Hello fellow beings …!

Romans named this Gregorian month as "APRILLS" but we humans renamed as FOOLS MONTH…. The divine etymology of April was "TO OPEN" .It gives us aspiration and freshness to open new plans and new deals.

To open the door of resistivity towards scorching sunny day.. Its time to open up and fly high with cation… Fools day they say, but my dear friends do not march the April with same attitude .Open up , work hard and knock down the month of May with victory so that people will praise it as goals day.

Open up your narrowed thoughts Set goals never to give up !.. . "This issue presents you with the achievements and the success the achievers. The issue is embedded with the many interesting technical articles.

Let's open us our hearts and congratulate the achievers of this April month, Thank you readers for your support in publishing the last issue of this volume.

Wishing to hear you feedback to fruitfully write the next volume..

Pon sharmila.P

Second year EEE

CONTENTS

April!!!

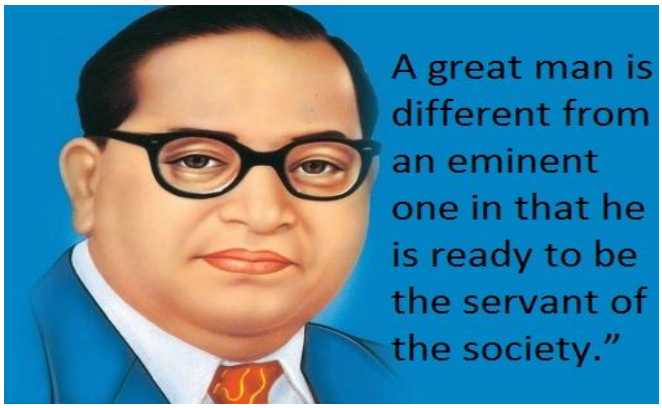
Dear Comrades,

April month suddenly reminds us of the "Fool's Day" on April 1st…

All of us sure have fooled our friends, family members… That is a fun for a single day. But many of us are fooling the government each and every day by breaking the laws of the government.

But who would have thought the month that has Fool's day also has the Birthday of a "MAN OF PRINCIPLES!".

He is none other than Dr. Bhimrao Ramji Ambedkar (14 April 1891 – 6 December 1956), was an Indian jurist, economist, politician and social reformer who inspired the Dalit Buddhist movement and campaigned against social discrimination against Untouchables (Dalits), while also supporting the rights of women and labour. He was Independent India's first law minister and the principal architect of the Constitution of India.



It is one of his mottos that one who serves his own nation is considered to be the GREAT MAN. He also said that "Life must be GREAT rather than LONG". So let's try to be great by following the laws of government without fooling… FIGHTING!!!

Thank You,

Raechel Annisha Angel. L (Second Year B)

STAFF ACTIVITIES/PUBLICATIONS/ACHIEVEMENTS

ACTIVITIES:

S.No.	Name of the Staff	Events/Guest Lecture	Topic/Event	Date	College
1.	Mr.N.B.Prakash Asso. Prof	NCC REFRESHER COURSE – PART - I		28.03.2016 TO 26.04.2016	NCC Officers Training Academy Kamptee
2.	P.Samuel Pakianathan & M.Bakrutheen, AP/EEE	TEQIP – II sponsored workshop	Functional Nano-Materials for Energy Applications	01.04.2016 & 02.04.2016	Thiagarajar College of Engineering, Madurai

PUBLICATIONS:

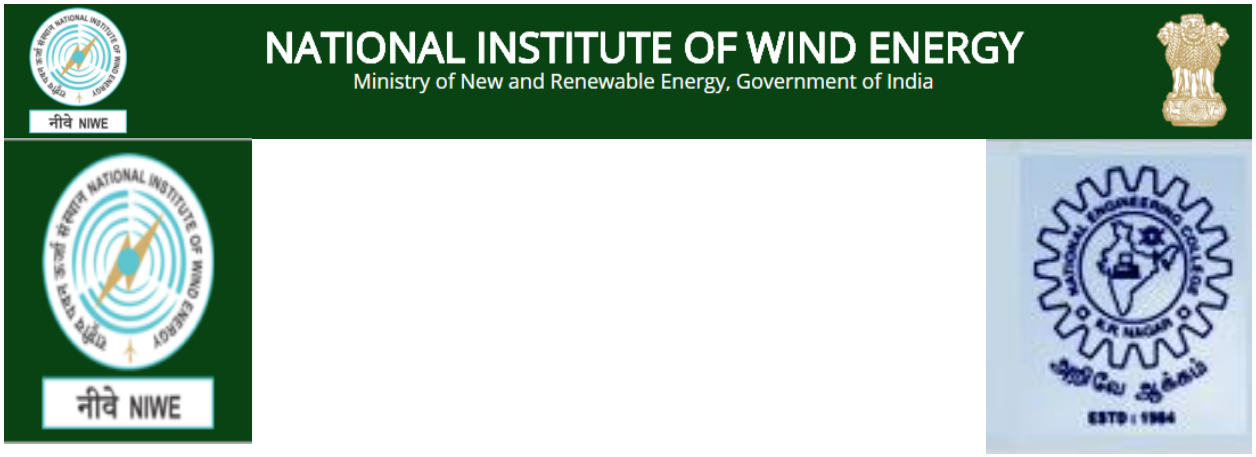
1. **Subathra.P & Saravanan.V,** "Design of Lithium Sulphur battery and PV system for a Micro-Grid", International Journal of Science and Innovative Engineering & Technology, May (2016)
2. **Kavitha.D & Gnana Sundari.M,** "Design of Neutral point potential regulator for NPC Inverter FED Induction Motor, of Science and Innovative", International Journal of Science and Innovative Engineering & Technology, May (2016)

