SAPTHAGIRI COLLEGE OF ENGINEERING

(IAO9001-2015 and ISO14001-2015 certified institute)

Accredited By NAAC with "A" Grade

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

March -2021 Vol-V Issue-1

EEE MAGAZINE

Power is Knowledge…Knowledge is Power.

VISION

To Create globally competent Electrical and electronics Engineers who can contribute to the growth of the nation and serve the society.

MISSION

* To impart students centric quality education
*To nurture the talents and impart moral values to the students
*To keep abreast the technical knowledge among students and faculty with industry-Academia interaction.
*To enrich Research and Innovation methods in students and faculty

Statement Of PEO's

Graduate Engineers will be able to:

PEO 1:Apply scientific, Mathematics and Engineering fundamentals gained to comprehend,analyse,design and create products and solutions for real life problems

PEO2:Contribute to industrial services and government organisations by applying their skills gained through formal education.

PEO3:Work on emerging technologies with professional communities,higher eduation ever developing careers to strengthen human values and social responsibilities to contribute towards society.

PEO4:Adopt professional and ethical attitude for effectively resolving societal problems through multidisciplinary approach

Editorial Team:

Associate Professor: Prof. Rekha SN

Assistant Professors:

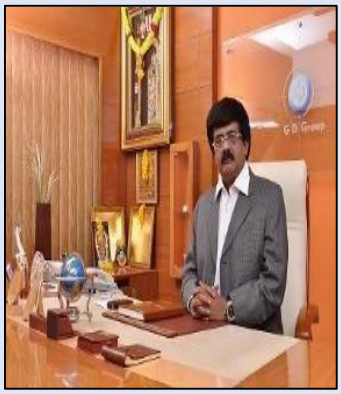
Prof. A.Dhamodaran
Prof. Preetha NP
Prof. MahaVishnu KBP

Student Coordinators:

Ajay S Pai
Dhasharath R
Cheluvarama S
Tejas S

Contents

Chairman: Sri G. Dayanand

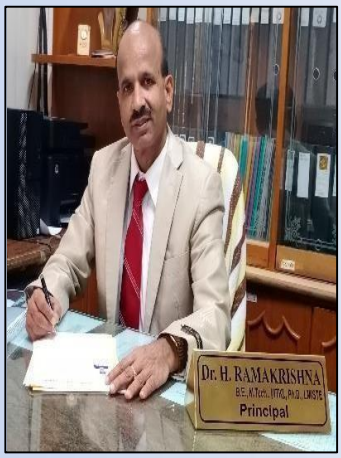


The " EEE MAGAZINE" is providing great space for the faculty and students to pen down their innovative ideas, imagination and perceptions to show case their creativity. So, I take the opportunity to congratulate the department of EEE and its editorial team to successful release of this issue. I am sure that students and faculty will find the content of this edition very interesting and educating.

Executive Director: Sri G. D Manoj

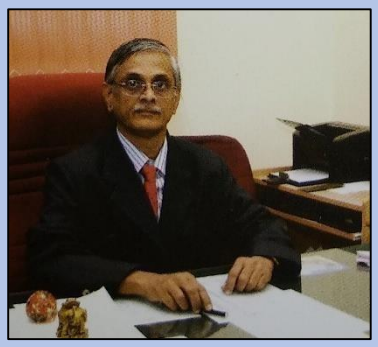
I am indeed happy to know that the department of EEE has taken initiative in realizing its " EEE MAGAZINE" and urge faculties and students to make use of the platform to share and educate among themselves in publishing article pertaining to the emerging domain and articles of interesting. I congratulate the team of editorial community and department of EEE

Principal's Message- Dr. H Ramakrishna



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

HOD'S MESSAGE- Dr.K.N.Ravi



SAPTHAGIRI COLLEGE OF ENGINEERING is releasing its " EEE MAGAZINE" .I would like to express my sincere appreciation to Faculty and Editor for their efforts and dedication into a modern and accessible mode of communication with the students' community. It is always a proud moment in the life of the SCE that its departments celebrate such occasions. Apart from providing the quality education, we craving to provide our students a holistic learning experience for life. Academic excellence along with Co-curricular and extra co- curricular activities complete the process of education.

