



VOLTZFEST 2.0 - SYMPOSIUM

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CO-CURRICULAR ACTIVITIES

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From HOD's Desk...

The department newsletter is one the wonderful presentation of the department regarding the achievements and participations of the faculty and the students. It is great achievement that Volume 2, Issue 1 of the Newsletter is released by our EEE Department. The Newsletter gives all the details of the activities undergone in the Department during the Odd Semester of 2017-2018. I appreciate the faculty members, students and supporting faculty for their tireless efforts and contributions to the various activities held in the Department.

All the best....

-Dr.Anitha Karthi, HoD-EEE



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From Editorial Board...

The various updates about the developments and achievements in the Electrical and Electronics Engineering department are published in this issue. It gives us great pleasure to know that the previous editions of our newsletter "VOLTZWAVES" had reached out the students well and was a great success.



This issue of the newsletter also in the rally to cover the achievements, of the faculty and students achievements and participation of events of the members and individuals within the department and in the outside world. Readers can use this opportunity to take a look back over the last semester achievements of the department. VOLTZWAVES has been a student team work entirely, thriving to bring out the best headlines

Happy Reading!!!

-Editorial board

VISION:

- To educate the students with adequate knowledge in Electrical and Electronics Engineering to get recognized at international level.
- To develop the department as a centre of excellence in all aspects.
- To graduate engineers with the quality of responsible citizens of the country to serve the society.

MISSION:

- To provide quality based technical education to students.
- To empower the students with professional skills to face the challenges with confidence, courage and ethics.
- To trigger the innovative minds to engage in research activities.
- To identify the capabilities and encourage the students to become entrepreneurs.

PROGRAMME EDUCATIONAL OBJECTIVES :

- 1.To prepare the students have successful career in industry and motivate for higher education.
- 2.To provide strong foundation in basic science and mathematics necessary to formulate, solve and analyse electrical and electronics problems.
- 3.To provide strong foundation in circuit theory, field theory, control theory and signal processing concepts.
- 4.To provide good knowledge of Electrical power apparatus and their applications in power systems.
- 5.To provide knowledge on basic electronics to power electronics and their applications in power engineering.

- 6.To provide an opportunity to work in inter disciplinary groups.
- 7.To promote student awareness for life long learning and inculcate professional ethics.
- 8.To provide necessary foundation on computational platforms and software applications related to the respective field of engineering.

PROGRAMME OUTCOMES :

- a)Ability to understand and apply differential equations, integrals, matrix theory, probability theory and Laplace, Fourier and Z transformations for engineering problems.
- b)Ability to understand and apply basic science, circuit theory, Electro-magnetic field theory control theory and apply them to electrical engineering problems.
- c)Ability to model and analyse electrical apparatus and their application to power system.
- d)Ability to understand and analyse power system operation, stability, control and protection.
- e)Ability to handle the engineering aspects of electrical energy generation and utilization.
- f)Ability to understand and analyse, linear and digital electronic circuits.
- g)Ability to review, prepare and present technological developments.
- h)Ability to form a group and develop or solve engineering hardware and problems.
- i)To understand and apply computing platform and software for engineering problems.
- j)To understand ethical issues, environmental impact and acquire management skills.

DEPARTMENT ACTIVITIES

FACULTY DEVELOPMENT PROGRAMME

The Faculty Development programme on “EE6703 Special Electrical Machines” was conducted by our department from 13th June to 15th June, 2017. The programme was



coordinated by Mrs.M.Monica, Asst. Prof., EEE. About 18 External Faculty participated in the programme. The topics covered include: Introduction to Special Electrical Machines, Projects and Funding Availabilities in the various areas of Special Electrical Machines, Speed control of BLDC and servo motor Demonstration. Speed control of BLDC machine and solar power tracking using MATLAB. Design and control of PMSM, Stepper motor and its application,

Synchronous Reluctance Motor, Switched Reluctance Motor and its controller circuits.

The above topics were presented by,

- ◆Dr.L.Ashok Kumar, Professor - EEE, PSG College of Technology, Coimbatore.
- ◆Mr. Malaiyappan, Managing Director, Pantech Prolabs India Private Limited, Chennai.
- ◆Mr. Parasuraman, Application Engineer, Axis Global Automation, Chennai.
- ◆Dr. K. Premkumar, Associate Professor -EEE, Rajalakshmi Engineering College, Chennai.
- ◆Dr.P.Sivakumar, Associate Professor-EEE, Rajalakshmi Engineering College, Chennai.
- ◆Dr.Anitha Karthi, HoD - EEE, Rajalakshmi Institute of Technology.
- ◆Dr.N.C. Lenin, Associate Professor- EEE, VIT, Chennai.
- ◆Dr. A. Kavitha , Assistant Professor - EEE, Anna University, Chennai .

