WIRELESS BODY SENSOR NETWORK FOR ACTIVITY**

FACULTY GUIDE: **Mr.A.SUBBARAYDU**


**Name1:**

**ANITHA A**

**Name2:**

**SINDHUJA .S**



**ABSTRACT**

The vast improvement in Information technology has led to the development of Internet of Things (IoT). Nowadays human health care system uses IoT for the convenience of physicians and patients and also used for real- time monitoring of patient information. The proposed system uses Body sensors for monitoring patient's temperature, blood pressure, pulse rate, ECG etc. The output produced by the sensors are analog data which is transformed into digital using the Arduino UNO microcontroller. The output can be viewed in the LCD display and computer. This system uses GSM module to transmit the real-time patient's data to the physicians and family members. The main objective of this system is to monitor the patient health condition and wirelessly transmit the details to the physician's mobile phone.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: IJSRD, Vol 5, Issue 11

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT16

TITLE OF THE PROJECT

**PRIVACY PRESERVING MOBILE CLOUD SENSING FOR BIG DATA APPLICATIONS**

FACULTY GUIDE: **Mr.R.SIVAKUMAR**


**Name1:**

**AKASH M**

**Name2:**

**THULASIDHARA N .M**



**ABSTRACT**

Social networks are a popular way to model the interactions among the people in a group or community. Understanding the dynamics that drive the evolution of a social network is a complex problem due to a large number of variable parameters. This problem is commonly known as the Link Prediction problem. In the traditional link prediction problem, a snapshot of a social network is used as a starting point to predict, by means of graph-theoretic measures, the links that are likely to appear in the future. In this paper, we introduce cold start link prediction as the problem of predicting the structure of a social network when the network itself is totally missing while some other information regarding the nodes is available. As a result the lack of topological information the traditional methods cannot be applied for solving the link prediction problem. We propose a two-phase method based on the bootstrap probabilistic graph. The first phase generates an implicit social network under the form of a probabilistic graph. The second phase applies probabilistic graph-based measures to produce the final prediction.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Nil

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT13

TITLE OF THE PROJECT

**SMART WEARABLE DEVICE TO ALERT BYSTANDERS OF THE ABDUCTED CHILD**

FACULTY GUIDE: **Ms.B.S.LIYA**


**Name1:** **M HEMA SHALINI**

**Name2:** **MONISHA V**

**Name3:** **NANDHINI DEVI R**



**ABSTRACT**

Our project dissert the concept of device for children. Using this device the parents can easily track the child using GSM technology. The advantage of this device is that, it does not require any expensive smart phone and the user does not need te chnical knowledge. In market many devices are available, but it is only using WIFI and Bluetooth with the specific range. Therefore t he focus of this project is to have the SMS text alert communication between parents and the device. Thus the GSM mobile communicat ion is almost present everywhere. The parents can send the text to the device with keywords about the "LOCATION"," TEMPERATURE"," PIR sensor" and "BUZZ " the device will reply back to the parent mobile about the real time accurate location of the child which will provide the directions of the child location in Google map app and the surrounding location temperature and the PIR sensor ra diation so that the parents can keep track of child with ease. This prestige of this project is that people in the surrounding of the child could instantly react if the child is in danger. This device provides the more security for the children.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Nil

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT414

TITLE OF THE PROJECT

**TRAFFIC IDENTIFICATION ENGINE WITH REAL TIME NETWORKING**

FACULTY GUIDE: **Mr.THANIGAIVEL**


**Name1:** **K JAYASREE**

**Name2:** **KOWSALYA S**

**Name3:** **PRIYADH ARSCINI**



**ABSTRACT**

Traffic classification is an emerging topic in the field of computer science. The Classification and the analysis of the network traffic is useful to avoid the traffic congestion while transferring the data. The classification of traffic refers to categorizing the traffic according to its various application type and also helps in managing the overall performance of a network. The flow of traffic analysis is an essential piece of knowledge for engineering a network. However, with the rapid evolution of the internet applications the effectiveness of the customary methods like port based, payload based. The Machine learning algorithms has achieved high accuracy and best results. The use of Hello Packet for the classification makes easier in analysing the real-time network which adds accuracy to the existing system. The accurate classification is achieved using the hello packet which classifies the network in an effective way and transfers the data through the easier and the shortest path.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Nil

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT15

TITLE OF THE PROJECT

**PRATHYUSHA FEEDBACK SURVEYING SYSTEM**

FACULTY GUIDE: **Mr.R.SIVAKUMAR**


**Name1:** **SELDAN .S**

**Name2:** **SHIBIN .G**

**Name3:** **SREEVATCHAN .R**


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Nil

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-4IT17

TITLE OF THE PROJECT

**INCORPORATING MIND EDUCATION TO DEVELOP A BETTER HUMAN**

FACULTY GUIDE: **Ms.J.OMANA**


**Name1:** **AVITA M**

**Name2:** **DHANALAKSHMI P**

**Name3:** **FASIK AHAMED S**



**ABSTRACT:**

A web application to find out the mental ability of a person and provide mind education strategies would be formulated. It has been seen that there is no automated system/software for analyzing the mental ability of a person. A survey depending on student's age is done which consists of scenario based questions and categorization (weak, average or bright) is done based on that. Once categorized, mind education strategies can be incorporated. The methodologies used can be reading comprehension on motivational articles, role play, various group activities, visit to rehabilitation centres, prison, hospital etc. After completing every task, the student has to report their experience. Once they complete all the tasks, assessment can be done by providing task on "how they tackle the given situation". By this the change in students are noticed and suggestions are provided.


**Achievements:**

Project Design Contests: Nil

Symposium: Nil

Publications: Nil

**Social Media Reach:** Nil

Youtube : Nil

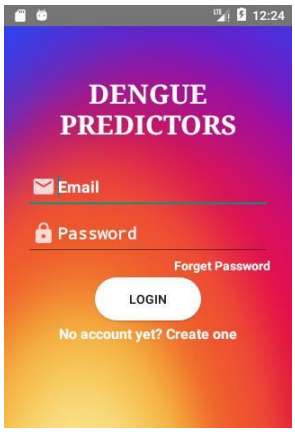
Facebook : Nil

**MAJOR PROJECT EXHIBITION DATED 23rd FEBRUARY 2018**

TEAM ID-IT415

TITLE OF THE PROJECT

**GPS BASED DENGUE RISK INDEX**





FACULTY GUIDE: **Dr. P. CHITRA**


**Name1:** PAVITHRAN .P

**Name2:** SARANYA .V

**Name3:** SHALINI .R

**Name3:** SHRUTHI .G.S.



**ABSTRACT:**

Our idea is to develop GPS-based dengue risk index app which is mainly used to predict the outburst of dengue diseases in user's location. The prediction is based on analysing climatic condition. The climatic parameters that are used in analysis are temperature, rainfall and humidity. Linear regression algorithm is used to extrapolate in the multidimensional space to predict the threat of dengue exploration at user's location. The dengue risk index score will indicate and alert the user to take some immediate precautionary measures to prevent from dengue infection


**Achievements:**

Project Design Contests: Texas

Symposium: Nil

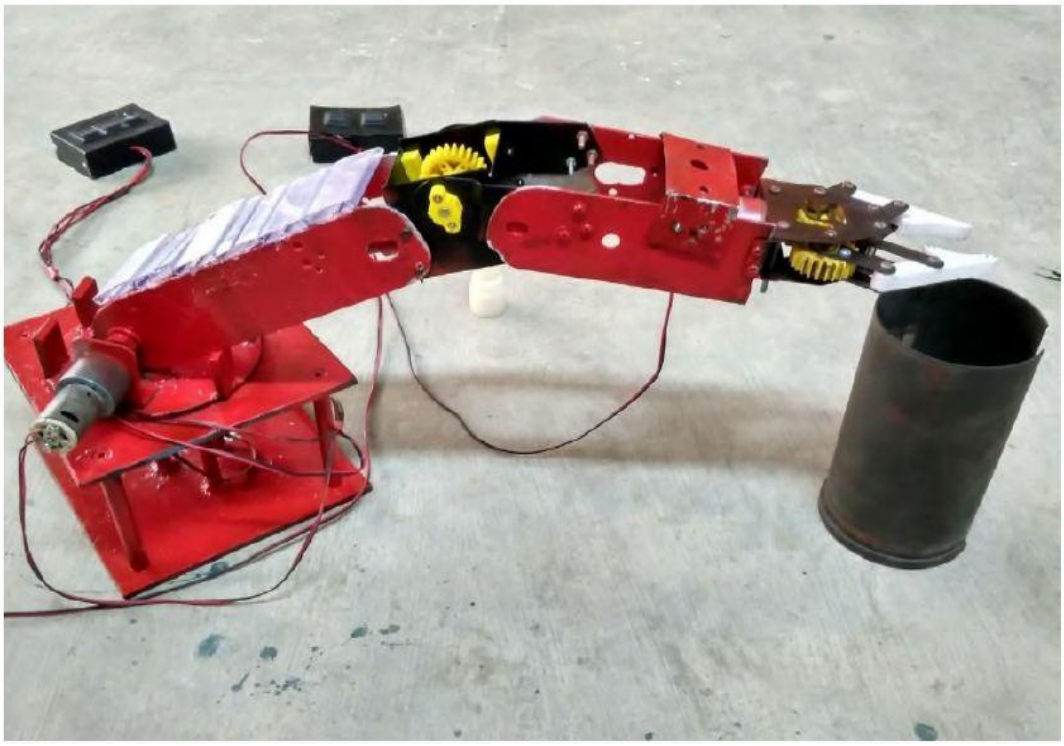
Publications: Nil

**Social Media Reach:** Nil

Youtube : Nil

Facebook : Nil

# DEPARTMENT OF MECHANICAL ENGINEERING



| Department | Miniproject Coordinator | Domain | No. of Miniprojects | Total |
|---|---|---|---|---|
| **Mechanical IV Year** | **K.Balachandar** | **Design-36** | **36** | **36** |
| **Mechanical III Year** | **D.Meganathan** | **Design /Manufacturing** | **27** | **63** |
| **Mechanical II Year** | **S.P.Mohan Mithra** | **Design /Manufacturing** | **18** | **81** |

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 4MEC9

TITLE OF THE PROJECT **DESIGN AND STRESS ANALYSIS OF GEARBOX**

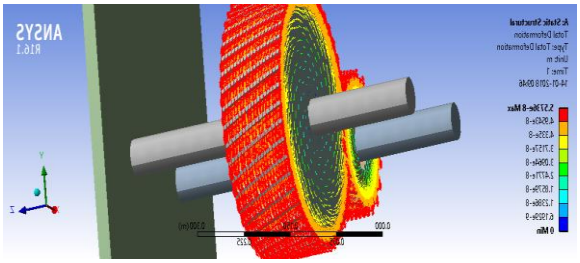
FACULTY GUIDE: G.Venkatkumar


CHANDRASEKARN. B

HARISH .L

DHANVANTH KUMAR.S


**Project Photo/ Block Diagram or schematic:**





## Abstract:

Gears are used for speed and torque variation. since gears are rotating parts gear teeth tends to wear and thus crack occurs, to overcome this crack and to obtain higher efficiency gearbox can be analyzed before production. Spur gears and the shafts are designed using SOLIDWORKS and then it is subjected to stress analysis in ANSYS. Stress concentration factor is compared under varied loads. The main objective for carrying out this analysis is to improve the life of the gear. After the analysis of gears from existing gearbox the reason for failure was found. The reason for failure of the gear was due to wear of gear teeth edges. This is caused due to high stress concentration along the gear teeth edges. To relieve these stress concentration gear material can be changed so that the resulting stress can be reduced according to the properties of the materials used. The resulting stress of all the materials are compared and the best material is chosen


**Achievements:**

Project Design Contests: --

Symposium: presented

Publications: Yes

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 4MEC10

TITLE OF THE PROJECT **DESIGN AND STRESS ANALYSIS ON FLYWHEEL**

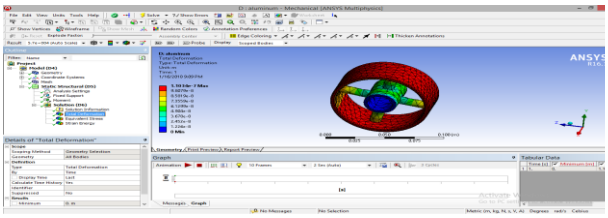
FACULTY GUIDE: G.Venkatkumar


PALURI VIJAYA BHASKARA REDDY

YERRATTY SAIHARISH

THARUN.K


**Project Photo/ Block Diagram or schematic:**




Abstract:

Energy can be stored in the form of chemical, thermal, electromagnetic and mechanical form. The applications of mechanical energy storage devices include compressed gas facilities, pumped hydroelectric storage and flywheels. A flywheel stores energy in the form of kinetic (rotational) energy. Whereas each energy storage system has its inherent advantages and disadvantages compared to the others, it is the overall system performance and simplicity of flywheels that make them especially attractive for a variety of applications. Flywheel is mechanical device which is used to store the kinetic energy. It stores up energy when the demand for energy is less than the availability and delivers energy when there is a lean period (when demand is more).Mainly, the performance of a flywheel can be attributed to three factors, i.e., material strength, geometry (cross-section) and rotational speed. While material strength directly determines kinetic energy level that could be produced safely combined (coupled) with rotor speed, there are many causes of flywheel failure. But maximum tensile and bending stresses induced in the web and rim under the action of centrifugal forces are the main causes of flywheel Failure.By changing the dimensions and shape and the materials and use such materials which increases stored energy and maintain minimum stresses with reduce mass of flywheel.It shows that smart design of flywheel geometry could both have a significant effect on the Specific Energy


**Achievements:**

Project Design Contests: --

Symposium: presented

Publications: Yes

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 4MEC11

TITLE OF THE PROJECT **MODELING AND FINITE ELEMENT ANALYSIS OF SPUR GEAR**

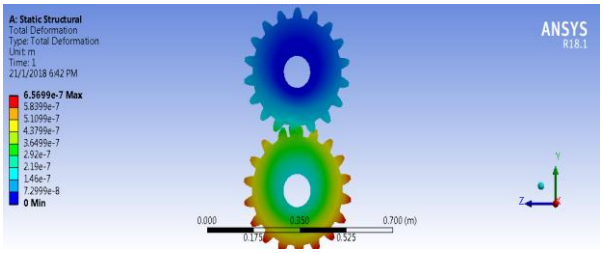
FACULTY GUIDE: G.Venkatkumar


DEERAJ BALAJI.M

MANDAHI ANILKUMAR

JAYAVEL..R


**Project Photo/ Block Diagram or schematic:**





Abstract:

The contact stress in the mating gears is the key parameter in gear design. This paper presents the stress analysis of mating teeth of spur gear to find maximum contact stress in the gear teeth. The results obtained from Finite Element Analysis (FEA) are compared with theoretical Hertzian equation values. For the analysis, steel, grey cast iron, aluminium alloy and ASTM A572 HSLA steel are used as the materials of spur gear. The spur gears are sketched, modeled and assembled in CATIA V5. As Finite Element Method (FEM) is the easy and accurate technique for stress analysis, FEA is done in finite element software ANSYS Workbench 18.1. Also deformation for steel, grey cast iron, aluminium alloy and ASTM A572 HSLA steel is obtained as efficiency of the gear depends on its deformation. The results show that the difference between maximum contact stresses obtained from Hertz equation and Finite Element Analysis is very less and it is acceptable. The deformation patterns of steel, grey cast iron, aluminium alloy and ASTM A572 HSLA steel gears depict that the difference in their deformation is negligible.