It gives me great satisfaction that SCE is making progress in all its endeavors towards the overall development of the students. As I look ahead, I can visualize that the college will grow in pursuit of higher standards of teaching, research, and may lead to shape my dreams. It will continue to serve a significant role in higher education and in the service of the country. My blessings and good wishes will always be with the EEE Department. May God give strength to see this department and college flourishing!

PAPER PUBLICTION:

Name of the Teacher (s)	Title of Paper	Publication citation	Month and year	Vol/Issue	Remarks
Dr K N Ravi	Electric Field and Potential Distribution of Porcelain Insulator using FEM Method	International Journal of Innovative Technology and Exploring Engineering (IJITEE)	February 2021	Volume-10 Issue-4,	ISSN: 2278-3075,
Dr K N Ravi	FEM Based Electric Potential Distribution Analysis of Porcelain Insulator using MATLAB PDE tool	International Journal of Recent Technology and Engineering (IJRTE)	January 2021	Volume-9 Issue-5	ISSN: 2277-3878

Dr.G.Raghavendra	**Vehicular blind spot detection and alert system using artificial intelligence and methods thereof**	**Patent publication**	**19 February 2021**		
Dr.G.Raghavendra	High voltage Engineering lab assistance robot	Patent publication	11 December 2020		
Mrs Rekha S. N	Development and performance Evaluation of feature reduced relevance vector machine on wind turbine sensor fault				

FACULTY PARTICIPATION

1.Prof. Rekha SN- Associate professor from Dept. of EEE attended Faculty development program on "CONTROL AND STABILITY ASPECTS IN MICRO GRID" Organised by IEEE Madras Section during 14/12/2020 TO 17/12/2020 .

2.Prof. Rekha SN- Associate professor from Dept. of EEE attended Faculty development program on " HARDWARE IN THE LOOP(HIL) SIMULATION" from 19/08/2020 TO 21/08/2020rganised by IEEE Madras Section.

3.Prof. Rekha SN- Associate professor from Dept. of EEE attended Faculty development program on "DEEP LEARNING NETWORK AND ITS APPLICATION" from 26/08/2020 TO 29/08/2020rganised by IEEE Madras Section.

4.Prof. Ashwini AV - Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “ELECTRIC VEHICLES" from 2/11/2020 TO 06/11/2020 organised by Jawaharlal Nehru National College.

5.Prof. Sumangala S Jambli - Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “ELECTRIC VEHICLES" from 2/11/2020 TO 06/11/2020 organised by Jawaharlal Nehru National College.

6.Prof. Muralikrishna K - Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “ELECTRIC VEHICLES" from 2/11/2020 TO 06/11/2020 organised by Jawaharlal Nehru National College Shivamoga.

7.Prof. Shivaraj A - Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “ELECTRIC VEHICLES" from 2/11/2020 TO 06/11/2020 organised by Jawaharlal Nehru National College Shivamoga.

8.Prof. Akshay Kumar - Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “ELECTRIC VEHICLES" from 2/11/2020 TO 06/11/2020 organised by Jawaharlal Nehru National College Shivamoga.

9.Prof. Swetha G- Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “ENERGY ENGINEERING" from 05/10/2020 TO 09/10/2020 organised by Vishwakarma Institute of Technology.

10.Prof. Jhansi K - Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “ENERGY ENGINEERING" from 05/10/2020 TO 09/10/2020 organised by Vishwakarma Institute of Technology.

11.Prof. Ramya M - Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “ENERGY ENGINEERING" from 05/10/2020 TO 09/10/2020 organised by Vishwakarma Institute of Technology.