DEPARTMENT ACTIVITIES

One Day National Level Conference on "Renewable Energy Techniques: Research and Applications - ELCON'16"

Every year in our department, we are organizing national level conference in the area of renewable energy techniques. Similarly, this year a one day national level conference on "Renewable Energy Techniques: Research and Applications – ELCON '16" has been conducted on 12th April 2016. Around 35 participants from various colleges were presented their papers. The conference was started by 10.00AM. ***Mr.A.Aswath Elango, Project Manager, Alstom***, Chennai was the chief guest for the conference. Ms.R.Radha, PG student delivered welcome address and Dr.M.Ravindran, Asso.Prof./EEE delivered preamble of the conference and Mr.R.Madavan, AP/EEE introduced the chief guest. Our principal Dr.S.Shanmugavel delivers presidential address then the conference proceedings was released by the chief guest. The presentation session was started by 11.30AM and it was over by 4.00PM. The best paper award was won by the paper titled on "Energy Harvesting Using Renewable Sources for Aeronautics Application" from Vellammal Engineering College. The certificates were distributed during valedictory function which was started by 4.30PM and Mrs.K.Gowthami, AP/EEE proposed vote of thanks.

INDUSTRY - INSTITUTION INTERACTION
MEMORANDUM OF UNDERSTANDING



Signed a Memorandum of Understanding (MoU) with National Institute of Wind Energy, Kayathar for 3 years periods.

BENEFITS OF MoU:

The benefits of the collaboration is to have academic, research engineering and training interaction along with with National Institute of Wind Energy, Kayathar to have fruitful outcomes in academic, research engineering and training areas.

- ✓ *Guest Lectures*
- ✓ *Student Projects*
- ✓ *Internships*
- ✓ *Consultancy works*
- ✓ *Research and Development Projects*
- ✓ *Field Visits*
- ✓ *Training Programmes*

STUDENTS PUBLICATIONS:

B.E PROJECTS:

1. **Syed Mohamed Mazood.L, Bakrutheen.M, Dr.Willjuice Iruthayarajan.M & Karthik.M,** "Studies on critical properties of vegetable oil based insulating fluids", 12th IEEE India International Conference on Electronics, Energy, Environment, Communication, Computer, Control (E^3-C^3) (INDICON 2015), December (2015).
2. **Anto Sharon Prakash.A, Arun Kumar.K, Logesh Raja.V, Manikandan.R & Kumar.K**, "A Reliable Smart Election system for Eliminating counterfit voters and facilitating voting at any polling booth", International Conference on Engineering Innovations and solutions, April (2016).
3. **Bala Murugan.P, Daniel Praveen Raj.A, Kaleeswaran.I, Muthu Karthik.R & Tamilarasi.A**, "FPGA Implementation of MPPT hybrid Algorithm for photo voltaic system", International Conference on Engineering Innovations and solutions, April (2016).
4. **Senthil Kumar.K, "**Design of Windmill Power Generation Using MATLAB/Simulation", NCRTETM'16, P.S.N College of Engineering and Technology, April (2016).

M.E PROJECTS:

5. **N.Avudaiammal, Dr.M.Willjuice Iruthayarajan & Mr.B.Vigneshwaran**, "Electric Field Analysis of 11kv Socket End Fitting Composite Insulator", IEEE International Conference on Intelligent Systems and Control, pp. 237-241, January (2016).
6. **K.Genga devi, Dr. M. Ravindran & Mr.S.Senthilkumar**, "Analysis of Critical Parameters of Vegatable Oil as an Alternate Dielectric Fluid to Mineral Oil", IEEE International Conference on Intelligent Systems and Control, pp.457-461, January (2016).
7. **R.Gulasekarapandian, Dr.P.Subburaj & Mr P.Samuel Pakinathan**, "Leakage Current and Flashover Performance Analysis of 11kV pin Insulator under Bird Excretion Pollution", IEEE International Conference on Energy Efficient Technologies for Sustainability, April(2016).