**Achievements:**

Project Design Contests: --

Symposium: ----

Publications: Yes

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 4MEC12

TITLE OF THE PROJECT **LOAD SHARING BASED ANALYSIS OF HELICAL GEAR USING FINITE ELEMENT ANALYSIS METHOD**

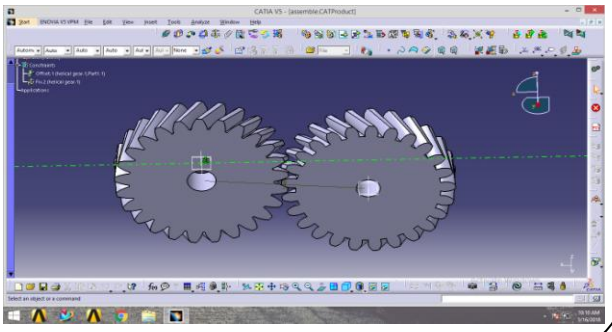
FACULTY GUIDE: G.Venkatkumar


KOLA KRISHNAPRASAD CHOWDARY

CHAVALI SARATHCHANDRA

LOGESWARAN.K


**Project Photo/ Block Diagram or schematic:**




**Abstract:**

In the gear design the bending stress and surface strength of the gear tooth are considered to be one of the main contributors for the failure of the gear in a gear set. Thus, the analysis of stresses has become popular as an area of research on gears to minimize or to reduce the failures and for optimal design of gears in this paper bending and contact stresses are calculated by using analytical method as well as Finite element analysis. To estimate bending stress modified Lewis beam strength method is used. Pro-e solid modeling software is used to generate the 3-D solid model of helical gear. Annoys software package is used to analyze the bending stress. Contact stresses are calculated by using modified AGMA contact stress method. In this also Pro-e solid modeling software is used to generate contact gear tooth model. Annoys software package is used to analyze the contact stress. Finally, these two methods bending and contact stress results are compared with each other.


**Achievements:**

Project Design Contests: --

Symposium: ----

Publications: Yes

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 4MEC13

TITLE OF THE PROJECT **DESIGN ANALYSIS OF DISC BRAKE**

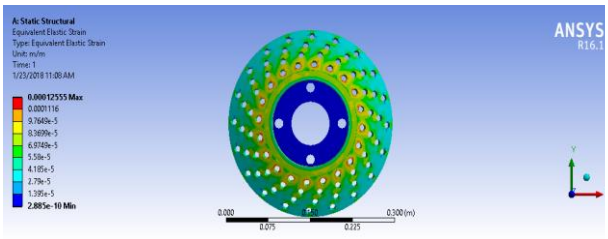
FACULTY GUIDE: G.Venkatkumar


R.DILIPKUMAR

R.HARISHKUMAR

M.G.MOHANRAO


**Project Photo/ Block Diagram or schematic:**





**Abstract:**

Each single system has been studied and developed in order to meet safety requirement. Instead of having air bag, good suspension systems, good handling and safe cornering, there is one most critical system in the vehicle which is brake systems. Without brake system in the vehicle will put a passenger in unsafe position. Therefore, it is must for all vehicles to have proper brake system. In this paper disc brake material use for calculating normal force, shear force and piston force. And also calculate the brake distance of disc brake. The standard disc brake two wheelers model using in Annoys and done the Thermal analysis and Modal analysis also calculate the deflection and Heat flux, Temperature of disc brake model. This is important to understand action force and friction force on the disc brake new material, how disc brake works more efficiently, which can help to reduce the accident that may happen in each day.


**Achievements:**

Project Design Contests: --

Symposium: ----

Publications: Yes

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 4MEC32

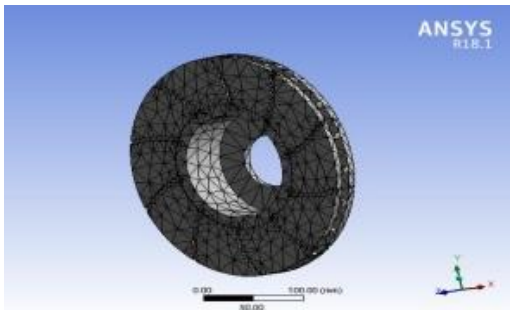
TITLE OF THE PROJECT **DESIGN AND ANALYSIS OF DISC BRAKE ROTOR OF CAR**

FACULTY GUIDE: Mr. R KARTHICK


ARUMUGA HARISH.K

**BHUVANESH S**


**Project Photo/ Block Diagram or schematic:**





## Abstract:

The disc brake uses calipers to squeeze pairs of pads against a disc or "rotor" to create friction. A brake disc usually made of cast iron or ceramic composites (as well as Kevlar, carbon and silica), is coupled to the wheel or the axle. To stop the wheel, resistance material in the form of brake pads is forced hydraulically, pneumatically, mechanically or electromagnetically against both sides of the disc. Repetitive braking of the vehicle leads to heat generation during each braking event. Transient Thermal Analysis of the Rotor Disc of Disk Brake is aimed at evaluating the performance of disc brake rotor of a car under braking conditions and there by assist in disc rotor design and analysis.


**Achievements:**

Project Design Contests: NIL

Symposium: Nil

Publications: Yes

**Social Media Reach:**

YouTube: --

Face book: --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 4MEC31

TITLE OF THE PROJECT **DESIGN AND ANALYSIS OF DIFFERENTIAL GEAR BOX**

FACULTY GUIDE: Mr. R KARTHICK


MOHAN KUMAR V

MOHAN PRABHU

V MANOJ


**Project Photo/ Block Diagram or schematic:**

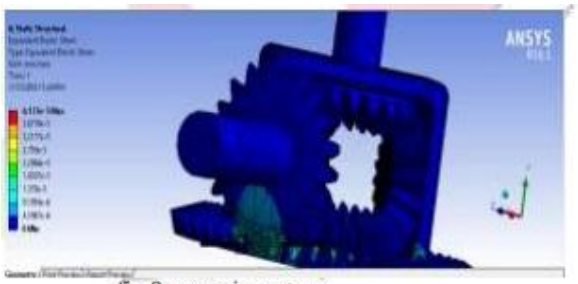



fig 8 von mises stress


## Abstract:

Differential is used when a vehicle takes a turn, the outer wheel on a longer radius than the inner wheel. The outer wheel turns faster than the inner wheel that is when there is a relative movement between the two rear wheels. If the two rear wheels are rigidly fixed to a rear axle the inner wheel will slip which cause rapid tire wear, steering difficulties and poor load holding. Differential is a part of inner axle housing assembly, which includes the differential rear axles, wheels and bearings. The differential consists of a system of gears arranged in such a way that connects the propeller shaft with the rear axles. The main objective of this paper is to perform mechanical design of differential gear box and analysis of gears in gear box. We have taken Stainless steel,aluminium alloy,magnesium alloy,structural steel materials for conducting the analysis. Presently used materials for gears and gears shafts is Cast Iron, Cast Steel. So, in this paper we are checking as the other material for the differential gear box for light utility vehicles so, we can reduce the weight.


**Achievements:**

Project Design Contests: NIL

Symposium: NIL

Publications: Yes

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 4MEC30

TITLE OF THE PROJECT **DESIGN AND ANALYSIS OF FOUR WHEELER ROCKER ARM**

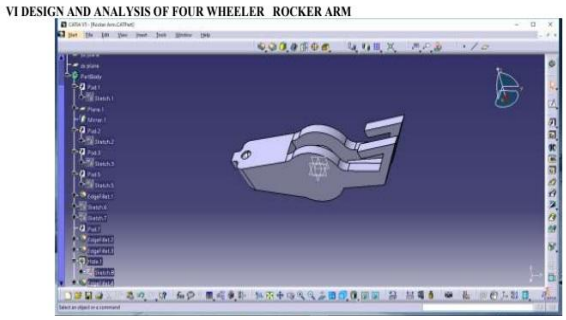
FACULTY GUIDE: Mr. R KARTHICK


SASI KUMAR .S

J.SIVA

S.TAMILSELVAN


**Project Photo/ Block Diagram or schematic:**





**Abstract:**

A rocker arm is a valve train component in internal combustion engines. As rocker arm is acted on by a camshaft lobe, it pushes and opens either the intake or exhaust valve. This allows fuel and air to be drawn into the combustion chamber during the intake stroke or exhaust gases to be expelled during the exhaust stroke. The rocker arm is designed and analysed by applying different materials for it. The materials used for this analysis are Aluminium Alloy 6061, HDPE and Glass fibre. The design is created in Catia and the analysis is done in Annoys workbench 16.1. Based on our analysis Aluminium Alloy 6061 has the maximum fatigue stress.


**Achievements:**

Project Design Contests: NIL

Symposium: Nil

Publications: Yes

**Social Media Reach:**

YouTube: --

Face book: --

TEAM ID- 4MEC5

TITLE OF THE PROJECT: DESIGN AND ANALYSIS OF FOUR STROKE PISTON FOR DIESEL ENGINE.

FACULTY GUIDE: K.SIVARAMAKRISHNAN

Nam

Name

Main project Photo/ **Block Diagram or schematic:**

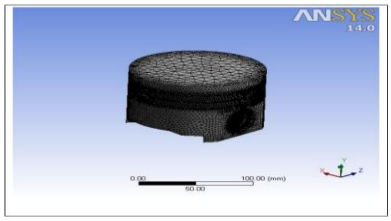



Figure 5.2 Shows the Mesh Model of Piston


## Abstract

In this study, firstly, thermal analysis is investigated on a conventional piston made of Al alloy A2618. Secondly, thermal analysis is performed on piston made of Al-GHS1300, coated with Zirconium material by means of using a commercial code, namely ANSYS. The main objective is to investigate and analyse the thermal stress distribution of piston at the real engine condition during combustion process. In this work, the main emphasis is placed on the study of thermal behavior of functionally graded coatings obtained by means of using a commercial code, ANSYS on aluminum and zirconium coated aluminum piston surfaces. The analysis is carried out to reduce the stress concentration on the upper end of the piston i.e. (piston head/crown and piston skirt and sleeve). With using computer aided design V5 Catia software the structural model of a piston will be developed. Furthermore, the finite element analysis is done using Computer Aided Simulation software ANSYS. For the analysis of piston input conditions and process of analysis, a lot of literature survey has been done. Comparative study is done to select best material.


**Achievements:**

Project Design Contests: NIL

Symposium:NIL

Publications:NIL

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID-4MEC2

Vibrational analysis of bicycle frame

FACULTY GUIDE: K.SIVARAMAKRISHNAN


Name : R. Balaji

Name P. Berlin

Name M.T. Karthik


Main project Photo/ **Block Diagram or schematic:**



**Abstract :**

It is important to recognize that the design of any machine is an interdisciplinary process, involving aerodynamics, thermodynamics, fluid dynamics, stress analysis, vibration analysis, the selection of materials, and the requirements for manufacturing. The operation of any mechanical system will always produce some vibration. Our goal is to minimize the effect of these vibrations, because while it is undesirable, vibration is unavoidable. The result of excess vibration can vary from nuisance disturbance to a catastrophic failure. Bicycle frame is a major component in a system. This work involves vibration analysis to determine the key characteristics of a bicycle frame. The dynamic characteristics of bicycle chassis such as the natural frequency and mode shape will be determined. Tools used are catiaV5 for 3D modeling, Hyper mesh for meshing, and Annoys for post processing.


**Achievements:**

Project Design Contests: NIL

Symposium: Nil

Publications: Nil

**Social Media Reach:**

YouTube: -

Face book: -

TEAM ID-4MEC1

DESIGN AND ANALYSIS OF TWO WHEELER (BIKE CHASSIS)

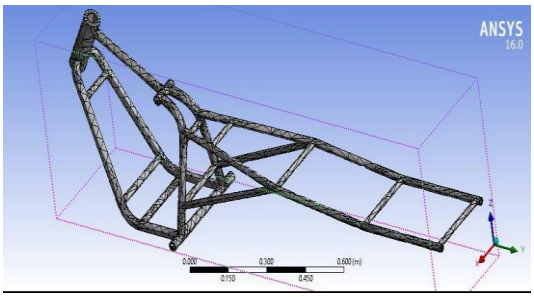
FACULTY GUIDE: K.SIVARAMAKRISHNAN


Name :
**S. Poovarasan**

Name
**S. Sakthivel**

Name K. Ranjith Kumar.


Main project Photo/ **Block Diagram or schematic:**





**Abstract :**

The chassis frame forms the backbone of a vehicle; its principle function is to safely carry the maximum load for all designed operating conditions. Automotive chassis is the main carriage system of a vehicle. The chassis serves as a skeleton upon which parts like gearbox and engine are mounted. The two-wheeler chassis consists of a frame, suspension, wheels and brakes. The chassis is what truly sets the overall style of the two wheeler. Commonly used material for two -wheeler chassis is steel which is heavy in weight or more accurately in density. There are various alternate materials like aluminium alloys, titanium, carbon fiber, magnesium, etc. which are lesser in weight and provide high strength and thus can be used for chassis. This paper deals with design of two wheeler chassis frame and its weight optimization. The static loading was carried out on the chassis and the design is improving the mechanical behavior of the chassis by using alternate material while maintaining the strength. The modeling work was carried out by the CATIA V5 and analysis was done by ANSYS software. The modeling would consider the geometry characteristics and


**Achievements:**

Project Design Contests: NIL

Symposium: Nil

Publications: Nil

**Social Media Reach:**

YouTube: -

Face book: -

TEAM ID-4MEC6

Design and Thermal Analysis on Engine Cylinder Fins by Modifying its Material and Geometry.

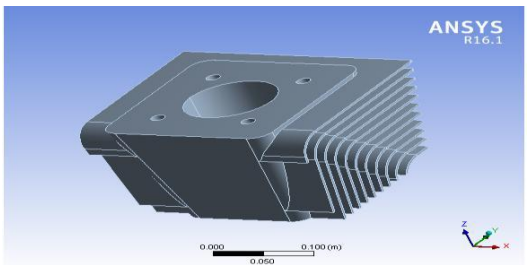
FACULTY GUIDE: K.SIVARAMAKRISHNAN


Name : **G. Ramakrishna**

Name **S. Selvaprakash**

Name **A. Sunil Kumar Giri**


Main project Photo/ **Block Diagram or schematic:**





**Abstract :**

The major component which is subjected to high amount of thermal variations is the engine cylinder fin. The cooling of the engine cylinder is increased by increasing the surface area of the engine fin. The main aim of this paper is to investigate the thermal dissipation of the heat from the engine fin for higher rate of cooling. This can be analyzed by changing the geometry and applying different materials for it. The geometry used for this analysis is circular, rectangular, helical, tapered, longitudinal, angular. The materials used for this analysis are Grey Cast iron and Aluminium Alloy 6061. The design is created in Creo 3.0 and the thermal analysis is done in Annoys Workbench 16.1. Based on our analysis Aluminium Alloy 6061 shows maximum thermal dissipation and higher rate of cooling, specifically circular fin has maximum value.


**Achievements:**

Project Design Contests: NIL

Symposium: Nil

Publications: Nil

**Social Media Reach:**

YouTube: -

Face book: -

TEAM ID-4MEC4

DESIGN AND ANALYSIS OF WIND TURBINE BLADE -STRUCTURAL ANALYSIS

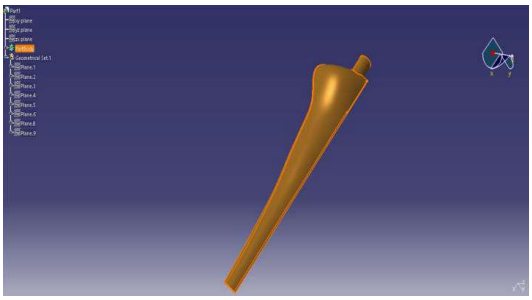
FACULTY GUIDE: K.SIVARAMAKRISHNAN


Name
R.CHANDRASEKARAN

Name
S.CHANDRASEKARAN

Name
S.ARUNKUMAR


Main project Photo/ **Block Diagram or schematic:**




**Abstract :**

A windmill is a mill that converts the energy of wind into rotational energy by means of vanes called sails or blades. The majority of modern windmills take the form of wind turbines used to generate electricity, or wind pumps used to pump water, either for land drainage or to extract groundwater. A wind turbine is a windmill-like structure specifically developed to generate electricity. The smallest turbines are used for applications such as battery charging for auxiliary power for boats or caravans or to power traffic warning signs. Slightly larger turbines can be used for making contributions to a domestic power supply while selling unused power back to the utility supplier via the electrical grid. In this project we are going to design a blade for small turbines using catiaV5 and analyses for a Epoxy material using ANSYS in order to give a good advantages of using that in a safe manner. Also, to initiate the advantages and disadvantages of the blades. So that the production time may also reduced.