12.10.Prof.Harshitha MR - Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “EMERGING TECHNOLOGIES (IOT,ROBOTICS &UAV)" from 12/10/2020 TO 16/10/2020 at Centre for Development Of Advanced Computing.

12.Prof.Preetha NP - Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “EMERGING TECHNOLOGIES (IOT,ROBOTICS &UAV)" from 12/10/2020 TO 16/10/2020 at Centre for Development Of Advanced Computing.

13.Prof. Dvya NS- Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “EMERGING TECHNOLOGIES (IOT,ROBOTICS &UAV)" from 12/10/2020 TO 16/10/2020 at Centre for Development Of Advanced Computing.

14.Prof. A Dhamodaran- Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “POWER ELECTRONICS APPLCATIONS IN MACHINE DRIVE AND POWER SYSTEM" from 01/12/2020 TO 05/12/2020 at NIT Mizoram.

15.Prof.Nagaraja BS - Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “RECENT DEVELOPMENT IN SMART CITY" from 07/12/2020 TO 12/12/2020 at Sri Siddhartha Institute of Tecnology Tumkur.

16.Prof. Harshitha MR - Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “RECENT DEVELOPMENT IN SMART CITY" from 07/12/2020 TO 12/12/2020 at Sri Siddhartha Institute of Tecnology Tumkur.

17.Prof.Harshitha MR - Assistant professor from Dept. of EEE attended online Faculty development program on “ADVANCED & NEW GENERATION MATERIALS IN ELECTRICAL AND ELECTRONICS ENGINEERING" from 08/02/2021 TO 19/02/2021 at B.M.S College of engineering Bangaolre.

18.Prof. Akshay Kumar D - Assistant professor from Dept. of EEE attended AICTE Training and Learning (ATAL) online Faculty development program on “RECENT DEVELOPMENT IN SMART CITY" from 07/12/2020 TO 12/12/2020 at Sri Siddhartha Institute of Tecnology Tumkur.

STUDENTS’ PLACEMENTS

Name of student placed	Enrollment number	Name of the employer	Appointment letter reference No. with date.
Dasharath R	1SG17EE020	CANBRIGHT	07/01/2021
Ajay S Pai	1SG17EE002	Q Spiders	12/01/2021
Thanuja N	1SG17EE081	Grifeo Technologies	23/10/2020
Vijaylakshmi G	1SG17EE086	Grifeo Technologies	23/10/2020
Mahadev M	1SG17EE038	Grifeo Technologies	23/10/2020