8. **M.Kiruthika & Dr.R.V.Maheswari**, "Electric Field Analysis of Composite Insulator under Wet Conditions Using Charge Simulation Method", International Conference on Renewable Energy Utilisation, January (2016).
9. **M.Kiruthika & Dr.R.V.Maheswari**, "Electric Field Analysis of 500kV Silicon Rubber Insulator Using Charge Simulation Method", 11th National Conference on Trends in Modern Power Electronics And Drives, April (2016).
10. **M.Kiruthika & Dr.R.V.Maheswari**, "Electric Field Analysis of Composite Insulator under dry Conditions Using Charge Simulation Method", IEEE International Conference on Energy Efficient Technologies for Sustainability, April (2016).
11. **R.Michael Janet & Dr.R.V.Maheswari**, "Prediction of Flashover Voltage of Ceramic And Non-Ceramic Pin Insulator Using Artificial Neural Network", 7th International Conference on Advanced Computing, December (2015).
12. **R.Michael Janet & Dr.R.V.Maheswari**, "Comparison of Flashover Performance of Ceramic and Non-ceramic Disc Insulators for Soluble Pollution Materials", International Conference on Renewable Energy Utilization, January (2016).
13. **R.Michael Janet & Dr.R.V.Maheswari**, "Evaluation of Ceramic and Non-ceramic Insulators based on its Flashover Performance", 11th National Conference on Trends in Modern Power Electronics And Drives, April(2016).
14. **R.Radha, Dr.M.Willjuice Iruthayarajan and Mr.M.Bakrutheen**, "Performance of Natural High Oleic Ester Based Blended Oil Insulation for Transformer", IEEE International Conference on Intelligent Systems and Control, pp. 194-198, January (2016).
15. **V.Senthil kumar, Mr.G.Kannayeram & Mrs.S.Divya**, "Performance Analysis of Disc Type Insulators under Fan-shaped Pollution", 7th International Conference on Advanced Computing, December (2015).
16. **G.Shiny, Mr.N.B.Prakash & Mr.R.Madhavan**, "Analysis of Bushing Performance under Different Polluted Environment", IEEE International Conference on Intelligent Systems and Control, pp.457-461, January (2016).
17. **G.Shiny, Mr.N.B.Prakash & Mr.R.Madhavan**, " Effect of Combination of Pollutants on the Performance of the Bushing", IEEE International Conference on Energy Efficient Technologies for Sustainability, April (2016).

18. **V.Vijayalakshmi & Dr.L.Kalaivani**, "Event Based Background Subtraction for Arcing Discharge Pattern Recognition", 7th International Conference on Advanced Computing, December (2015).
19. **V.Vijayalakshmi & Dr.L.Kalaivani**, "Extraction of Arc and Features for Arcing Discharge Pattern Recognition", 11th National Conference on Trends in Modern Power Electronics And Drives, April (2016).

VIRTUAL LABS

- Ms. Ramya Jemema.M, Prefinal Year B

Definition

"The Virtual Laboratory is an interactive environment for creating and conducting simulated experiments: a playground for experimentation". "A Virtual Laboratory is a heterogeneous distributed problem solving environment that enables a group of researchers located around the world to work together on a common set of projects."

Key Features

- ✓ To provide remote-access to Labs in various disciplines of Science and Engineering. These Virtual Labs would cater to students at the undergraduate level, post graduate level as well as to research scholars.
- ✓ To enthuse students to conduct experiments by arousing their curiosity. This would help them in learning basic and advanced concepts through remote experimentation.
- ✓ To provide a complete Learning Management System around the Virtual Labs where the students can avail the various tools for learning, including additional web-resources, video-lectures, animated demonstrations and self evaluation.
- ✓ To share costly equipment and resources, which are otherwise available to limited number of users due to constraints on time and geographical distances.

Objectives of the Virtual Labs

- ✓ Virtual Labs offers various types of experiments for students to perform online.
- ✓ Modelling or simulating the physical phenomenon by a set of equations to yield the result of a particular experiment.
- ✓ Remotely triggering an experiment in an actual lab and providing the student the result of the experiment through a computer interface. This would entail carrying out the actual lab experiment remotely.
- ✓ Accompanying audio and video streaming of an actual lab experiment and equipment.