SYMPOSIUM- IEEE STUDENT BRANCH

The students of EEE department with the help of the HoD and faculty members conducted an intra-college symposium titled “*Voltzfest 2.0*” at



Rajalakshmi Institute of Technology on 01st, September 2017. We conducted various events such as *Thesis Hunt*, *Mystefii Quiz*, *Game –A–Game*, *Chasse Au Terser* and *Hasta Break*.

In the valedictory function , Students of EEE department and the winners of all the events were gathered at the seminar hall. Our Principal **Dr.M.Velan** addressed the students about the need and benefits of the symposium. Then our department HOD, **Dr.Anitha Karthi** gave a sweet speech about the Chief Guest and she congratulated our EEE department students and faculty members for their untiring works. Finally, our honorable Chief Guest **Mr. Prashanth Mohan**, IEEE Xtreme had an interactive session with the students about the IEEE Membership and benefits. Exciting prizes were given to the awardees of the events of the symposium and the association events. Association report was delivered and vote of thanks was given to the gathering. The day greeted us with pleasant and memorable moments.

INDUSTRIAL VISITS

Sriperumbudur Sub-station for the students of *Final year* was organized. **Mrs.K.Ranjitha, Asst. Prof., & Mr.S.Sathishkumar, Asst. Prof.** accompanied the students on September 1st, 2017.



Integral Coach Factory, Chennai for the students of *Second year* was organized. And accompanied by **Mr.R.Elavarasu, Assoc.Prof. & Ms.G.Dharanya, Asst.Prof.** on September 8th, 2017.



GUEST LECTURES

Four Guest Lectures were organized by the Department of EEE in the Odd semester of the academic year 2017-2018 .

- On 9th September 2017, **Mr.E.Arun Kumar, Re-tech Solutions Private Limited** delivered on the topic **“Electrical Machines”**. It was organized by **Mrs.K.Ranjitha, Asst.Prof.** A total of 50 Students of III year EEE attended the Lecture.



- On the topic **“Power System Analysis”** was delivered by **Dr.R.Kalaivani, Professor, EEE Department, REC** on 15th September 2017 was organized by **Mr.S.Sathishkumar, Asst.Prof.** The Speaker Explained the Importance of Practical Applications of Power systems . A total of 50 Students of III year EEE attended the Lecture.



- On 5th October 2017,

- Dr.A.Kavitha, Asst. Professor (SG), EEE Department, College of Engineering, Guindy** delivered on the topic **“Power Electronics”** . It was organized by **Mr.R.Elavarasu, Asst.Prof. (SG).** A total of 50 Students of III year EEE attended the Lecture.



- On the topic **“Electromagnetic Theory”** was delivered by **Dr.N.Lenin, Assoc. Professor, EEE Department, VIT, Chennai** on 7th October 2017 and organized by **Ms.S.Laksana, Asst. Prof. at RIT.** A total of 50 Students of II year EEE attended the Lecture.



FACULTY ACTIVITIES

PAPERS PRESENTED - INTERNATIONAL CONFERENCE

Event Name	Name of the Authors	Date	Topic of paper presented	Venue
International Conference on Intelligent and computing control	Mr.M.Poomanirajan, AP Dr.Anitha Karthi, Prof.&Head, Dr.R.Rajkamal, Asso.Prof.,MITS	23.06.17	Effect of Voltage Sag Compensation with and without using 7-level inverter based DSTATCOM.	Karpagam College of Engineering

PAPERS PUBLISHED - INTERNATIONAL JOURNALS

Journal Name	Name of the Authors	Paper Title	Vol./ Issue.	Impact Factor
Brazilian Archives of Biology and Technology	Mr.M.Poomanirajan, AP Dr.Anitha Karthi, Prof.&Head, Dr.R.Rajkamal, Asso.Prof.,MITS	Smart Health Surveillance with Automated Database Using Android Mobile Device	Vol.60, August 2017	0.644

GUEST LECTURES GIVEN

Ms.P.Kalaivani, Asst. Prof. has been invited by Mr.A.Hakkim Raja,Asst.Prof. of *RVS Padmavathy College of Engineering and Technology* to take over a guest lecture on the topic of “**Linear Integrated Circuits and Applications** ” on 27.9.2017 where **15 students** have participated in the guest lecture.