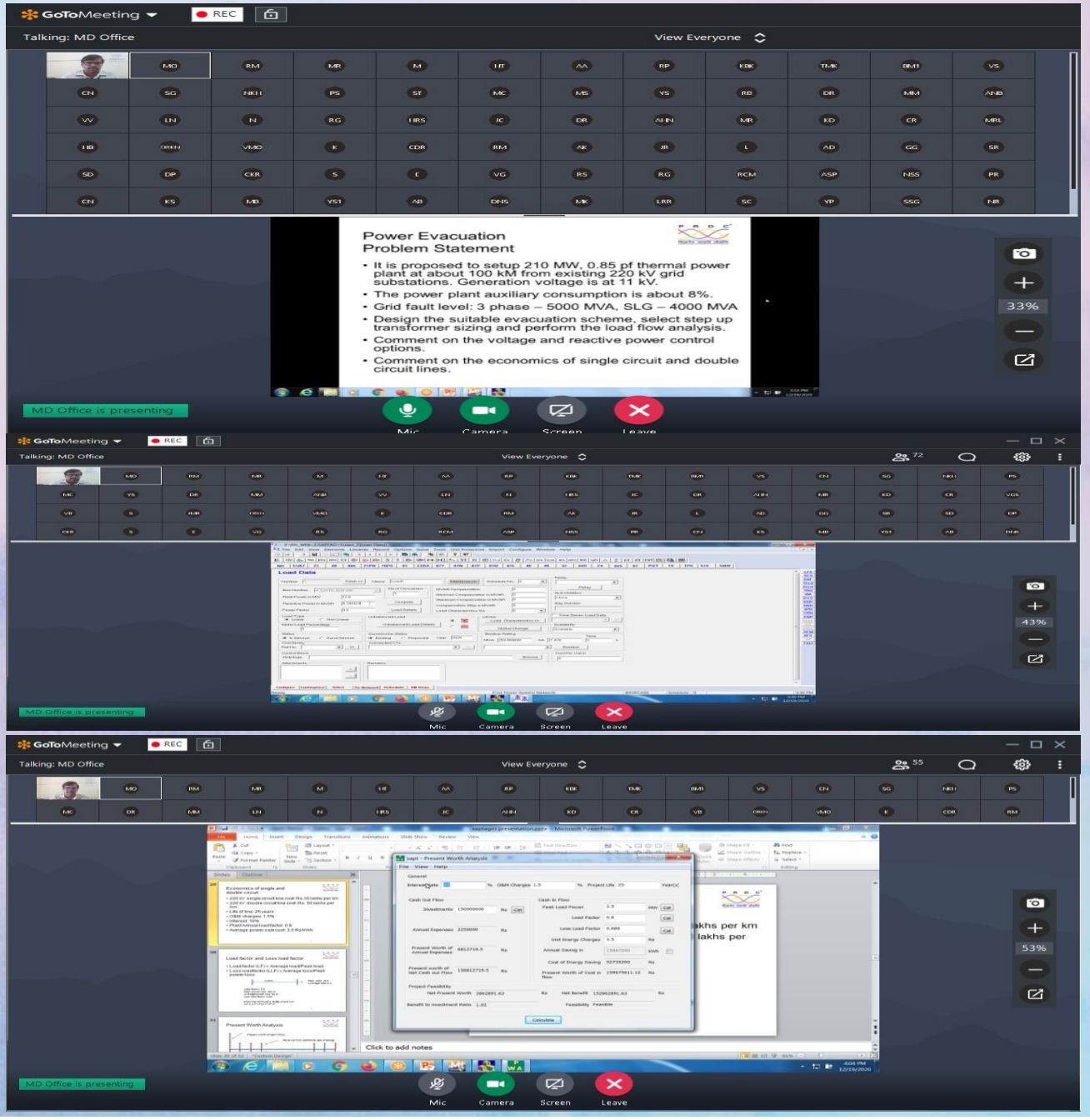
Webinar ON “Mi Power Simulation Studies”