**Achievements:**

Project Design Contests: NIL

Symposium: Nil

Publications: Nil

**Social Media Reach:**

YouTube: -

Face book: -

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID-4MEC27

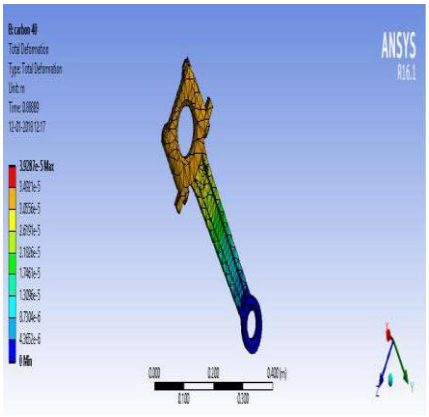
TITLE OF THE PROJECT: DESIGN AND ANALYSIS OF TWO WHEELER CONNECTING ROD USING DIFFERENT MATERIAL

FACULTY GUIDE: A.Selvakumar


A.Dayanidhi,

K. Aravind Redd

MD. Dhanish khan



Abstract:

Connecting Rods are used practically generally used in all varieties of automobile engines acting as an intermediate linkbetween the piston and the crankshaft of an engine of an automobile. It is responsible for transmission the up and down motion of thepiston to the crankshaft of the engine, by converting the reciprocating motion of the piston to the rotary motion of crankshaft. Whilethe one end, small end the connecting rod is connecting to the piston of the engine by the means of piston pin, the other end, thebigger end being connected to the crankshaft with lower end big end bearing by generally two bolts. Generally connecting rods arebeing made up of stainless steel and aluminum alloy through the forging process, as this method provides high productivity and thattoo with a lower production cost. Forces generated on the connected rod are generally by weight and combustion of fuel insidecylinder acts upon piston and then on the connecting rod, which results in both the bending and axial stresses. The lateral bendingstress are commonly called as whipping stress and this whipping stress forms the base of evaluation of performance of variousmaterials that can be used for manufacturing of connecting rod. The conventional material used is steel which is designed using CADtool which is CATIA V5 and subsequently analyzed for bending stress acting on it using ANSYS workbench 16.1 and this procedure is followed for different material which are cast iron grade 25 , carbon40


**Achievements:**

Project Design Contests: nil

Symposium: -

Publications: **2018 IJCRT | Volume 6, Issue 1 January 2018 | ISSN: 2320-2882**

**Social Media Reach:**

Youtube : -

Facebook : -

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID-4MEC29

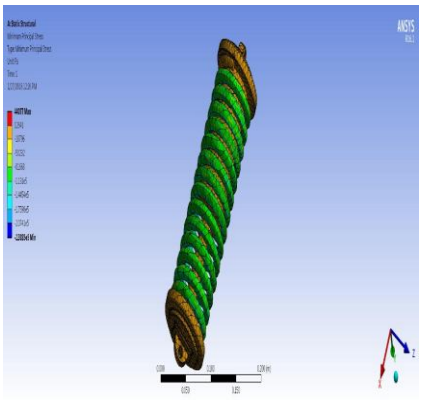
TITLE OF THE PROJECT: Design and Analysis of Shock Absorber

FACULTY GUIDE: A.Selvakumar


R.Santhosku mar

M.Santhosh Kumar

S.Varadha Rajan


Abstract:

In vehicles problem happens while driving on bumping road condition. The objective of this project is to design and analyze the performance of Shock absorber by varying the wire diameter of the coil spring. The Shock absorber which is one of the Suspension systems is designed mechanically to handle shock impulse and dissipate kinetic energy. It reduces the amplitude of disturbances leading to increase in comfort and improved ride quality. The spring is compressed quickly when the wheel strikes the bump. The compressed spring rebound to its normal dimension or normal loaded length which causes the body to be lifted. The spring goes down below its normal height when the weight of the vehicle pushes the spring down. This, in turn, causes the spring tore bound again. The spring bouncing process occurs over and over every less each time, until the up-and-down movement finally stops. The vehicle handling becomes very difficult and leads to uncomfortable ride when bouncing is allowed uncontrolled.

Hence, the designing of spring in a suspension system is very crucial. The analysis is done by considering bike mass, loads, and no of persons seated on bike. Comparison is done by varying the material and diameter of the coil spring to verify the best dimension for the spring in shock absorber. Modeling and Analysis is done using CATIA and ANSYS respectively.


**Achievements:**

Project Design Contests: nil

Symposium: -

Publications: **2018 IJCRT | Volume 6, Issue 1 January 2018 | ISSN: 2320-2882**

**Social Media Reach:**

Youtube : -

Facebook : -

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID-4MEC28

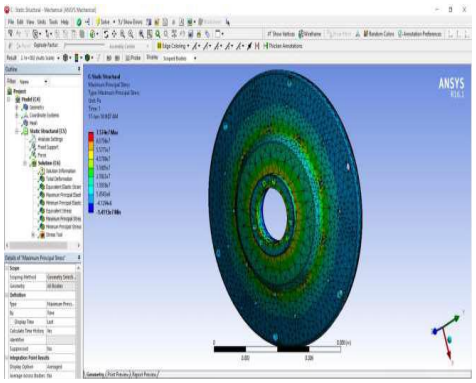
TITLE OF THE PROJECT: DESIGN AND ANALYSIS OF FLYWHEEL IN PETROL ENGINE.

FACULTY GUIDE: A.Selvakumar


S.Rajapandi,

B.Santhoshkumar,

R.Vaitheeswaran



Abstract: A flywheel is an energy storage device. It is used in machines serves as a reservoir which stores energy during the period when the supply of energy is more than the requirement and releases it during the period when the requirement of energy is more than supply. The modeling of flywheel is created in CATIA tool and is imported to ANSYS for analysis. Finite Element Analysis is used to calculate the stresses inside the flywheel. The analysis on various geometric forms of Flywheel such as solid type, rim type, web type & spoke type of flywheel has been carried out and appropriate results have been extracted & more over analysis has been carried out on the specific rotation of fly wheel. For example, in I.C. engines, the energy is developed only in the power stroke which is much more than engine load, and no energy is being developed during the suction, compression and exhaust strokes in case of four stroke engines. The excess energy is developed during power stroke is absorbed by the flywheel and releases it's to the crank shaft during the other strokes in which no energy is developed, thus rotating the crankshaft at a uniform speed.


**Achievements:**

Project Design Contests: nil

Symposium: -

Publications: **2018 IJCRT | Volume 6, Issue 1 January 2018 | ISSN: 2320-2882**

**Social Media Reach:**

Youtube : -

Facebook : -

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 4MEC35

TITLE OF THE PROJECT

EXPERIMENTAL INVESTIGATION ON THE PERFORMANCE, COMBUSTION AND EMISSION CHARACTERISTICS OF RAPESEED METHYL ESTER IN DI DIESEL ENGINE.

FACULTY GUIDE: Dr.V.Balaji

M:


Abstract :

Today, as a result of limited fuel resources and stringent emission standards, the methyl ester fuel has been focused on alternative fuels for I.C engine. Methyl ester fuels can be effectively used in diesel engine. The main objective of our work is to reduce the engine exhaust emissions like HC and CO using methyl ester in DI Diesel engine.The effects of rapeseed methyl ester (biodiesel) produced by transesterification method were studied in DI Diesel Engine. Findings: The thermal efficiency is found to be higher for diesel engine.Significant improvements were observed in engine exhaust emissions like CO and HC (except NOx) for all the diethyl ether blended biodiesel fuel in diesel engine. The higher oxygen content in the blended fuel reduces CO and HC emissions by 10% and 18% respectively compared to biodiesel in diesel engine.


**Achievements:**

Project Design Contests:

Symposium:

Publications:1

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB2018**

TEAM ID- 4MEC36

TITLE OF THE PROJECT

EXPERIMENTAL INVESTIGATION ON THE PERFORMANCE, COMBUSTION AND EMISSION CHARACTERISTICS OF WASTE COOKING OIL METHYL ESTER IN DI DIESEL ENGINE.

Mini:

FACULTY GUIDE: Dr.V.Balaji


Abstract :

The utilization of Recycled Waste Cooking Oil which is proven to be harmful to health is an alternative for petroleum based fuel, due to the fact that it is not environmental friendly to dispose used Cooking oil. The alternative solution for this is to use it for Industrial purposes namely to reproduce it as a Bio Diesel. For this project, The Waste Cooking Oil is collected from Hotels in Chennai to produce Bio Diesel from Waste Cooking Oil and the Bio Diesel is tested in the laboratory to understand its properties. The Bio Diesel extracted from Waste Cooking Oil is blended with diesel oil to get B25, B50, B75, and B100 grades of Bio Diesel. The properties of Bio Diesel meet the American Bio Diesel Standard ASTM 6751. The application of this Bio Diesel has enabled the company to use the Waste Cooking Oil without risks having risks of disposing it and this has save cost to the company. The other advantages are that it has significantly help to preserve environment and as well as conversion of Waste to useful energy. The Bio Diesel plant has also motivated the staff towards about environment and also thinks of producing sustainable production by concerning environmental factors.


**Achievements:**

Project Design Contests:

Symposium:

Publications: 01

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 4MEC3

TITLE OF THE PROJECT

PERFORMANCE ANALYSIS OF FOUR STROKE PETROL ENGINE USING H-H-O GAS.

FACULTY GUIDE: : Dr.V.Balaji


Abstract :

An attempt has been made in this project to use alternative fuel in four stroke Gasoline engine. Our fore most aim in selecting this project is to use non- conventional fuel against conventional fuel which is becoming scarce and costly now days. The combustion of a hydrocarbon fuel with air produces mainly carbon dioxide ($CO_2$) and Water ($H_2O$). However, internal combustion engines are not perfectly efficient, so some of the fuel is not burned, which results in the presence of hydrocarbons (HC) other organic compounds, carbon monoxide (CO) and forming mainly nitric oxide (NO).


**Achievements:**

Project Design Contests: 1

Symposium:

Publications:1

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 4MEC7

TITLE OF THE PROJECT **DESIGN AND ANALYSIS OF HELICAL SPRING IN TWO WHEELER SUSPENSION SYSTEM USING DIFFERENT MATERIALS**

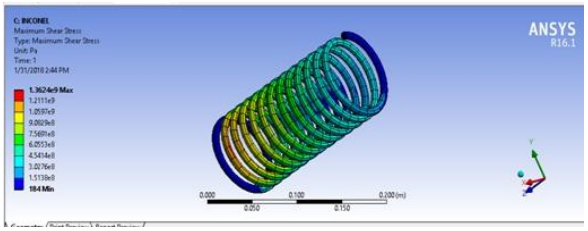
FACULTY GUIDE: Dr.V.Jayaseelan


SHEIK SALEEM

RAMAKRISHNA.V.S

ULLASANADABABU


**Project Photo/ Block Diagram or schematic:**





**Abstract:** The suspension system is the main part of the vehicle, where the shock absorber is designed mechanically to handle shock impulse and dissipate kinetic energy. In a vehicle, shock absorbers reduce the effect of traveling over rough ground, leading to improved ride quality and vehicle handling. While shock absorbers serve the purpose of limiting excessive suspension movement, their intended sole purpose is to damp spring oscillations. Hysteresis is the tendency for otherwise elastic materials to rebound with less force than was required to deform them. Hence, the designing of suspension system is very crucial. In modeling the time is spent in drawing the coil spring model and the front suspension system, where risk involved in design and manufacturing process can be easily minimized. So the modeling of the coil spring is made by using SOLID WORKS. Later the model is imported to ANSYS for the analysis work..


**Achievements:**

Project Design Contests: --

Symposium:--

Publications: Yes, IJCRT

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 4MEC8

TITLE OF THE PROJECT: ANALYSIS OF CAM SHAFT FOR DIFFERENT MATERIALS

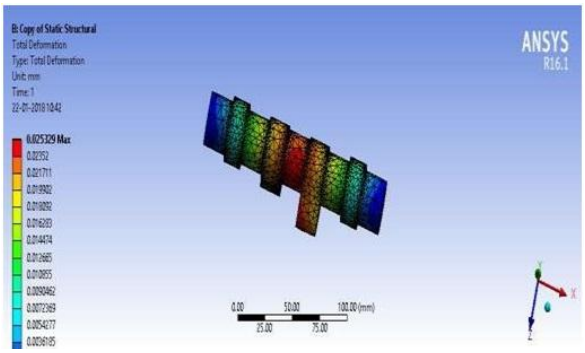
FACULTY GUIDE: Dr.V.Jayaseelan


R.Saravanan

**V.Shanmugam**

**T.R.Priyanka**


**Project Photo/ Block Diagram or schematic:**





**Abstract:** In an internal combustion engine camshaft is used to control the injection of vaporized fuel. These are occasionally confused with the crankshaft of the engine, where the reciprocating motion of the piston is converted into rotational energy. The different types of materials can be used to make the engine cam shaft. The materials used in the camshaft depend upon the quality and type of engine being manufactured. For most mass-produced automobiles, chilled cast iron is used. This undergoing process increasing its strength and hardness due to cold treating. In this project, a cam shaft will be designed for a 150cc engine and modelled through CATIA. Present used material for camshaft is cast iron. In this work, the camshaft material will be replaced with steel and aluminium alloy. Cast iron, Steel and Aluminium alloy are used in cam shaft for the structural and model analysis. Comparison will be done for the three materials to verify the better material for camshaft. Modelling is done using CATIA software and analysis carried out by ANSYS


**Achievements:**

Project Design Contests: --

Symposium:

Publications: Yes, IJCRT

**Social Media Reach:**

Youtube : --

Facebook : --

**MAIN PROJECT EXHIBITION DATED FEB 2018**

TEAM ID-
DESIGN AND ANALYSIS OF A CLUTCH PLATE

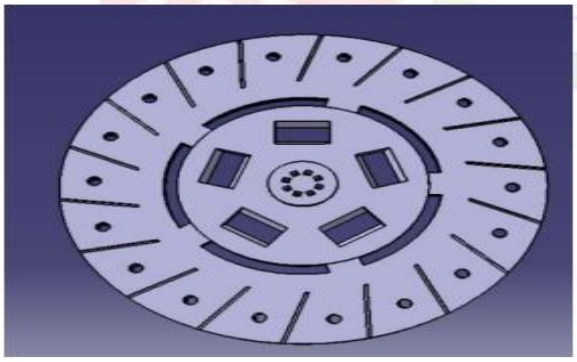
FACULTY GUIDE:D.PREMKUMAR


T.Harthik

G.V.Hema kumar

J.Murali Muruganan


III. DESIGN AND ANALYSIS:




**Abstract :**The clutch is one of the main components in automobiles. The power of engine is transmitted to the system through theclutch. If the main component fails the whole application can be damaged. The present used material for friction disc is Asbestos. Inthis paper composite material Kevlar 29, Gray cast iron are taken. A single plate clutch is designed and modeled using CatiaV5software. Static analysis is done on the clutch to determine stresses, strain, deformations using following materials in Ansys.Theoretical calculations are also done to determine strength, weight saving in percentage and weight reduction.