Mr.S.Sathishkumar, Asst. Prof. has been invited by Mr.A.Hakkim Raja,Asst.Prof. of *RVS Padmavathy College of Engineering and Technology* to take over a guest lecture on the topic of “**Power System Analysis** ” on 27.9.2017 where **40 students** have participated in the guest lecture.

WORKSHOPS & SEMINARS ATTENDED

- **Mr.S.Sathishkumar,Asst. Prof.** have attended “**Network Planning Using Advanced Power System Simulation Tool**” on 8th August,2017 at Siemens Limited, Chennai.
- **Mrs.K.Ranjitha, Asst. Prof.** have attended “**Internet of Things**” on 18th & 19th August,2017 at Chennai Institute of Technology.
- **Ms.G.Dharanya, Asst. Prof.** have attended “**Introduction to Internet of Things**” on 4th & 5th October,2017 at RMK Engineering College.
- **Mr.Elavarasu, Assoc.Prof.** have attended a Seminar on “**Smart Grids and Green Systems (Smart Greens)** ” on 5th & 6th October, 2017 at Pondicherry Engineering College.

STUDENT'S ACTIVITIES

PAPERS PRESENTED - INTERNATIONAL CONFERENCE

Event Name	Name of the Authors	Date	Topic of paper presented	Venue	DOI
IEEE 3rd International Conference on Sensing, Signal Processing and Security	Pretheep Kumar R, Thrshan J, Shakthi Kolapan R, P.Kalaivani	04-05-2017 & 05-05-2017	Smart Collision Avoidance and driver Alert Recognition (SCADAR) System	St. Peter's College of Engineering and Technology	10.1109/SSPS.2017.8071624

WORKSHOPS & HANDS ON TRAINING ATTENDED

- Arun Kaarthik and Muthukrishnan of final year have attended **“MEMS and its Applications”** held at *Rajalakshmi Engineering College, Chennai* on August 16th and 17th, 2017.
- Shreyesh.S.A, Abinaya.G, Yazhini.S, Jemila Jerin.C.T., Mohanraj.G, Viswanathan.R, Vignesh.A.R and Arvind.S of second year have attended **“MATLAB/SIMULINK with Real Time Arduino Interfacing”** held at *Rajalakshmi Engineering College, Chennai* on September 19th and 20th, 2017.
- Hitesh Kumar.S, and Shreyesh.S.A of second year have attended **“Embedded System Design using MSP430 Microcontroller”** held at *Saveetha Engineering College, Chennai* on 27th September, 2017.
- Hitesh Kumar.S of second year have attended **“Design & Development of Raspberry pi based systems”** held at *Saveetha Engineering College, Chennai* on 26th September, 2017.
- S.Naresh and Ramalingam.T.S of 3rd year have attended a **“IOT”** organised by SSN College of Engineering on 9th September 2017 as a part of INVENTE-A National level Techfest.
- C.Vignesh, G.Vignesh,S.Naresh,S.Uma Nisita of 3rd year have attended **“Ride with Arduino”** organised by Saveetha Engineering College on 27th September 2017 as a part of DRESTEIN '17-v2.0-9th A National level Intercollegiate Technical and Management Fest.
- C.Vignesh of 3rd year underwent a Hands-on training on **“Unified Technology Learning Platform of Embedded Systems Applications”** held during 19.9.2017 to 23.9.2017 at Rajalakshmi Engineering College, at the end of the program, he has successfully completed a project titled **“Red Hunt”**.
- S.Uma Nisita of 3rd year underwent a Hands-on training on **“Unified Technology Learning Platform of Embedded Systems Applications”** held during 19.9.2017 to 23.9.2017 at Rajalakshmi Engineering College., at the end of the program, he has successfully completed a project titled **“Keypad Shuffling”**.