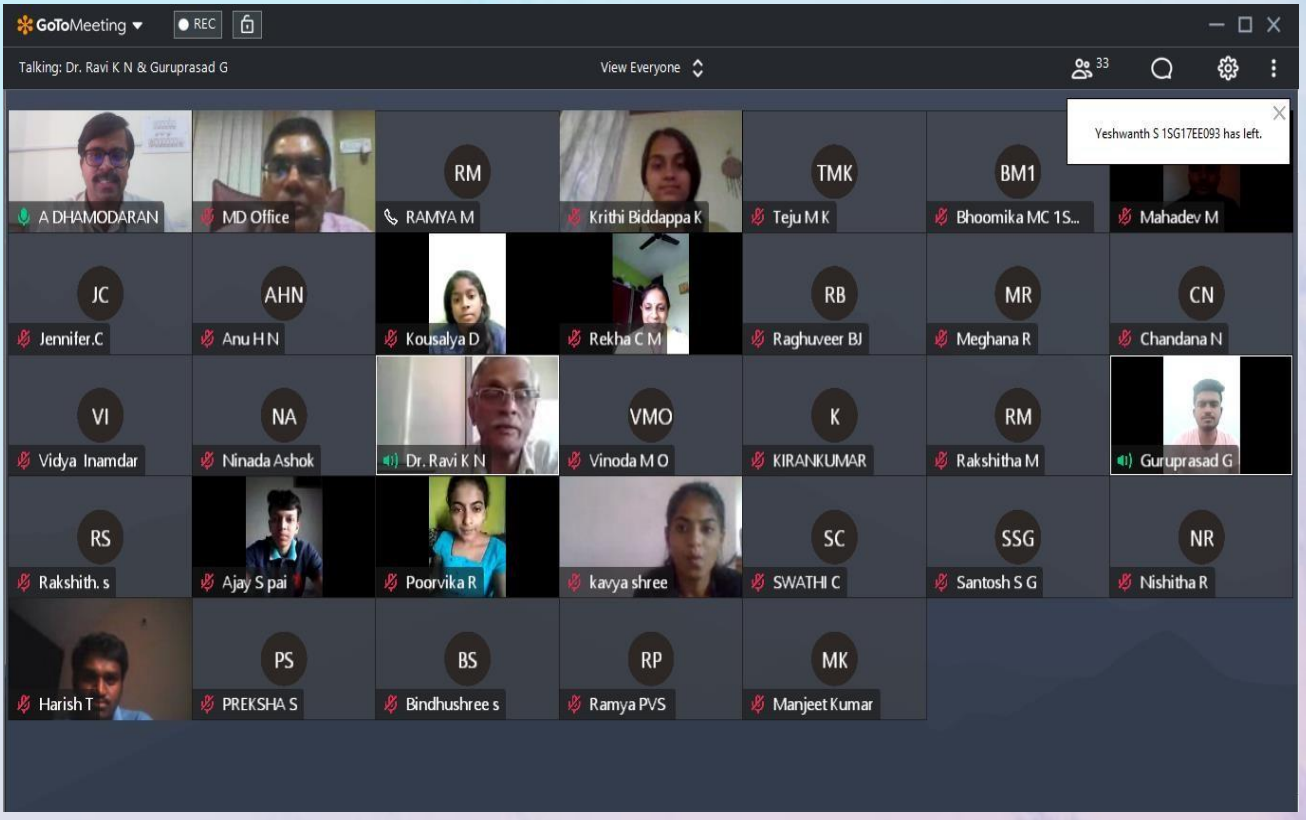
An open webinar on “MiPower Simulation Studies” was conducted on 19/12/2020 in association with M/s. Power Research Development Consultants Pvt. Ltd (PRDC).

Dr. R Nagaraja, Founder and Managing Director, PRDC has given consent to be speaker for the webinar.

PRDC is a pioneer in developing solutions for various power system network based issues/problems arising in the world. This webinar was conducted for the Final year students of EEE and faculty members from various institutions in Karnataka. The no. of participants was 92.

Dr. R. Nagaraja, was given detailed view of Load Flow studies using “MiPower” software for a sample power system with various Load Flow solution methods, such as, FDLF, Gauss-Seidel and Newton Raphson. Overview of various fault studies were also presented with sample system for LG, LL, LLG and LLLG. The Stability studies were carried out in this webinar with a background of Swing equation under different fault conditions using Modified Euler’s method and Point-by-Point method.





Quiz Competition "BASICS OF ELECTRICAL TECHNOLOGY"