**Achievements:**

Project Design:

Symposium:

Publications:YES

**Social Media Reach:**

Youtube :

Facebook :

**MAIN PROJECT EXHIBITION DATED FEB 2018**

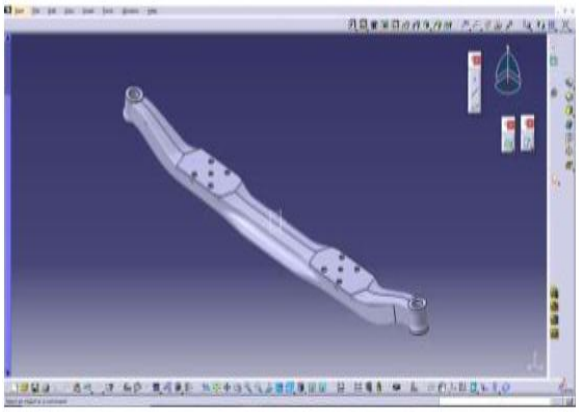
TEAM ID-4MEC23
DESIGN AND ANALYSIS OF FRONT AXLE OF HEAVY COMMERCIAL VEHICLE

FACULTY GUIDE:D.PREMKUMAR


Akash.M

Hareshwaran.S

Karthik.R


**Abstract :**Front axle absorbs the shock due to road surface variations and also carries weight of the front part of the automobile. The front axle is designed to transmit the weight of the automobile from the spring to front wheels so proper design of front axle is essential. The front axle is modelled in CAD software and analysed using ANSYS software. The axle is analysed for four different materials SAE1018, AISI1020, 27cr15, ductile cast iron. The front axle of the truck is designed and analysed by considering the following specifications such as vehicle's gross weight, payload capacity, braking torque, principle stress, tensile stress.


**Achievements:**

Project Design:

Symposium:

Publications:YES

**Social Media Reach:**

Youtube :

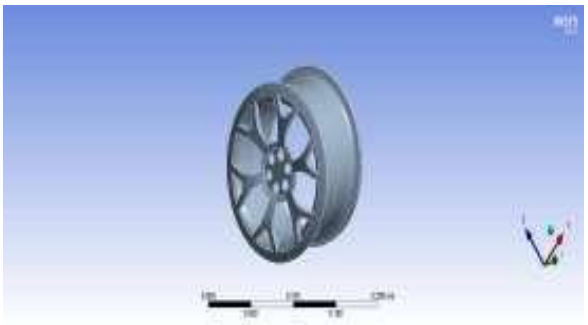
Facebook :

**MAIN PROJECT EXHIBITION DATED FEB 2018**

TEAM ID-4MEC21

DESIGN AND ANLYSIS OF WHEEL RIM

FACULTY GUIDE:D.PREMKUMAR




P.Raghul

P.vignesh

S.Vimlesh kumar



**Abstract :**

Design has constantly played a key role in automobile engineering. This often leads to multifaceted car designs which need to be fashioned and proof tested with least lead time and expenses. Latest deindustrialized .Thus the automobile producer is increasingly more investigating and evolving new design tools to help proceed the excellence of their products. CAE helps to diminish the time required to build a fresh design. It also improves the quality of design. In this study fatigue life calculation, computer aided design, and finite element analysis are the tools which have been used.


**Achievements:**

Project Design:

Symposium:

Publications:YES

**Social Media Reach:**

Youtube :

Facebook :

**MAIN PROJECT EXHIBITION DATED FEB 2018**

TEAM ID-4MEC20

DESIGN AND IMPACT ANALYSIS OF CAR DOOR

FACULTY GUIDE:D.PREMKUMAR


M.M.SHERI

CHINNARASU.M

HARIHARAN.S.B



**Abstract :**Car door is one of the main parts which are used as protection for passengers from slide collisions. Side impact collision of vehicle is one of the terribly hazardous crashes causing injuries and death annually around the word. In this paper, the most important parameters including material, geometry and beam arrangement were studied to improve the crashworthiness during vehicle-to-vehicle side collision. In the side impact, the side door beam is responsible to absorb the most possible kinetic energy. We designed side impact beam of different cross sections. Presently steel is used for car doors construction. The aim of the paper is to analyse the car door and its structure with currently used material by replacing with composite materials like aluminium, s-glass epoxy, e-glass epoxy. The design of car door is designed using CATIA. Impact analysis is conducted on door with transient structural analysis using ANSYS software by varying the materials.


**Achievements:**

Project Design:

Symposium:

Publications:YES

**Social Media Reach:**

Youtube :

Facebook :

**MAIN PROJECT EXHIBITION DATED FEB 2017**

TEAM ID-4MEC19
DESIGN AND STRUCTURAL ANALYSIS OF BUS CHASIS

FACULTY GUIDE:D.PREMKUMAR


S.NARESHKUMAR

S.M.TAMEEN

VENKATESH.P



**Abstract :**

Conventional Design of bus chassis have more weight and due the heavy weight of the bus body components.The load carrying capacity and the performance characteristics of the bus is highly reduced. This paper deals with the improvisation of the convectional design, by altering the thickness properties of the frame as well as reducing the weight of the chassis by providing suitable material. In order to analyze the vehicle under its loading conditions, the working boundary constrains are utilized. A complete feature based chassis model by altering the thickness properties of the frame as well as reducing the weight of the chassis by providing suitable material. In order to analyze the vehicle under its loading conditions, the working boundary constrains are utilized. A complete feature based chassis model


**Achievements:**

Project Design:

Symposium:

Publications:YES

**Social Media Reach:**

Youtube :

Facebook :

**MAIN PROJECT EXHIBITION DATED FEB 2018**

TEAM ID : 4MEC33

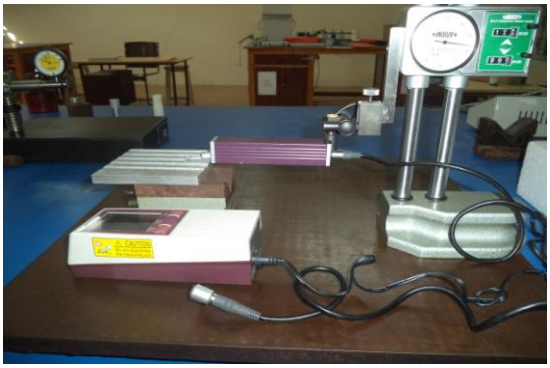
**Title of Project: Prediction of Milling Parameters and Comparative Study of Effectiveness of Response Surface Methodology and Genetic Algorithm Technique in Optimization of Milling Parameters**

FACULTY GUIDE: Dr. P. Jayaraman


K.SIVAPRAKASAM

R.SIVARAJAN

B.VASUDEVAN


## Abstract :

In the current study, response surface methodology has been applied to find out the optimum cutting conditions leading to minimum average surface roughness ($R_a$), minimum root mean square surface roughness ($R_q$), minimum mean roughness depth ($R_z$) and maximum material removal rate (MRR) in milling operation on AA6082. The second order mathematical models in terms of machining parameters were developed for average surface roughness, root mean square surface roughness, mean roughness depth and MRR prediction using response surface methodology (RSM) on the basis of experimental results. The experimentation was carried out with uncoated carbide end mill cutter for machining of AA6082. The model selected for optimization has been validated with F-test. The adequacy of the models on all responses has been established with Analysis of variance (ANOVA). An attempt has also been made to optimize the average surface roughness ($R_a$), root mean square surface roughness ($R_q$), mean roughness depth ($R_z$) and material removal rate (MRR) prediction models using Genetic algorithm to find optimum cutting parameters.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MAIN PROJECT EXHIBITION DATED FEB 2018**

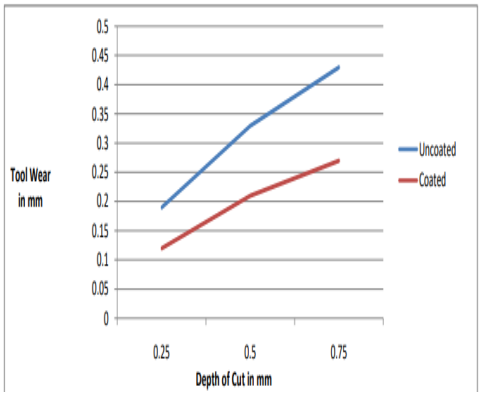
TEAM ID-4MEC14
THERMAL ANALYSIS OF ALUMINIUM OXIDE COATED CUTTING TOOL

FACULTY GUIDE:S.P.MOHAN MITHRA


A.Divakar

M.Gokula Kannan

Mukhil Mohan



**Abstract :** Cutting tools that have been used in the manufacturing industries for many years for producing machine elements which encounters numerous problems such as reduced tool life, failure of tool, higher wear and tear etc. The coating includes one or several refractory layers of which at least one layer is a dense, fine-grained layer of α-Al2 O3. The coated tool exhibits excellent surface finish and toughness and shows much improved wear properties compared to prior art objects when used for machining steel, cast iron and, particularly when machining nodular cast iron


**Achievements:**

Project Design:

Symposium:

Publications:YES

**Social Media Reach:**

Youtube :

Facebook :

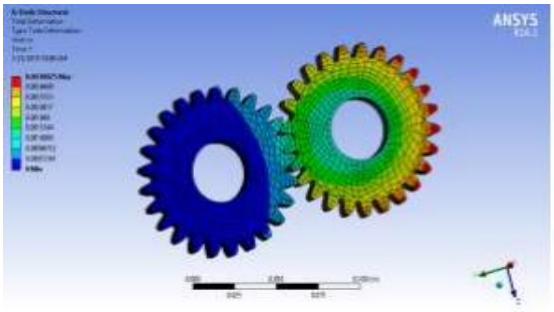
**MAIN PROJECT EXHIBITION DATED FEB 2018**

TEAM ID-4MEC18
CONTACT STRESS ANALYSIS STRESS ANALYSIS OF SPUR GEAR IN STATIC AND DYNAMIC CONDITION

FACULTY GUIDE:S.P.MOHAN MITHRA

SRIDHARAN.D

VENKATESAN .N




m

atic:

**Abstract :** To design the spur gear to study the weight reduction and stress distribution cast steel and composite materials. Gearing is one of the most critical components in a mechanical power transmission system, and in most industrial rotating machinery. It is possible that gears will predominate as the most effective means of transmitting power in future machines due to their high degree of reliability and compactness. To design the spur gear model using designs software. To study the impact analysis for cast steel, Aluminium and composite materials.

**Achievements:**

Project Design:

Symposium:

Publications:YES

**Social Media Reach:**

Youtube :

Facebook :

**MAIN PROJECT EXHIBITION DATED FEB 2018**

TEAM ID-4MEC15

DESIGN AND EXPERIMENTAL ANALYSIS OF COMPOSITE LEAF SPRINGSPRING BY USING CATIA AND ANSYS

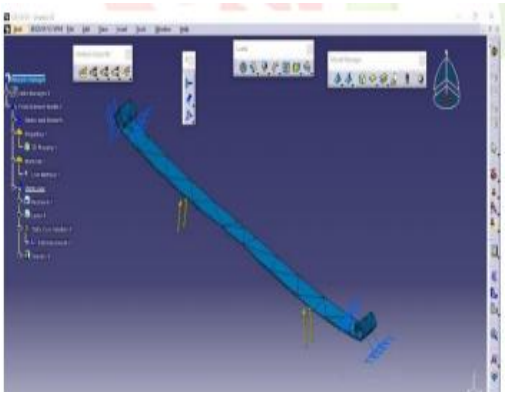
FACULTY GUIDE:S.P.MOHAN MITHRA


.MURALI PRASATH

ISMAIL .J

S.KAUSHIK


matic:




**Abstract :** Our project is aimed to investigate the suitability of natural and synthetic fiber with reinforced composite material in composite leaf spring application. By using composite leaf spring, the cost and weight of the leaf spring has been reduced without reducing the quality. It is made by hand-lay method. It is also an eco-friendly method. Leaf spring is a simple form of suspension spring used to absorb vibration induced during the motion of the vehicle. The recent development shows increased interest in replacement of steel leaf spring with composite leaf spring. The design of leaf spring is done by using CATIA V5R20 and analysis is done in ANSYS 18.2 performing with different loads. In this project we designed leaf spring for the materials composite material by varying reinforcement angle. We studied the strength variations.Analysis is done on the leaf spring by using four composite materials. Modal and fatigue Analysis is also done. CATIA software is used for modeling and ANSYS is used for analysis.


**Achievements:**

Project Design:

Symposium:

Publications:YES

**Social Media Reach:**

Youtube :

Facebook :

**MAIN PROJECT EXHIBITION DATED FEB 2018**

TEAM ID-4MEC16

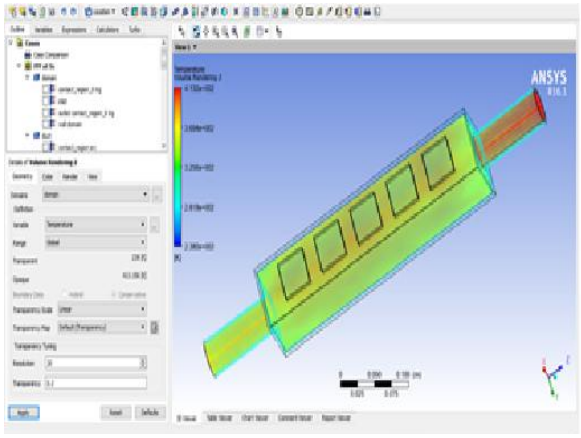
DESIGN AND FABRICATION OF THERMO ELECTRIC INTERCOOLER TO IMPROVE THE VOLUMETRIC EFFICIENCY OF I.C ENGINE

FACULTY GUIDE:S.P.MOHAN MITHRA


C.Mounikumar

M.Lokesh

M.JayaPrathap



**Abstract :** The exhaust from I.C Engine supplied to the turbo charger turbine. The turbine rotates the compressor by means of turbine shaft connected to the compressor. Then compressor compresses the air from the atmosphere and supplied to the thermo-electric intercooler which workers under peltier effect. The peltier module having hot face facing towards the atmosphere to transmit the heat and cold face facing towards the enclosed area of the peltier effect intercooler. The exit temperature of air from the thermo-electric intercooler will be reduce due to the peltier effect which increases the volumetric efficiencyand reduces the fuel consumption rate which results the complete combustion.


**Achievements:**

Project Design:

Symposium:

Publications:YES

**Social Media Reach:**

Youtube :

Facebook :

**MAIN PROJECT EXHIBITION DATED FEB 2018**

TEAM ID-4MEC17

EFFECTIVE REDUCTION OF WEIGHT AND VIBRATION BY OPTIMIZING ENGINE MOUNTING SYSTEM

FACULTY GUIDE:S.P.MOHAN MITHRA


K.Madesh

E.Magesh

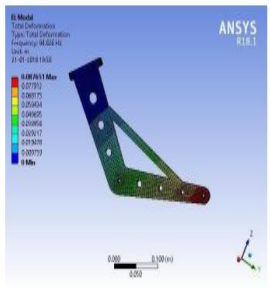




Fig:6. Minimum Analysis

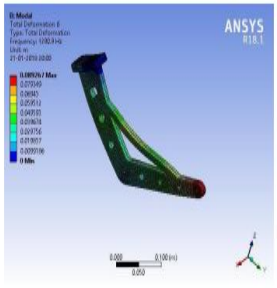



Fig:7. Maximum Analysis


**Abstract :** The highly competitive automotive business industry requires manufacturers to pay more attention to passenger comfort and riding quality. This has forced designers to direct their attention to the development of high quality engine mounting devices, with traditional physical prototyping and testing being gradually replaced by virtual prototyping and numerical simulations. In this paper, we are doing to reduce the weight and vibration by changing the size of the engine Mounting bracket for FSAE Car using CATIA and ANSYS software. Vehicle engine mounting system consisting of engine and three or four mounts are connected to vehicle structure..