IN PLANT TRAINING

- Divya.G, Devisri.S, Bernard Samuel.E, Alwin Infant.M, Sahib John.M, Piraimathi Chelvi.M, Suchana.S, Kishore Kumar.S, Rishi Kumar.N, of final year attended an In plant training in **Chennai Port Trust** from *June 14 to 19, 2017*.
- Manoj.B, Vigneshwaran.D, Gowtham.K, Santhana Krishnan.S, Ajith Kumar.M, Subash.S, Thamarai Selvan.N, Dhipak Kanna.K, Seshan.R, Gokul Raj.S of final year attended an In plant training in **Basin Bridge Gas Turbine Power Station** from *June 19 to 23, 2017*.
- Arun Kaarthik.R.A., Deepak.N, Madhavan.C, Muthu Krishnan.K, Swarna.V of final year attended an In plant training in **Bharat Heavy Electricals Limited** from *April 24 to 29, 2017*.
- Oviya.P.K. of third year attended an In plant training in **Bharat Sanchar Nigam Limited** from *June 12 to 16, 2017*.
- Pavithra.R of third year attended an In plant training in **Gtek Techno Solution Private Limited** on *June 17, 2017*.
- Manthra.R of third year attended an In plant training in **Barola Technologies** from *June 10 to 16, 2017*.

CO-CURRICULAR ACTIVITIES

Krithiga.I, Oviya.P.K, Pavitra.V, Uma Nisita.S of third year won third prize in **District Level Skill Summit** on 11.10.2017 at Sree Nallazhagu Nadar Polytechnic College, Chennai.



EXTRA CURRICULAR ACTIVITIES

Pavithra.V of third year won second prize with cash award of Rs.7000/- in **Tamil Poetry Competition** on 15.09.2017 at Hindu College, Chennai.

SCI - INFO

Solar Chimney

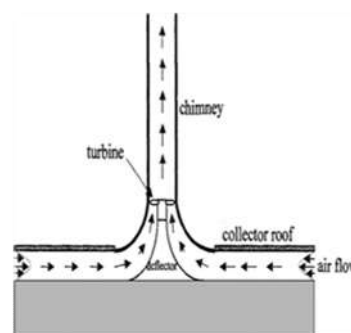
Our country is facing a number of problems on power generation. The original target of increasing the generating capacity by 30,000 MW during eight plan got reduced to 20,000MW and fears are now being expressed about by achieving even this reduced target. This is ascribed essentially to a lack of sufficient financial resources. Privatization of generation with a view to attracting private investors, Indian and Foreign countries is now considered a remedy to overcome this difficulty. There has been some progress in this direction but far away from our expectation. Thus foreign investors like AES transpower in Orissa. Enron – in Maharashtra and siemens – Torrent in Gujarat. The process of involving foreign enterprises in the power sector has been long and arduous. Meanwhile, the load demands are increasing fast while the addition to generating capacities are slow and reliability small and the reliabilities and quantity of power supply are deteriorating resulting in frequent interruptions and low voltage thus affecting industrial and agricultural production and causing inconvenience to the public in a variety of ways. Hence solar and wind power generation adds large extent of power generation in the target of achieving requirement. It does not consume any type of fuel, coal or any other natural resources and it does not polluted atmosphere by exhausting poisonous gases in the atmosphere, it works on simple principle only conversion of one form to another form and rotates the turbine and gives electrical output.

It provides electricity 24 hrs a day from solar energy alone. At night, heat absorbing or other sources in the "green house" would slowly release the ther-

mal energy built up during the day, maintaining the indoor-outdoor temperature differential The solar chimney can operate around the clock, instead of depending on environmental factors such as the wind needed for wind farms. No fuel is needed, it needs no cooling water and is suitable in extreme drying regions, it is practically reliable and a little trouble – prone compared with other power plant. The material concrete, glass and steel necessary for the building of solar chimney power stations are everywhere in sufficient quantities. It does not exhausting poisonous gases or smoke as in thermal power plant. It does not utilizes the sources of energy it does not unbalance the natural phenomenon. As in hydroelectric power plant due to storage of water the lack of water to agricultural land may arise problem of agricultural fields. This type of problem is not arises in solar chimney power plant. It can use the infertile land for the construction such as desert land which will cause to progress in that area. The peripheral area of collector is used for the

greenhouse cultivation for drying plants.

Courtesy: [http://data.solar-tower.org.uk/pdf/INDIA-A-Solar-Chimney-Power-Plant-TULJAPUR-](http://data.solar-tower.org.uk/pdf/INDIA-A-Solar-Chimney-Power-Plant-TULJAPUR-16p.pdf)



[16p.pdf](http://data.solar-tower.org.uk/pdf/INDIA-A-Solar-Chimney-Power-Plant-TULJAPUR-16p.pdf)

Kindly send your suggestions to: voltzwaves@ritchennai.edu.in