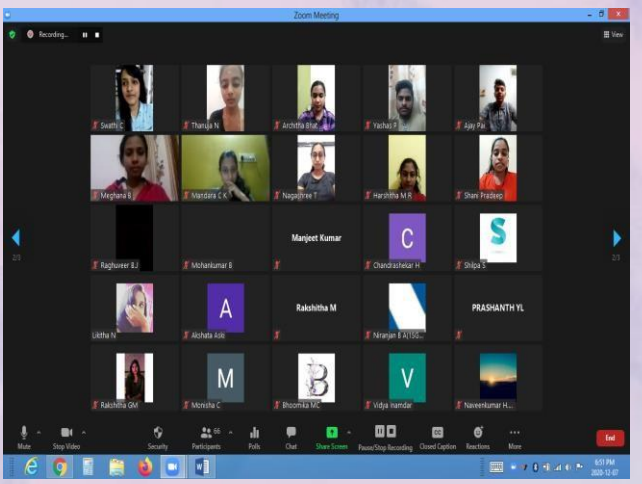
Department of Electrical and Electronics had arranged an quiz competition on " Basics of Electrical Technology" on 25/11/2020 at 11 a.m., for the students of Electrical and Electronics Engineering, this event was conducted to enhance the knowledge of students and to make their basics stronger, which would help students to prepare for GATE and other competitive exams. The quiz competition was held in online mode and about 250 students actively participated. The toppers of quiz were appreciated with appreciation certificate and other participants were given participation certification. List of top performers in the quiz are

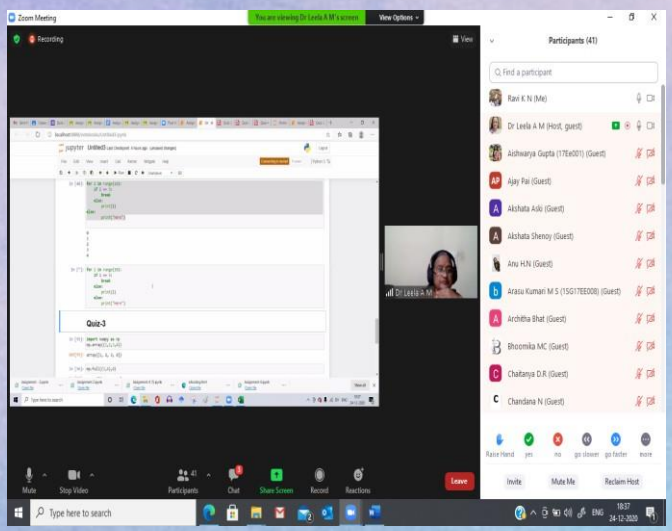
Sl.No.	Name of the student	USN	Semester	Score
1	Harshith M S	1SG18EE035	5	48/50
2	Anshu	1SG18EE007	5	47/50
3	Chethan Gowda GT	1SG18EE025	5	47/50

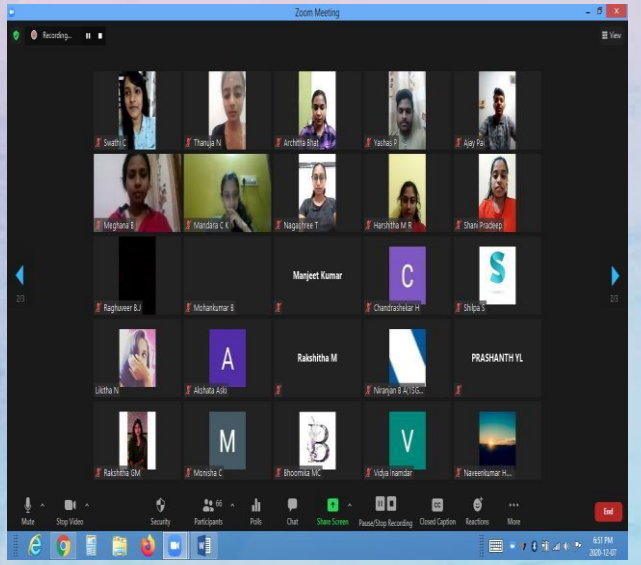
ADD ON COURSE:

An ADD on Course on “Python and its application to Signals and Systems” was conducted from 7/12/2020 to 24/12/2020. Resource Person: Dr.A.M.Leela,Prof(Retried),Archarya Institute of technology,Bangalore.