**Achievements:**

Project Design:

Symposium:

Publications:YES

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID-4MEC26

TITLE OF THE PROJECT: ANALYSIS OF MOTOR CYCLE HELMET UNDER STATIC AND DYNAMIC

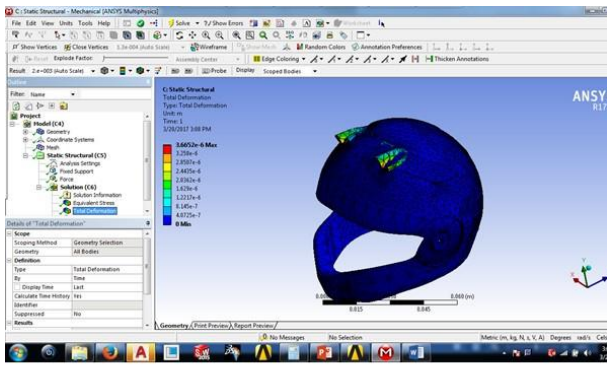
FACULTY GUIDE: D MEGANATHAN


KARTHIK.S

K.Gokul

JAISION


Miniproject




**Abstract :(10 lines)**

Each year nearly nine hundred persons die in head injuries and over fifty thousand persons are severally injured due to not wearing of helmets . In motor cycle accidents,the human head is exposed to loads exceeding several times the loading capacities of its natural protection. In this work, an attempt has been made for analysing the helmet with all the standard data. The simulation software 'ANSYS' is used to analyse thehelmet with different conditions such as bottom fixed-load on top surface, bottom fixed–load on top line, side fixed–load on opposite surface, side fixed–load on opposite line and dynamic analysis. The maximum force of 19.5 kN is applied on the helmet to study the model in static and dynamic conditions. The simulation has been carried out for the static condition for the parameters like total deformation, strain energy, von Mises stress for different cases. The dynamic analysis has been performed for the parameter like total deformation and equivalent elastic strain. The result shows that this values are concentrated in the retention portion of the helmet. These results has been compared with the standard experimental data proposed by the BIS and well within the


**Achievements:**

Project Design Contests: ICT

Symposium:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID- 4MEC34

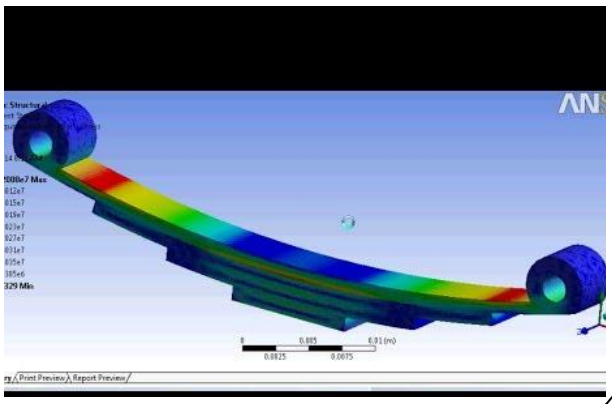
TITLE OF THE PROJECT: DESIGN AND ANALYSIS OF LEAF SPRING IN HEAVY DUTY VEHICLE

FACULTY GUIDE: D MEGANATHAN


ARUN KUMAR

BALAJI


Mini




**Abstract :**

The objective is to compare the stresses, deformations and weight saving of composite leaf spring with that of steel leaf spring. The design constraint is stiffness. The Automobile Industry has great interest for replacement of steel leaf spring with that of composite leaf spring, since the composite materials has high strength to weight ratio, good corrosion resistance. The material selected was glass fiber reinforced polymer (E-glass/epoxy) is used against conventional steel. The design parameters were selected and analyzed with the objective of minimizing weight of the composite leaf spring as compared to the steel leaf spring. Result shows that, the weight of composite leaf spring was nearly reduced up to 85% compared with steel material. The leaf spring was modeled in Pro/ENGINEER and the analysis was done using ANSYS 12.0 software. The fatigue life of both steel and composite leaf is compared using ANSYS software.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID-4MEC25

TITLE OF THE PROJECT: INVESTIGATION ON ENERGY ABSORPTION OF NATURAL AND HYBRID FIBRE UNDER AXIAL STATIC CRUSHING

FACULTY GUIDE: N.RAMASAMY


Ashwin Kumar S

Mathew S

Aravind Kumar B



**Abstract :(10 lines)**

Using metallic materials in vehicles structures increases cost and fuel consumption, therefore, the trends start to use cheaper and lite materials. Fibers are used in composites in automotive applications because they are lightweight, stiff, and stronger than bulk material, as well as achieve comparable energy absorption to metallic materials. The aim of this research is to investigate the potential of natural fiber in the applications of crash energy absorption. An experimental procedure (hand layup) was applied to investigate the effect of using jute fiber on crash worthiness parameter of composite material with other types of fibers such as Kevlar and glass fiber reinforced epoxy composite. The work involved fabrication the tubes using three layers, two geometries (circular and square) with three different heights at constant crush speed 1.5 mm/sec. The results show that the tubes of jute fiber were ineffective and failed directly, but, replacing one layer of jute fiber by one layer of other types of fibers lead to an enhancement in crash worthiness parameters especially, failure type and crash worthiness parameters. The better results are achieved when using hybrid jute and Kevlar, where the energy absorption is enhanced by 17.75 % and the specific energy absorption is enhanced by 25.122% in case of circular tube with diameter 50 mm. In case of square tube with length 50 mm, the results are enhanced by 62.764 % for energy absorption and 58.942% for specific energy absorption.


**Achievements:**

Project Design Contests:

Symposium: -

Publications: IJCRT, Vol.6.Issue.1, Feb 18

**Social Media Reach:**

Youtube : -

Facebook : -

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID-4MEC24

TITLE OF THE PROJECT: EVALUATION OF ADHESIVE FAILURE IN SIMILAR AND DISSIMILAR SINGLE LAP JOINT

FACULTY GUIDE: N.RAMASAMY


Srivathsan M

Balaji P

Shanmuga Rajan B



**Abstract :(10 lines)**

Single-lap joints made of aluminium and aramid fibre adherends are tested to understand better the behaviour of such dissimilar joints. Peeling and shearing strains are investigated, emphasizing that peeling is important in the region where failure is initiated, towards the extremity of the overlap region. Annoys was used to simulate the behaviour and strength of dissimilar single-lap adhesively bonded joints.Experiments show that the use of dissimilar stiffness of the joints aluminium-aramid and aramid-glass adherends is reducing the strength and as the delamination and pull-out of the aramid fibres compromises their integrity.


**Achievements:**

Project Design Contests:

Symposium: -

Publications: IJCRT, Vol.6.Issue.1, Feb 18

**Social Media Reach:**

Youtube : -

Facebook : -

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID-3MEC1

TITLE OF THE PROJECT: **DESIGN AND FABRICATION OF ORGANIC WASTE CRUSHING**

FACULTY GUIDE: N.RAMASAMY


Vishnu P

MD Yasin A

MD Fahim S



**Abstract :(10 lines)**

Organic waste crusher machine is the key fertilizer granulation machine widely used in crushing organic compost fertilizer, city organic waste, industrial organic waste, animal manure. Crushers may be used to reduce the size, or change the form, of waste materials so they can be more easily disposed of or recycled, or to reduce the size of a solid mix of raw materials (as in rock ore), so that pieces of different composition can be differentiated. Crushing is the process of transferring a force amplified by mechanical advantage through a material made of molecules that bond together more strongly, and resist deformation more, than those in the material being crushed do. The earliest crushers were hand-held stones, where the weight of the stone provided a boost to muscle power, used against stones. Querns and mortars are types of these crushing devices. We are designing and analysis a kind of crushing machine in which screw type shaft with blade are used


**Achievements:**

Project Design Contests:

Symposium: -

Publications: IJECS, Vol.2.Issue.6,June 18

**Social Media Reach:**

Youtube : -

Facebook : -

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 3MEC2

TITLE OF THE PROJECT DESIGN & FABRICATION OF MULTI TOOL CUTTING MACHINE

FACULTY GUIDE: T.THIRUMALAI


NIVESH .G.D

THARANATH R

VIJAYABALAJI .C



**Abstract :** This paper discuss about the Design and Fabrication of Multi-Purpose Wood Working Machine. Wood working is anything that performing any operation on wood in any way for some useful work. This multipurpose wood working machine has ability to perform four operations such has Planing, Edge forming, Cutting, and Drilling on a single machine. All the four tools driven by single motor. The belt drives are used can be engaged and disengaged whenever necessary. In this competitive world people are very passionate for their home interior design. In order to produce interior design models carpenter are using separate machines for conducting particular operations so which leads to more cost, material handling is more. In order to avoid these problems this concept is developed. Hence, using this is all about combining planing, drilling, forming and sawing machines in a single platform to reduce the investment cost and floor area and made work easy.


**Achievements:**

Project Design Contests: --

Symposium:

Publications: --

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 3MEC3

TITLE OF THE PROJECT **DESIGN AND FABRICATION OF STAIR CLIMBER TROLLEY**

FACULTY GUIDE: T.THIRUMALAI


ABILESH.M.J

GUDURU JITHENDRA

LOGESH.V



**Abstract :** This project aims at developing a mechanism for easy transportation of heavy loads over stairs. The need for such a system arises from day-to-day requirements in our society. Devices such as hand trolleys are used to relieve the stress of lifting while on flat ground; however, these devices usually fail when it comes to carrying the load over short fleet of stairs. In the light of this, the project attempts to design a stair climbing hand cart which can carry heavy objects up the stairs with less effort compared to carrying them manually. It also endeavors to study the commercial viability and importance of such a product. Several designs were conceived that would allow a non-industrial hand trolley to travel over stairs, curbs, or uneven terrain while reducing the strain on the user.

In our project, the trolley is equipped with Tri-Star wheels which enable us to carry load up and down the stairs. It also eases the movement of trolley in-irregular surfaces like holes, bumps, etc.


**Achievements:**

Project Design Contests: --

Symposium:

Publications: --

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 3MEC4

TITLE OF THE PROJECT **Design and Fabrication of Automatic rain operated wiper**

FACULTY GUIDE: T.THIRUMALAI


AKASH.M.J

BHUVANESH.B

DIVAKAR.G



**Abstract :** The aim is to design and develop a control system based an electronically controlled automotive rain operated motor is called AUTOMATIC RAIN OPERATED WIPER. Rain operated motor is consists of conduction sensor (Tough sensor) circuit, Control Unit, wiper motor and glass frame. The sensor is used to detect the rain or water flow. There is any rain on the class, the sensor senses the rain or flow water and giving the control signal to the wiper motor. We have pleasure in introducing our new project AUTOMATIC RAIN OPERATED WIPER, which is fully equipped by sensors circuit and wiper motor. It is a genuine project which is fully equipped and designed for Automobile vehicles. This forms an integral part of best quality. This product underwent strenuous test in our Automobile vehicles and it is good. The Automatic rain operated wiper system is a fully automation project. This is an era of automation where it is broadly defined as replacement of manual effort by mechanical power in all degrees of automation. The operation remains an essential part of the system although with changing demands on physical input as the degree of mechanization is increased.


**Achievements:**

Project Design Contests: --

Symposium:

Publications: --

**Social Media Reach:**

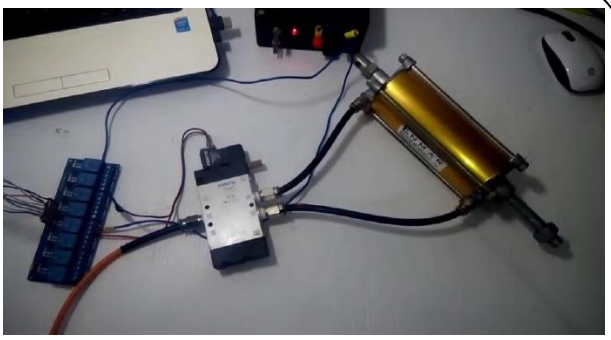
Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 3MEC5

1. TITLE OF THE PROJECT DESIGN AND FABRICATION OF IMPROVISED SAFETY DOOR IN PUBLIC TRANSPORT (FOOTBOARD ACTION PREVENT



FACULTY GUIDE: T.THIRUMALAI


**Anbarasan.P**

**Bhuvanesh.A**

**Harish.G**



**Abstract :** The main objective of the improvised safety door project is to ensure the safety of passenger and to avoid the dangerous board journey of students. Safety door in public transport are merely showcase model as the meaning of that name is not implemented properly. Here the improvised safety door makes the name a real meaning full product. The doors and clutch are being synchronized to work accordingly to ensure safety. Similar ideas have already been implemented in Shinkansen trains in Japan and Boeing 747A passenger flights. This improvised safety door is more efficient when compared to the automatic foot board accident prevention mechanism which arrests the accelerator pedal. The boarding of the passengers in the transport is to be made such that passenger should not be afraid to travel in the vehicle to their favourite or desired places and also the driver should be stress less to drive the vehicle. The project presents a systematic approach to optimize the structural, heat and vibration characteristics of the clutch friction plate. Heat analysis considers the reduction of heat generated


**Achievements:**

Project Design Contests: --

Symposium:

Publications: --1

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 3MEC6

TITLE OF THE PROJECT **DESIGN AND FABRICATION OF MULTI-WAY MULTI NUT TIGHTNER**

FACULTY GUIDE: T.THIRUMALAI


C.D.Sivaram an

R.Vignesh

R.Manivanna



**Abstract :** The fabrication o f two way multi-nut tightener and remover is a new innovation concept . The main aim of our project is to fabricating the two way tool which is the combination of two tools four nut remover and five nut remover. Now a days most of the car s have five nut and four nut wheel its is difficult to carry two tools and costly to buy both the tool. From our project we can reduce the carrying loa d of two tools into one tool and also the cost of buying two tool by buying the sing e tool. It reduces the man power and equal torque is applied on the entire nut in car wheel. It can be successfully used as a standard tool provided with a new vehicle. also it can be used in assembly line of automobiles, workshops and service stations.


**Achievements:**

Project Design Contests: --

Symposium:

Publications: --1

**Social Media Reach:**

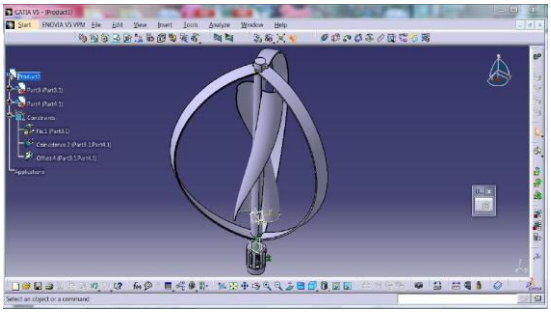
Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 3MEC7

TITLE OF THE PROJECT DESIGN AND FABRICATION OF MINI WIND MILL POWER GENERATOR



FACULTY GUIDE: T.THIRUMALAI


**Yuvaraj P**

**Naresh Kumar**

**Sivaranjan R**



**Abstract :** The objective of this project is to generate electricity with vertical axis wind turbine. Increasing demand for energy has lead to search for efficient source of energy .Most of the places in India have a wind speed of less than 5.32 m/s. So a vertical axis wind turbine will be the best choice for places with low wind speed. Renewable energy source of power is high on demand due to the need of tackling of environmental pollution .By the end of 2020 nearly 12% of global energy source will be by WIND ENERGY. It is very useful for market today. It is more cost effective and efficient than the normal wind mills .It can rotate along the direction of wind so it is multi-directional .It is economic and pollution free , so we can harvest electricity in a greener way.


**Achievements:**

Project Design Contests: --

Symposium:

Publications: --1

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID : 3MEC8

TITLE OF THE PROJECT: Design & Fabrication of dosa making sub assembly 1

FACULTY GUIDE: D MEGANATHAN

RAJESH

TEJ KIRAN

MONESH


## Abstract :

Every human being needs three basic necessities for survival i.e. food, clothing, and shelter. This proves that food is one of the most basic amenities in day to day life. Hence, we, as a team decided, to apply automation and engineering to this aspect. Our primary objective is to provide quality services to meet the needs of those working in the food sector and simplify production of food. The concept emerged out of the need to automate the preparation of traditional Indian delicacies which were competing with western fast food. Thus we came up with the MULTIPLE DOSA MAKING MACHINE (a faster rate in multiple numbers helping to reduce the strain of the cook. The machine is compact and an assembly of various parts like the gas cylinders, electric motor, main frame, circular disc, steel hopper container, non stick pans etc. that can be disassembled for maintenance purposes, making it easy to operate and provide ease of maintenance.