Dr. A M Leela, Prof(Retried),Archarya Institute of technology,Bangalore. has given consent to be Resource person for the Add-on Course. Python is an interpreted, high-level and general-purpose programming language. Python is used in artificial intelligence, Electrical application projects and machine learning projects with the help of libraries like TensorFlow, Keras, Pytorch and Scikit-learn . Python is often used for natural language processing. From this course students are gained the knowledge to apply python language to the signals and systems. This ADD on Course was conducted for the Final year students of EEE. The no. of participants was 72.Dr. A.M. Leela has given the detailed explanation on Python Interperter (how to use the libraries and program flow control to write the program),Numpy module,sympy module are explained in detail how to use arrays, markers,plots to execute the signals and systems equations and plots of the signals, also test the signals and systems properties. This language is very much useful for the final years for their project work as well as for employability.The students gained very much interested and actively participated for the course.







Toppers:

I - Year

S.No	Name	USN	SGPA
1	BHOOMIKA N	1SG19EE019	9.25
2	ANUSHA R	1SG19EE006	9.23
3	NUTHAN S M	1SG19EE054	9.10

II- Year

S.No	Name	USN	SGPA
1	SINDHU N	1SG18EE077	9.73
2	J S HARITHA	1SG18EE040	9.08
3	YASHWANTH R	1SG18EE093	9.08

III - Year

S.No	Name	USN	SGPA
1	SHILPA S	1SG17EE072	9.712
2	SWATHI C	1SG17EE079	9.712
3	PREKSHA S	1SG17EE058	9.596

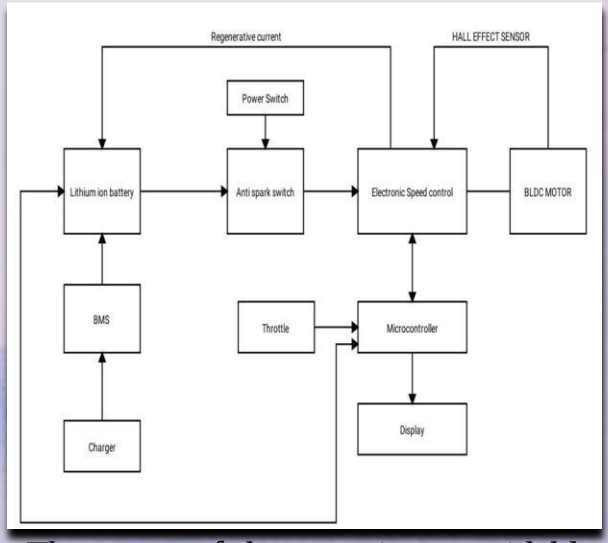
IV - Year

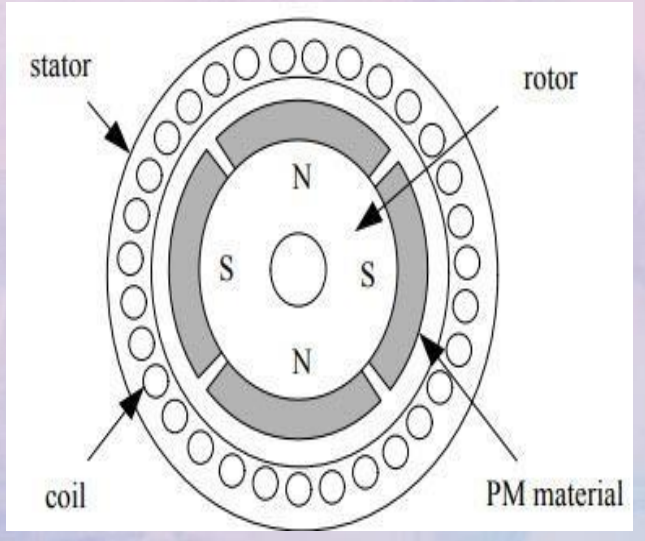
S.No	Name	USN	SGPA
1	KAVYA SHREE R	1SG16EE043	9.11
2	MOUNA M	1SG16EE055	8.89
3	ASHFAQUE AHMED	1SG16EE014	8.82