**Achievements:**

Project Design Contests:

Symposium:

Publications: 1

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID : 3MEC9

TITLE OF THE PROJECT: Design & Fabrication of dosa making sub assembly II

FACULTY GUIDE: D MEGANATHAN


prakash

SANKAR

MONESH



**Abstract :** Every human being needs three basic necessities for survival i.e. food, clothing, and shelter. This proves that food is one of the most basic amenities in day to day life. Hence, we, as a team decided, to apply automation and engineering to this aspect. Our primary objective is to provide quality services to meet the needs of those working in the food sector and simplify production of food. The concept emerged out of the need to automate the preparation of traditional Indian delicacies which were competing with western fast food. Thus we came up with the MULTIPLE DOSA MAKING MACHINE (a faster rate in multiple numbers helping to reduce the strain of the cook. The machine is compact and an assembly of various parts like the gas cylinders, electric motor, main frame, circular disc, steel hopper container, non stick pans etc. that can be disassembled for maintenance purposes, making it easy to operate and provide ease of maintenance.


**Achievements:**

Project Design Contests:

Symposium:

Publications: 1

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID : 3MEC10

TITLE OF THE PROJECT: Design & Fabrication of dosa making Sub assembly III

FACULTY GUIDE: D MEGANATHAN


RAJESH

RAJASEKAR

PRAVEEN



**Abstract :**

Every human being needs three basic necessities for survival i.e. food, clothing, and shelter. This proves that food is one of the most basic amenities in day to day life. Hence, we, as a team decided, to apply automation and engineering to this aspect. Our primary objective is to provide quality services to meet the needs of those working in the food sector and simplify production of food. The concept emerged out of the need to automate the preparation of traditional Indian delicacies which were competing with western fast food. Thus we came up with the MULTIPLE DOSA MAKING MACHINE (MDMM). This machine obviate~ the need for human labour and ensures exacting hygienic conditions while ensuring uniformity in quality, taste and quantity. In places where time is a factor and voluminous production of dosa's is required, this dosa making machine will be the answer. It aims at making dosa's at a faster rate in multiple numbers helping to reduce the strain of the cook. The machine is compact and an assembly of various parts like the gas cylinders, electric motor, main frame, circular disc, steel hopper container, non stick pans etc. that can be disassembled for maintenance purposes, making it easy to operate and


**Achievements:**

Project Design Contests:

Symposium:

Publications: 1

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID : 3MEC11

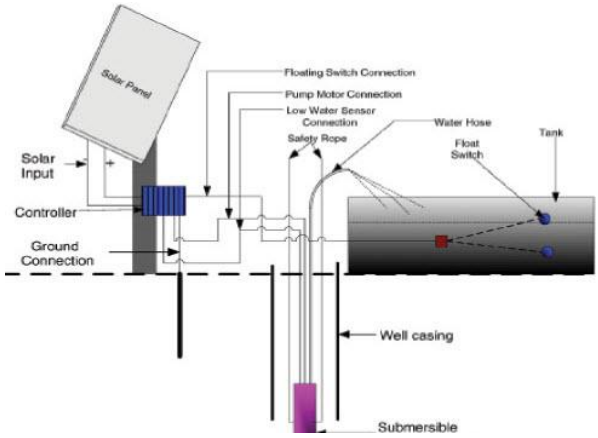
TITLE OF THE PROJECT: Design and fabrication of automatic sprinkling machine

FACULTY GUIDE: D MEGANATHAN

MARAVAN

MOHAN

VENU





**Abstract :**

This paper attempts to integrate microcontrollers into smoke detector circuitry and other components for safety purpose. This can be achieved by placing some sensors and devices in the building. In the proposed system, a smoke detector upon senses smoke activates its alarm, sends a low voltage signal to microcontrollers. The microcontroller will activate the relays which are connected to other components to alert residents that one of the smoke detectors has sensed smoke by means of voice and flashing lights. At the same time, it will send signals to valves, air suckers and the water pump. The solenoid valve will operate the water pump which delivers water to the room through pipes installed inside the building to attack the fire. Meanwhile, the air sucker will suck the smoke from the room to prevent suffocation. The proposed design is aiming to have cost efficient system, compact design, easily expandable, simple to install and replaceable components


**Achievements:**

Project Design Contests:

Symposium:

Publications: 1

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID : 3MEC12

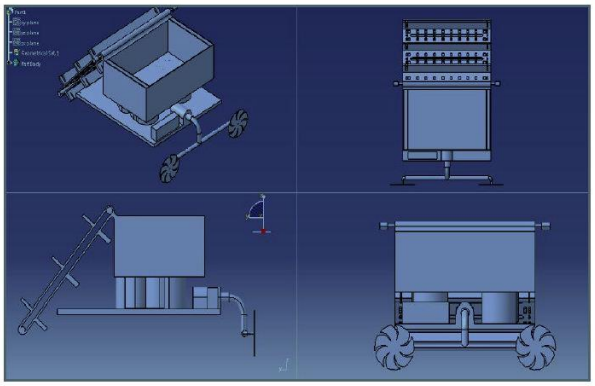
TITLE OF THE PROJECT: DESIGN AND FABRICATION OF AUTOMATIC SEWAGE CLEANING MACHINE

FACULTY GUIDE: K BALACHANDAR


YOGESHWARAN

SATHEESH

YAMINI


## Abstract :

The motive of the project is to automate the sewage cleaning process in drainage, to protect the Biodiversity. A study recently published in the Proceedings of the National Academy of Sciences (PNAS) found that at least 88 percent of the Earth's water surface is polluted with plastic debris. The result is not just a number; it says the contamination level of water. All the plastic wastes are of less density and so they float. The wastes also block the water path at narrow regions. The floating waste reduces the absorption amount of sunlight by water which results in imbalance of aquatic system. The reduction of this level of contamination is a very difficult one. And we cannot employ humans to clean the floating wastes because it may cause severe problems. We can overcome this problem by using a machine in that field. Our project is about automatic sewage cleaning machine, which can be used to clean the solid floating wastes that may be plastic or any other lighter waste materials. There are two parts mechanical & electronics. Mechanical system performs the lifting, moving & throws the waste by the power of motor. Electronics part of this controls the speed, frequency of the
Mechanical components.


**Achievements:**

Project Design Contests: 1

Symposium:

Publications: 1

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID : 3MEC13

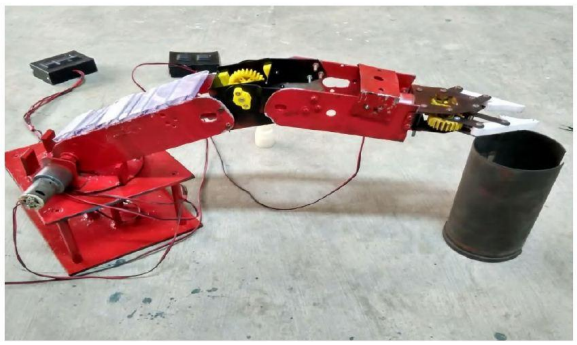
TITLE OF THE PROJECT: DESIGN AND FABRICATION MULTIPURPOSE ROBOTIC ARM

FACULTY GUIDE: K BALACHANDAR


PONRAJ

PRAKASH

RAKESHSUNDAR


## Abstract :

Robotic arms are highly used in industries, manufacturing units and for other industrial operations.Robotic arms are made to do complex industrial automation operations which only humans can do. These functionalities of the robotic arm include picking up a object or component and placing it horizontally into another machine for other operations or picking component and placing it in packing box and more. So here we propose the design and fabrication of a semi automated robotic arm that can be automated to do various industrial operations. Our system consists of an assembly of components and parts designed to hold motors in place in order to get required movement. And also it contains a gripper with gear arrangement in order to achieve gripping function according to the rotation of motor. This mechanism helps us to understand the working and control flow of industrial robotic arms.


**Achievements:**

Project Design Contests: 5

Symposium: 1

Publications: 1

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID : 3MEC14

TITLE OF THE PROJECT: DESIGN AND FABRICATION OF PEDAL OPERATED WASHING MACHINE

FACULTY GUIDE: K BALACHANDAR


GOODWIL

GOWTHAVARAMAN

HARISH



**Abstract:**

The Fabrication of Pedaling Washing machine with a dryer and draining system is a new innovative concept which is mainly used to save power consumption. It uses manual power instead of electric power.Nowadays, washing the clothes is very easy by using the electric power devices like washing machine, these machines are very costly. Instead of that, this machine is designed in such a way, in which manual power is used and electrical power is avoided. Due to non-renewable energy crises, basic need of this machine is to utilize the energy from renewable sources and to save the non-renewable energy.


**Achievements:**

Project Design Contests: 2

Symposium:

Publications: 1

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID : 3MEC15

TITLE OF THE PROJECT: DESIGN AND FABRICATION OF PEDAL OPERATED WASHING MACHINE

FACULTY GUIDE: K BALACHANDAR


BALAMURUGAN

K.CHAITANYA

C.VIJAYAKUMAR



**Abstract:**

Automation plays a vital role in major things in day to day life. It is not only applicable in automotive industries. The necessary of automation is to reduce the human effort and to save time. Here the tender coconutopening in easiest way is proposed. But most of the people cut the coconuts manually. But it is more difficult andskilled persons required. A common problem that many people are facing is punching and splitting the coconut.The existing (traditional) tools used are unsafe, messy and also needs skill and training. The risk of injury is alsotoo high. There are some machines for pairing coconut, but until now no tool exists to punch a hole and split itopen. This necessitates the development of a cutting and punching coconut. The selected concept mainly consistsof punch operated by a lever and torsion spring mechanism. When the coconut has to be punched the operatorplaces the coconut on the top of the machine in natural rest position and the lever is raised and pressed againstthe tender coconut to punch a hole. For cutting, the coconut is placed in the rest position and the lever is raised& operated to cut the coconut to extract the cut. The selected concept is further analyzed in terms of itsfunctionality and cost.


**Achievements:**

Project Design Contests:

Symposium:

Publications: 1

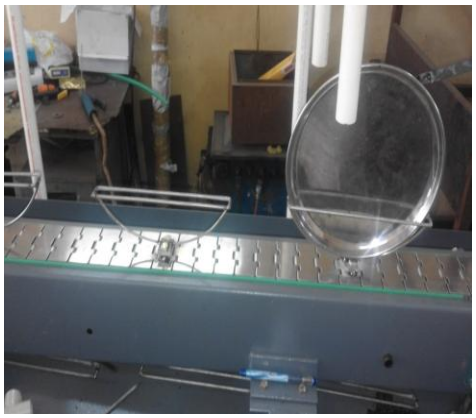
**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM IDTITLE 3MEC16 OF THE PROJECT: **NEW DESIGN AND FABRICATION OF AUTOMATIC DISH WASHER**



FACULTY GUIDE: A.Selvakumar


**Pradhip.p,**

**Sanjaikumar. M**

**Venkatarajalu.S.**



***Abstract:***

This paper discusses about how to reduce the human efforts and washing the two side of plate in dishwasher. The dishwasher has made wiping and drying plates much easier and more efficient. Automatic dishwasher uses to minimize the time of washing and reduce human energy .By separating assembly parts for spraying of water, injection of soup solution and brushing of plates. By using this process large amount of work can be done in considerably lesser time. In conventional dish washing process large amount of human power as well as quantity of water is used. So keeping that in mind, to reduce those problem and it is developed. Also we can use this in places where there is vast use of dishes for example, marriage ceremony, college mess etc. This dishwasher in which can conserve time and cost rather than spending in washing dishes by hand and wasting large amount of energy.


**Achievements:**

Project Design Contests: nil

Symposium: -


Publications: INTERNATIONAL JOURNAL OF RESEARCH CULTURE SOCIETY ISSN: 2456-6683
Volume - 2, Issue - 4, Apr– 2018


**Social Media Reach:**

Youtube : -

Facebook : -

TEAM ID-3MEC17

TITLE OF THE PROJECT: **NEW DESIGN AND FABRICATION OF AUTOMATIC DISH WASHER**

FACULTY GUIDE: A.Selvakumar


**R.Abishek2**

**V.N.Deepak**

**S.Lokeshwaran**



***Abstract:***

This paper discusses about how to reduce the human efforts and washing the two side of plate in dishwasher. The dishwasher has made wiping and drying plates much easier and more efficient. Automatic dishwasher uses to minimize the time of washing and reduce human energy .By separating assembly parts for spraying of water, injection of soup solution and brushing of plates. By using this process large amount of work can be done in considerably lesser time. In conventional dish washing process large amount of human power as well as quantity of water is used. So keeping that in mind, to reduce those problem and it is developed. Also we can use this in places where there is vast use of dishes for example, marriage ceremony, college mess etc. This dishwasher in which can conserve time and cost rather than spending in washing dishes by hand and wasting large amount of energy.


**Achievements:**

Project Design Contests: nil

Symposium: -


Publications: INTERNATIONAL JOURNAL OF RESEARCH CULTURE SOCIETY ISSN: 2456-6683
Volume - 2, Issue - 4, Apr– 2018


**Social Media Reach:**

Youtube : -

Facebook : -

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 3MEC18

TITLE OF THE PROJECT **DESIGN AND FABRICATION OF SOLAR OPERATED LAWN MOWER**

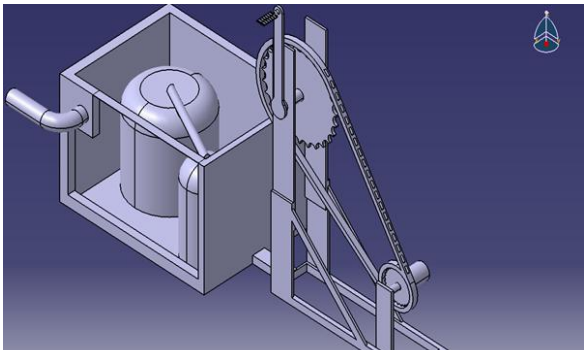
FACULTY GUIDE: Mr. R KARTHICK


S BALACHANDER

S KANNAN

R JEEVA


**Project Photo/ Block Diagram or schematic:**




**Abstract:** This paper analyzes the design of a pedal powered purified water supply device to be used by local dwellers. It consists of reciprocating pump with pedal power. It works on the principle of compression and sudden release of a tube by creating negative pressure in the tube and this vacuum created draws water from the sump into the pump while roller push the water through to the filter where adsorption takes place to purify the water. This paper proposes to take on challenges associated with the accessibility and purity of water in developing countries by designing and building a filtration and that are portable, durable, and cost-effective.Pure water is very much essential to survive, but now a days the water is getting contaminated due to Industrialisation which leads to many water-related diseases. A reciprocating pump will be used to pull salt water out of one holding tank, pass through a filtration system (membrane), and onward into a clean tank while the rider pedals the bicycle. Both the holding tanks and the filtration system will be incorporated into the design of the entire system that is portable and can be easily retrofitted to most standard bicycles.


**Achievements:**

Project Design Contests: NIL

Symposium: NIL

Publications: Yes

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 3MEC19

TITLE OF THE PROJECT **DESIGN AND FABRICATION OF SOLAR OPERATED LAWN MOWER**

FACULTY GUIDE: Mr. R KARTHICK


S SOORAJ

M TAMILMANI

R


**Project Photo/ Block Diagram or schematic:**


**Abstract:** This project deals with the design and fabrication of a solar operated lawn mower, i.e. a device used for grass cutting in lawns. This device reduces manual labour in cutting the grass in lawns. This device is fabricated by assembly of certain components. It is also a pollution free device without emission of any gases. It also reduces the human effort of pushing the device across the field as it is controlled by wired (remote control) and wireless (Wi-Fi control). A lawn mower/ Grass cutting machine is a machine that uses a revolving blade or blades to cut a lawn at an even height. Lawn mowers employing a blade that rotates about a vertical axis are known as rotary mowers, while those employing a blade assembly that rotates about a horizontal axis are known as cylinder or reel mowers. The system uses 12V battery to power the vehicle movement motors as well as the grass cutter motor. A solar panel is used to charge the battery so that there is no need of charging it externally.