STUDENTS'ARTICLES:

PORTABLE SMART ELECTRIC SCOOTER

portable electric scooter is gaining attention among our community especially in large/urban areas. An electric scooter is originally inspired from a wheelchair, which is created to ease people to move from one place to another. It can be a stand Electric scooter or seated Electric scooter. However, this project is implemented by using a stand Electric scooter and transformed into a portable electric scooter. This Electric scooter is decidedly clean to operate since it is a battery handled vehicle. Before this, we can see the use of electric scooter is limited only for child, but nowadays, statistic or the number of electric scooters has been increased and it is proven that it has been used by adults especially in a big city and it is widely used for a recreation in the evening. Basically this type of vehicle will used DC motor since it is directly connected to the battery as a supply, and the power will be transfer to rear wheel by sprocket and chain as its drive train. Also running in attention the parking illustration present days, we concluded to require a compact electric scooter which can be folded easily, and so can be easily carried. The setup allows buyer to clearly enchantment the Electric scooter handling lower span when it is "enveloped" it displays compact in size. This project is unique and no foldable Electric scooter is presently available in market till now. It occurs a light-weight foldable Electric scooter, promoted on the support of a brand fresh concept.





The status of the rotor is unavoidable and there are two simple systems controlled for recognizing the rotor position. The prime recognized method is by using Hall-effect sensors. Corresponding to this knowledge the ESC knows when to stimulate the next commutation sequence or interruption. The second common method used for determining the rotor status is through sensing the backward electromotive force or back EMF. The back EMF strikes as a issue of the applicable inverse process of developing a magnetic field or when a propelling or rotating magnetic field pass free through a coil it help a current in the coil.

Name Of The Student:Thanuja N
USN No:1SG17EE081
7th sem Dept Of EEE

AUTOMATIC FLUID CONTROL SYSTEM

Previously old and traditional methods of crop cultivation were used by farmers which require a tremendous amount of hard work and attention. Also the results of crops were obtained with poor quality and less productivity. This causes difficulty in implementing traditional cultivation techniques as old methods need a lot of hard work and also they were time consumable.

The green houses provide automatic and effective controlling techniques for improvement in crop growth over old growing methods. This will reduce human efforts required for growing crops in open field. Greenhouses are framed or inflated structures covered with transparent or translucent material large enough to grow crops under partial or full controlled environmental conditions to get optimum growth and productivity. At present, the data transfer between the greenhouses and the control system is mainly provided by suitable wired communication system, such as a field bus .

It is well known that, about 95% of plants, either crops or cash crops are grown in open field where the climatic conditions are extremely adverse resulting poor growth of crops. Hence greenhouses are particularly needed to grow plants under natural environmental conditions. Different environmental factors are responsible for development of plant growth. Environment composed of various factors like light, temperature, humidity, CO2 gas which are directly or indirectly plays important role in successive growth of plants. In some cases, poor or weak environment can damage plants by providing disease. Hence better understanding of climatic factors is necessary that may affect the development of the plants and appropriate actions can be drawn to prevent these problems.

The imbalance of parameters causes various diseases for crop growth. India is a developing nation and hence there is an increase in consumption of man power day by day. In our project we are automating the control of fluid pumps which is used in the domestic, industrial and agriculture sector. The main purpose of our project is to reduce the man power by automating the method of fluid control system. There is a chance of wastage of man power if proper care is not taken.

Our project also includes different types of protection required for the fluid pumps. We also monitor the dry, normal and over load of the fluid pump. We also monitor the quantity of fluid discharged to the different lines from the fluid pump using liquid flow meter.

Name of the Student:Shivaraj NP
USN No:1SG17EE073
7th Sem
Dept. Of EEE