**Achievements:**

Project Design Contests: NIL

Symposium: NIL

Publications: Yes

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID-3MEC20

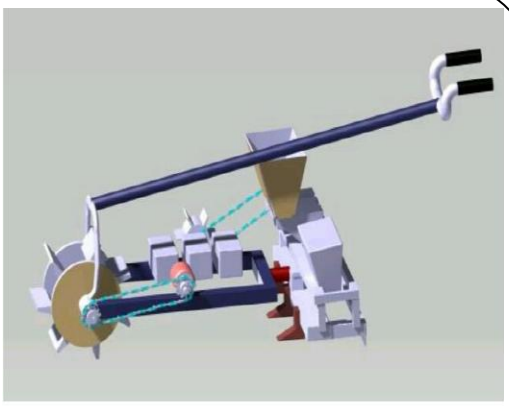
TITLE OF THE PROJECT: **DESIGN AND FABRICATION OF MULTI FUNCTIONAL AGRO BASED MACHINE**

FACULTY GUIDE: N.RAMASAMY


Bharani S

Kavi Priya R

Dinesh Kumar B U


**Abstract :** The world's population at 2016 is 7.6 billion and it is expected to be 11.2 billion by 2100. India's population is 1.324 million at 2016, so there is a need to increase food production. One of the identified problems behind this is lack of advanced agricultural machines. The reason why mechanisation (and other technologies too) is not seen much, apart from tractors mainly in Northern India, is because of four reasons. Firstly, small tracts of land, that get smaller with division at the change of every generation, make it impractical and uneconomical to invest in technology. One could argue that a collective of farmers could jointly invest but that has problems related to trust and the very practical problem of bunds between farms that make use of most mechanisation impractical. Secondly most farmers have small and marginal holding and are dirt poor. They depend on credit from moneylenders to even get through a normal season. There is no way that they would be able to afford new technology, especially machines and the third reason is, the most agriculture is seasonal and dependent on rains. That means at best fields are being used 4 months a year. Investing in mechanisation makes little sense especially if the equipment is to lie idle for most part of the year. And last reason is, the available modern machines are costly to be afforded by farmers. This is the main cause for the lack of usage of modern machines. In order to solve this problem the cost effective agro based machine designed and developed. In addition to the economical problem, the electricity is also


**Achievements:**

Project Design Contests: Start up india,Hackathon

Symposium: -

Publications: IJECS, Vol.2.Issue.3,March 18

**Social Media Reach:**

Youtube : -

Facebook : -

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID-3MEC 21

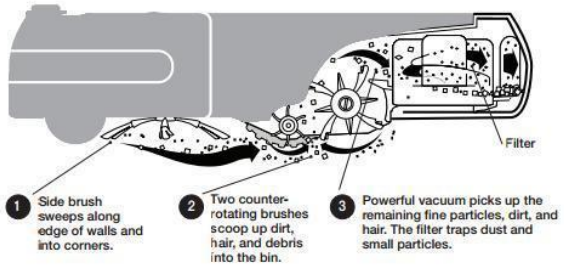
Design & Fabrication of Rough surface cleaner sub assembly I

FACULTY GUIDE: Mr Rajesh M

AUSTRIN MES

GOKU

GAESH





**Abstract :(10 lines)**

***Abstract:***

Floor cleaner is a system that enables cleaning of the floor by the help of highly stabilized and rapidly functionalized mechanical control system. Current project work targets to use floor cleaner for large floor ishouse-hold purposes and Office floors. The cleaning purpose is specifically carried out by continuous relative motion between a scrubber and the floor surface. During the cleaning and moving operation of vehicle a propulsion mechanism such as driven wheels and guide wheels for the dry tracking on the floor surface to be cleaned, suction of water and large particles is carried out by vacuum pump, scrubbing action is done by the scrubber directing small dust and lust particles towards tail part of the structure. Preferably, a sweeper mechanism is mounted on the body forwarded by propulsion mechanism. The ultimate main of this project is to combine both the process of vacuum cleaning and scrubbing mechanisms, in order to achieve the high efficient cleaning.


**Achievements:**

Project Design Contests:

Symposium:

Publication: IJRCS

**Social Media Reach:**

Youtube :

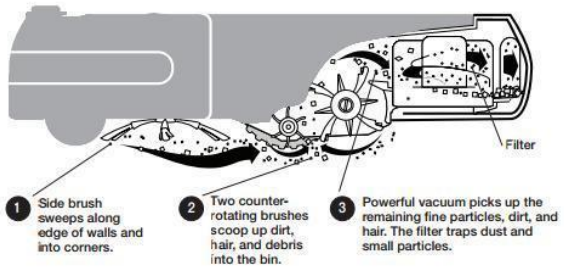
Facebook :

MINIPROJECT EXHIBITION DATED **FEB** 2018

TEAM ID- 3MEC22

Design & Fabrication of Rough surface cleaner sub assembly II

FACULTY GUIDE: Mr Rajesh M




Photo/ **Block Diagram or** schematic:


**Abstract :(10 lines)**

Floor cleaner is a system that enables cleaning of the floor by the help of highly stabilized and rapidly functionalized mechanical control system. Current project work targets to use floor cleaner for large floor ishouse-hold purposes and Office floors. The cleaning purpose is specifically carried out by continuous relative motion between a scrubber and the floor surface. During the cleaning and moving operation of vehicle a propulsion mechanism such as driven wheels and guide wheels for the dry tracking on the floor surface to be cleaned, suction of water and large particles is carried out by vacuum pump, scrubbing action is done by the scrubber directing small dust and lust particles towards tail part of the structure. Preferably, a sweeper mechanism is mounted on the body forwarded by propulsion mechanism. The ultimate main of this project is to combine both the process of vacuum cleaning and scrubbing mechanisms, in order to achieve the high efficient cleaning.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

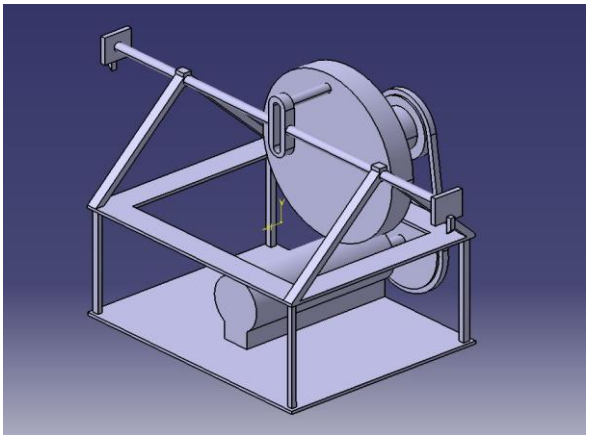
TEAM ID- 3MEC23

TITLE OF THE PROJECT: **DUAL SIDE SHAPER MACHINE AND GRINDING WHEEL ATTACHMENT**

FACULTY GUIDE: RAGAVENDRAN

Name

Name




**Abstract :**

The objective of this project is to make automatic punching machine for the Industries and the automobile with the help of dc motor, bearing, punching tool. Punching or pressing process is one of the most important and necessary Processing step in sheet metal industry. By automating this process one can have a greater control over the process. It is very useful in industries for manufacturingUnits in order to save the time and manpower. . But in future hope we will take this to advance type. In order to deliver the products at a faster rate all Manufacturing process is atomized.


**Achievements:**

Project Design Contests:

Symposium:

Publications: IJCRT (International Journal of Research culture Society)

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

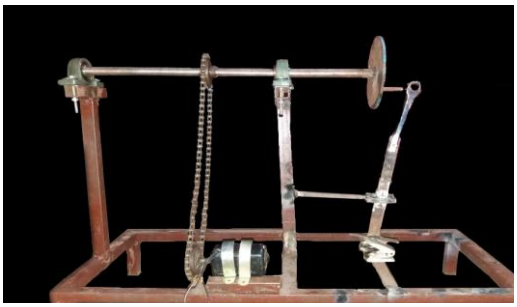
TEAM ID- 3MEC24

TITLE OF THE PROJECT: **DESIGN AND FABRICATION OF AUTOMATIC PUNCHING**

FACULTY GUIDE: R.Ragavendiran

Name

Miniproject Photo/ **Block Diagram or**




**Abstract :(10 lines)**

This paper explains about DUAL SIDE SHAPER MACHINE AND GRINDINGWHEEL ATTACHMENT USING SCOTCH YOKE MECHANISM. The shaper machine is used to remove metal chips in the blank of high speed steel to get a definite structure. The ordinary shaper machine will remove the metal in blank only in the forward stroke, while in the backward stroke the tool will not remove the chips. Whereas the dual side shaper machine will remove the chips during both forward and backward strokes. In industries for achieving shaping and grinding operations they are using individual machines. While in this mechanism both operations can be achieved in a single machine. It will reduce the operating time, manufacturing cost and increase the production rate compare to other machines.


**Achievements:**

Project Design Contests:

Symposium:

Publications: IJCRT (International Journal of Research culture Society) | Volume 6, Issue 1

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

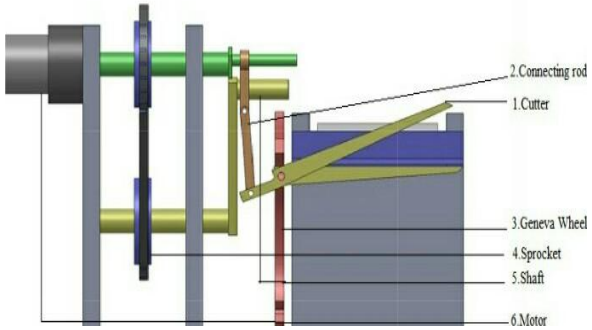
TEAM ID- 3MEC25

Title:**DESIGN AND FABRICATION OF AUTOMATIC PAPER CUTTING MACHINE**

FACULTY GUIDE: Mr.R.Ragavendiran

Name

Miniproject Photo/ **Block Diagram or sc**




**Abstract :(10 lines)**

The objective of this project is to make automatic paper cutting machine for the industries with the help of DC motor, bearing, cutting tool. The cutting process is done by Geneva mechanism and lever crank mechanism in order to cut papers in equal and accurate dimensions. Geneva drive is an indexing Mechanism that converts continuous motion into intermittent motion, due to which paper is moved between the equal intervals of cutting period. This machine is used to reduce the manual work of paper cutting, and also saving time. This machine is very useful for paper manufacturing industry also we can avoid the human efforts and also we can use this equipment also in institutes, stationary shops, paper stores, etc

**Achievements:**

Project Design Contests:

Symposium:

Publications:IJCRT

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 3MEC26

TITLE OF THE PROJECT **DESIGN AND FABRICATION OF SOLAR OPERATED LAWN MOWER**

FACULTY GUIDE: Mr. R KARTHICK

S SOORAJ

M TAMILMANI

R

**Project Photo/ Block Diagram or schematic:**


**Abstract:**

This project deals with the design and fabrication of a solar operated lawn mower, i.e. a device used for grass cutting in lawns. This device reduces manual labour in cutting the grass in lawns. This device is fabricated by assembly of certain components. It is also a pollution free device without emission of any gases. It also reduces the human effort of pushing the device across the field as it is controlled by wired (remote control) and wireless (Wi-Fi control). A lawn mower/ Grass cutting machine is a machine that uses a revolving blade or blades to cut a lawn at an even height. Lawn mowers employing a blade that rotates about a vertical axis are known as rotary mowers, while those employing a blade assembly that rotates about a horizontal axis are known as cylinder or reel mowers. The system uses 12V battery to power the vehicle movement motors as well as the grass cutter motor. A solar panel is used to charge the battery so that there is no need of charging it externally.


**Achievements:**

Project Design Contests: NIL

Symposium: NIL

Publications: Yes

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- Mech

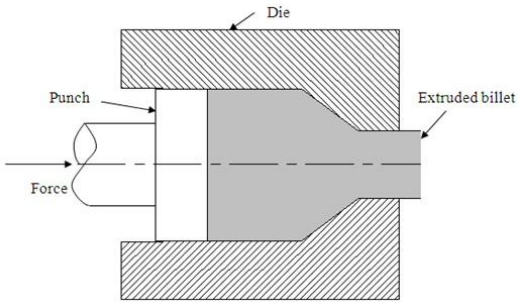
TITLE OF THE PROJECT **DESIGN AND FABRICATION OF EXTRUSION DIE ANGLE OPTIMIZATION**

FACULTY GUIDE: Dr.V.Jayaseelan


N.Dilli Babu

B.Himaya Sri

V.Ajith Kumar



Abstract: Extrusion is a plastic deformation process in which the metal is forced to flow by compression, through a die opening having a cross sectional area smaller than that of the original billet. Extrusion is an indirect-compression process, in which, indirect-compressive forces are developed by the reaction of the metal with the container and the die. The reaction of the billet with the container and the die results in high compressive stresses that are effective in reducing the cracking of the billet material during primary breakdown from the billet


**Achievements:**

Project Design Contests: --

Symposium:--

Publications: Yes

**Social Media Reach:**

Youtube : --

Facebook : --

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 2MEC12

TITLE OF THE PROJECT: Fabrication of vacume cleaner for small applications

FACULTY GUIDE: G.NIRESH KUMAR


DOBSONMERVIN

ELAMUGIL

ELAVUR JANARDH

ELAYAKUMAR



**Abstract :**

In this work, Automatic vacume cleaner has been designed for consumer/office environments . Proposed design is being operated in dual modes. In one of the modes, the robot is fully autonomous and making decisions on the basis of the outputs of infrared proximity sensors, ultrasonic sensors and tactile sensors after being processed by Arduino controller and control the actuators by the H-bridge driving circuitry. In manual mode, the robot can also be used to clean a specific area of a room by controlling it manually


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION FEB 2018**

TEAM ID- 2MEC13

TITLE OF THE PROJECT: Automated portable hammering machine

FACULTY GUIDE: G.NIRESH KUMAR


JANARTHA

GANESH

GERANISH


Mini


**Abstract :**

Hammering is the most widely used industrial as well as construction activity. Hammering or screws, metal sheets, parts etc requires a lot of time and effort. So here we propose an automated hammering system that allows for fully automatic hammering process. This allows for accurate, fast and automated hammering wherever and whenever needed using a 12V battery. The person just needs to insert work piece and start the hammering machine


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

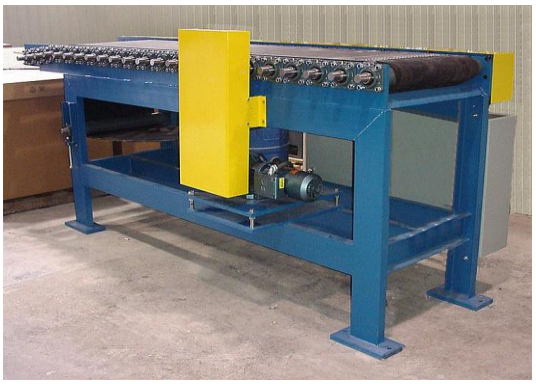
Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 2MEC17

TITLE OF THE PROJECT: Design & Fabrication Pneumatic conveyor



FACULTY GUIDE: G.NIRESH KUMAR


CHANDRAANIL

CHARAN

DHANUSH

DHILEEPHEN



**Abstract :**

Bicycle is the most cheap and easiest mode of transport especially in countries like India on which humans apply their effort to propel the bicycle, over centuries from now. Human effort is transferred to the wheels through pedals, crank and chain mechanism. But the same pedal power can be used for other purposes such as to generate electricity, to operate hand tools or agricultural tools. Therefore, an idea of using pedal power is presented in this paper. In this paper, a system is fabricated for generating electricity by pedaling a bicycle and at the same time water pumping also. The fabricated mechanism is tested to determine its performance and results are presented. Index Terms: Bicycle, Electricity, Pedal Power, Water Pumping


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 2MEC15

TITLE OF THE PROJECT: Automatic pneumatic jack for four wheelers

FACULTY GUIDE: G.NIRESH KUMAR


GUDI KIRAN

HARIHARAN

JAGAN



## Abstract :

An Automobile hydraulic jack can be easily operated by a single push button provided on the dash board. The jack will be installed on both the sides of chassis according to the weight distributions of the car. Similarly it will be installed on the other side of the car. The system operates on hydraulic drive which consists of three main parts: hydraulic pump, driven by an electric motor, hydraulic cylinder to lift the vehicle. The hydraulic jacks actuate separately for either side of car as per the breakdown condition


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 2MEC14

TITLE OF THE PROJECT: Design & Fabrication of Fabrication of pedaling pump.

FACULTY GUIDE: G.NIRESH KUMAR


SANJU SANKAR

SARATH KUMA




**Abstract :**

Our goal of the project is to design and implement pedal operating water pumping system used for home application. This project initiative to bring the safe the water Pumping system is the pollution less in the environmental of the country. Human power can do everything using that we introduce water pumping system this goal will be accomplished by designing for without using electrical energy.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 2MEC16

TITLE OF THE PROJECT: Pedal operated cell phone charger

FACULTY GUIDE: G.NIRESH KUMAR


KIRAN GANESH

KIRAN P.N

AKASH



**Abstract :**

It is a hectic task to carry everywhere the charger of mobile phones or any electronic gadget while travelling, or it is very cruel when your mobile phone getting off by the time you urgently need it. It is the major problem in today's electronic gadgets. Though the world is leading with the developments in technology, but this technology is still incomplete because of these limitations. Today's world requires the complete technology and for this purpose here we are proposing the wireless charging of batteries using Microwaves.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 2MEC5

TITLE OF THE PROJECT: Design and fabrication of Automatic Pneumatic Bumper

FACULTY GUIDE: P.SARMAJI KUMAR

M:

- Abstract : The technology of pneumatics has gained tremendous importance in the field of workplace rationalization and automation from old-fashioned timber works and coal mines to modern machine shops and space robots. It is therefore important that technicians and engineers should have a good knowledge of pneumatic system, air operated valves and accessories.
- The aim is to design and develop a control system based an intelligent electronically controlled automotive bumper activation system is called “AUTOMATIC PNEUMATIC BUMPER”. This system is consists of IR transmitter and Receiver circuit, Control Unit, Pneumatic bumper system. The IR sensor is used to detect the obstacle. There is any obstacle closer to the vehicle (with in 4 feet), the control signal is given to the bumper activation system.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 2MEC4

TITLE OF THE PROJECT: Design and Fabrication Of Grinding Wheel Attachment On Lathe Machine

FACULTY GUIDE: : P.SARMAJI KUMAR

Mini:

- Abstract : Grinding operation is performed to obtain a fine surface finish after performing turning operation on lathe machine for cylindrical jobs. This is done to obtain required dimensions of part to be used in any assembly. Thus to perform these two operations on same machine the attachment is designed. To verify the design the attachment is fabricated. This work describes an attempt to decrease the time in loading and unloading of work piece with desired surface finish. The report describes the selection of wheel for grinding. It also considers the rigidity of design, damping of vibration due to motor speed and stress analysis of critical part of design, which is analyzed on INVENTOR software and compared with theoretical calculations. It also lists the various operations performed to fabricate the attachment. The results are obtained in form of tolerance limits which are compared with results of individual grinding machine operation on different machine and the conclusion are stated.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 2MEC3

TITLE OF THE PROJECT: Fabrication Of Magtnetic Material Collecting Trolly By Using Electromagnetic

FACULTY GUIDE: : P.SARMAJI KUMAR

Abstract : The intention of this mechanical engineering project is to fabricate a magnetic material collecting trolley by using electromagnetic. Sincecomplete automation is very complex and even research facilities haven't come up with one, you better design one that is operated via manual control. This is a working project and as usual requires the help of industrial purpose . This trolley is 4 wheeled with an arm to collect scrap magnetic materials. It also can move over small obstacles with the support of the frame. Though this project may sometimes look simple, it requires much effort to actually make one

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

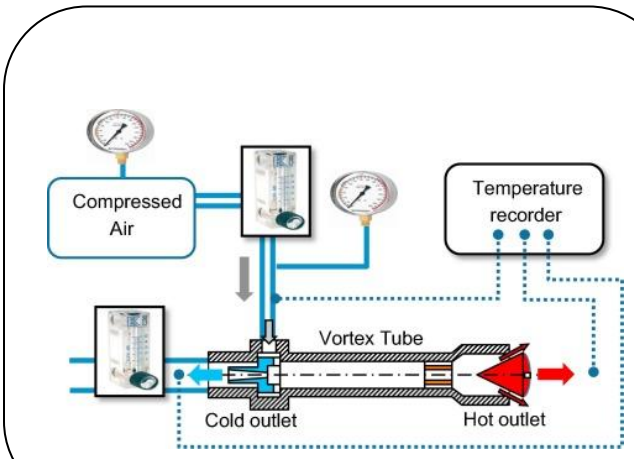
Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID- 2MEC1

TITLE OF THE PROJECT: Design and fabrication of Magnetic Refrigeration system

FACULTY GUIDE: : P.SARMAJI KUMAR





- Abstract : On a summer day,one may reach for a glass of cool water from one's refrigerator while sitting Down inside one'scool home.While this setting seems simple enough to the common consumer,the engineer sees specifically engineered coolings ystems allowing such climate control.A cooling system consists of adevice o rdevices used to lower the temperature of a defined region in space through some cooling process.
- Typical refrigerants used in refrigerators from the late 1800's through 1929 included ammonia, methylchloride, and sulfurdioxide, all o fwhich are toxic.To mitigate the risks associated with toxic refrigerants,a collaboration by Frigidaire,GeneralMotors,and DuPontnetted the development of Freon(orR12),a chlorofluorocarbon.Freonisanon-flammable and non-toxic,butozone-depleting gas1.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

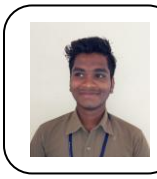
Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID-2MEC6

TITLE OF THE PROJECT: Design and Fabrication of Auto Turning Fuel Valve

FACULTY GUIDE: : P.SARMAJI KUMAR




- Abstract : The Need for innovative ideas in automotive sector is a highly demanded thing to match the technology improvements in the field for managing success and competition. Our paper deals with making an auto turning fuel valve for two wheelers. aim of this work under taken in is to improvetechnology in mechanical field and also for doing a job in a scientific way. In fabricating this we gained invaluable technical knowledge regarding, material solution, planning the project, group efforts in achieving targets, cost estimation and also gained confidence in doing works.
- Motorcycles are affordable methods for transporting purpose in various area of the globe and these motors are very popular kind of motor vehicle. There are nearly 200 million motorcycles which consist of motor scooters, mopeds, and two and three-wheelers.


.

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID : 2MEC7

TITLE OF THE PROJECT: **PREDICTION OF PROCESS PARAMETERS IN CNC MILLING USING FUZZY LOGIC**


FACULTY GUIDE: Dr.P.JAYARAMAN

YOGESH .S

U.JAFFAR SHERIFF

R.RAGHUL



**Abstract :**

In the current study, RSM & Fuzzy logic methodology have been applied to find out the optimum cutting conditions leading to minimum average surface roughness ($R_a$), minimum root mean square surface roughness ($R_q$), minimum mean roughness depth ($R_z$) and maximum material removal rate (MRR) in milling operation on AA6082. The second order mathematical models in terms of machining parameters were developed for average surface roughness, root mean square surface roughness, mean roughness depth and MRR prediction using response surface methodology (RSM) and FUZZY LOGIC method on the basis of experimental results. The experimentation was carried out with uncoated carbide end mill cutter for machining of AA6082. The model selected for optimization has been validated with F-test. The adequacy of the models on all responses has been established with Analysis of variance (ANOVA). An attempt has also been made to optimize the average surface roughness ($R_a$), root mean square surface roughness ($R_q$), mean roughness depth ($R_z$) and material removal rate (MRR) prediction models using FL to find optimum cutting parameters.


**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID : 2MEC8

**TITLE OF PROJECT: TRIBOLOGICAL STUDY ON AL/AL2O3/GR & AL/SIC/GR HYBRID MMC**

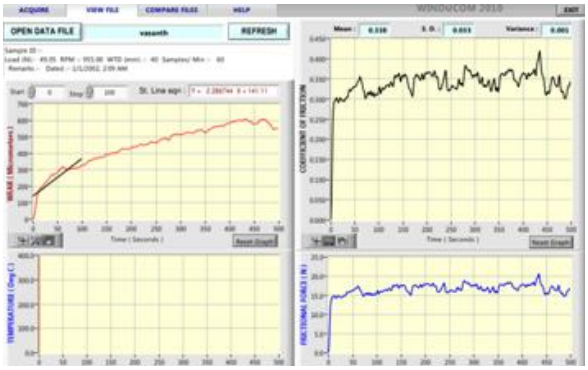
FACULTY GUIDE: Dr.P. JAYARAMAN


SOMNATH GUPTA .T

SURIYA PRAKASH .SK

SYED ISHAQ AHAMAD

VASANTH



**Abstract :**

An attempt has been made to fabricate and compare the properties of aluminium hybrid metal matrix composites in this current work. Two specimens were fabricated by adding 10% (wt) of each Al2O3 and SiC along with 1% (wt) Graphite to AA6351. The stir casting route with bottom pouring technique has been employed to fabricate the two specimens. Morphology of the cast composites reinforced with Al2O3/Gr and SiC/Gr were studied in detail by optical microscopy to analyze particle distribution in the aluminium metal phase. The hardness test is carried out to find out the hardness of the cast composites and parent metal using Vickers micro hardness testing machine. Mechanical testing is carried out on the tensile samples prepared from the two cast composite specimens and parent metal specimen. Wear test is carried out to study the wear resistance behaviour of cast composites and parent metal specimen. The hardness, tensile strength and wear rate of the two HMMCs are compared with the parent metal specimen and the better HMMC is determined based on the comparison of test results.


**Achievements:**

Project Design Contests:

Symposium:

Publications: 1

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID- 2MEC18

TITLE OF THE PROJECT: DESIGN AND FABRICATION OF PNEUMATIC PUNCH

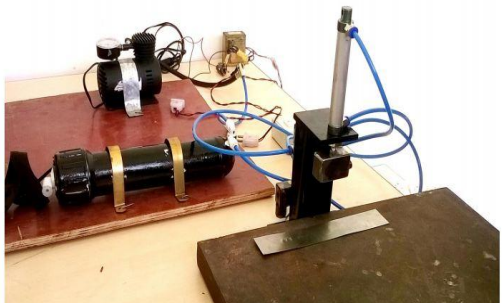
FACULTY GUIDE: Mr Rajesh M

ARAVINDAN .M

GOKULAN .B

ARUN KUMAR .S

AVINASH .V




**Abstract :(10 lines)**

***Abstract:***

"This project work deals with the design of pneumatically controlled small scale punching machine to carry out piercing operation on thin sheets (1-2 mm) of different material(aluminium and plastic). Reduction in punching force requirement being the main aim of this project work is obtained by modification in punch tool design i.e. by provision of shear on punch face. Subsequently it results in reduction in amount of punching force requirement. And further a CATIAmodel of the machine is developed on the basis of calculations with respect to punching force requirement".


**Achievements:**

Project Design Contests:

Symposium:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID- 2MEC20

Title: DESIGN AND FABRICATION OF GLASS CUTTING MACHINE

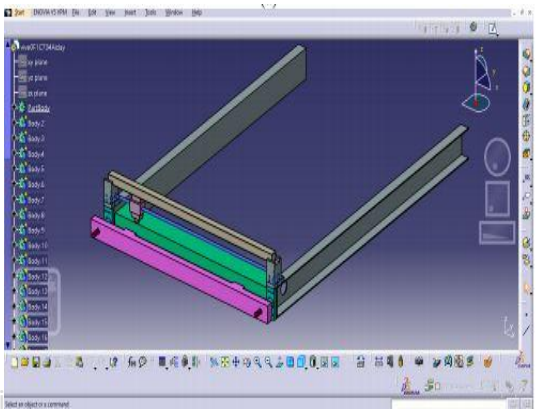
FACULTY GUIDE: Mr Rajesh M

NamBALAJI .

BHUVANESHWAR .R

BHUVANESHWAR .S

BALARAJU LAKSHMAN RAJU



**Abstract :(10 lines)**

This paper deals with the design and fabrication of the automatic glass or mirror cutting machine. In order to increase the accuracy of cut and production rate; and decrease the production time and accidents caused due to manual cutting of mirror or glass, this project aims at development of an automatic machine which uses a programmable logic controller (PLC) for controlling the movement of the conveyer and also to control the pneumatic circuit. In this machine, the work of the operator is to load and unload the mirror. The cutter used in this machine is carbide wheel with its cutting edge ground to a V-shaped profile. The PLC controls the pneumatic cylinder and intern actuates the cutter along the glass, a fracture layer is formed causing a mark to be formed below the fracture layer and a crack to be formed below the rib mark.

**Achievements:**

Project Design Contests:

Symposium:

Publications:IJCRT

**Social Media Reach:**

Youtube :

Facebook :

**MINIPROJECT EXHIBITION DATED FEB 2018**

TEAM ID : 2MEC9

TITLE OF THE PROJECT: DESIGN AND FABRICATION OF LANDMINE DETECTION ROBOT

FACULTY GUIDE: K BALACHANDAR


GANGADHARAN

ARJUN

KART



**Abstract :**

Landmines have been a threat for both humans and animals since the world wars. The number of casualties increases everyday all over the world. In order to clear the landmines in a more effective way that is cheaper and simple a robot is made which will detect landmines using a simple metal detector circuit. The Robot is a suspension arrangement called ROCKER AND BOGIE which enables it to move freely in all type of terrain. The mine is cleared using an electro magnet which is equipped with the robot. The whole process is controlled wirelessly from a remote place. The estimated cost is very much low.


**Achievements:**

Project Design Contests:

Symposium: 1

Publications: 1

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID : 2MEC

TITLE OF THE PROJECT Determination of friction factor by Uniform compression process

FACULTY GUIDE: Dr.V.Jayaseelan

NIRANJAN

NIRMAL RAJ

PRAKASH

**Abstract :**

The technology advancement has envisaged going for near net shape of the produces. Also, near net shapes formed are again cold upset for obtaining a final shape of the Product. This work deals with an experimental, theoretical and analytical determination of friction factor 'm' for Solid aluminium Cylinders under different lubricating conditions. In this method friction calculated by comparing the prior to the compression thickness and after the compression thickness

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :

TEAM ID : 2MEC

TITLE OF THE PROJECT Determination of friction factor by ring compression test

FACULTY GUIDE: Dr.V.Jayaseelan

RAMESH

ROOPKUMAR

RUFUS

**Abstract :**

It is the simple test to determine the friction factor. Also, near net shapes formed are again cold upset for obtaining a final shape of the Product. This work deals with an experimental, theoretical and analytical determination of friction factor 'm' for Solid aluminium Cylinders under different lubricating conditions. The aluminium ring having a standard ratio specified by the Male and Cockcroft (6:3:2) with a dimension of Outer diameter: inner diameter: Height, 42:21:14 is prepared to carry the ring compression test

**Achievements:**

Project Design Contests:

Symposium:

Publications:

**Social Media Reach:**

Youtube :

Facebook :