Virtual laboratories for research

A virtual laboratory would allow scientists in a number of different physical locations, each with unique expertise, computing resources, and/or data to collaborate efficiently not simply at a meeting but in an ongoing way. Effectively, such a project would extend and pool resources while engendering orderly communication and progress toward shared goals. For example, a group of astronomers and computer scientists at the supercomputing centres in the U.S. are attempting to share experiments and knowledge about the origin of the universe. Virtual laboratories are also envisioned for the design and manufacturing of complex systems such as airplanes and for studying and forecasting weather patterns.

PARTICIPATING INSTITUTES

IIT DELHI
http://vlab.co.in/institute_detail.php?ins=001

IIT BOMBAY
http://vlab.co.in/institute_detail.php?ins=003

IIT KANPUR
http://vlab.co.in/institute_detail.php?ins=002

IIT KHARAGPUR
http://vlab.co.in/institute_detail.php?ins=004

IIT MADRAS
http://vlab.co.in/institute_detail.php?ins=005

IIT ROORKEE
http://vlab.co.in/institute_detail.php?ins=006

IIT GUWAHATI
http://vlab.co.in/institute_detail.php?ins=007

IIT HYDERABAD
http://vlab.co.in/institute_detail.php?ins=008

AMRITA UNIVERSITY
http://vlab.co.in/institute_detail.php?ins=009

DAYALBAGH UNIVERSITY
http://vlab.co.in/institute_detail.php?ins=010

NIT KARNATAKA
http://vlab.co.in/institute_detail.php?ins=011

COE PUNE
http://vlab.co.in/institute_detail.php?ins=012

RANK LIST

ACADEMIC YEAR 2014 - 2015

Branch: B.E (Electrical and Electronics Engineering)

Batch: Passed Out 2015

S. No.	Year	Name of the Student	Roll No.	Register No.	Grade/CGPA (1st to 8th Sem)	Rank
1	IV	G. MARISELVI @ ABITHA	113005	1113054	9.42	I
2		P. NANTHINIDEVI	113044	1113062	9.30	II
3		B. MAHIBA CATHLINE	113071	1113049	9.30	II
4		A. MUTHU MEENA SUNDARI	113026	1113057	9.17	III

Batch: 2016

S. No.	Year	Name of the Student	Roll No.	Register No.	Grade/CGPA (5th + 6th Sem)	Rank
1	III	V. SIVARAMALAKSHMI	123036	1213102	9.38	I
2		C. PRADEEPA	123018	1213071	9.27	II
3		M. MANIKANDAN	123064	1213050	9.21	III

Batch: 2015

S. No.	Year	Name of the Student	Roll No.	Register No.	Grade/CGPA (3rd + 4th Sem)	Rank
1	II	K. MAHESWARI	133018	1313049	9.17	I
2		M. MUTHUSELVI	133029	1313057	9.06	II
3		S. SATHYA	133067	1313080	9.02	III

Batch: 2014

S. No.	Year	Name of the Student	Roll No.	Register No.	Grade/CGPA (1st + 2nd Sem)	Rank
1	I	S. BALA ABHIRAMI	143042	1413013	9.75	I
2		P. TAMILARASI	143009	1413111	9.45	II
3		S.S.SIVA SHANKAR	143058	1413103	9.30	III

Branch: M.E (High Voltage Engineering)

Batch: Passed Out 2015

S. No.	Year	Name of the Student	Roll No.	Register No.	Grade/CGPA (1st to 4th Sem)	Rank
1	II	M. KARTHIK	133816	1354006	8.91	I
2		B. REVATHI	133812	1354012	8.87	II
3		K. KUMAR	133811	1354008	8.72	III

Batch: 2014

S. No.	Year	Name of the Student	Roll No.	Register No.	Grade/CGPA (1st + 2nd Sem)	Rank
1	I	R. RADHA	143807	1454006	9.21	I
2		N. AVUDAIAMMAL	143805	1454001	8.91	II
3		G. SHINY	143808	1454008	8.57	III

RANK HOLDERS LIST FOR THE PASSED OUT STUDENTS

Sl.No	Reg.No	Name	Rank
1	1113054	MARISELVI @ ABITHA.G	1
2	1113049	MAHIBA CATHLINE.B	2
3	1113062	NANTHINIDEVI.P	2
4	1113057	MUTHUMEENASUNDARI.A	3
5	1113061	MUTHULAKSHMI.M	4
6	1113082	SARAVANAN.S.R	5
7	1113028	GOBINATH.R	6
8	1113037	JEYA RANI.C	7
9	1113094	SRIDEVI.G	7
10	1113008	AMUTHA.S	8
11	1113011	ARCHANA.M.S	8

ARTICLE FROM INDUSTRIAL EXPERT

- ***Mr.Muthu Senthilkumar,***
TVS Motor Company, Hosur
Batch: 2007

How to read and understand a patent document:

A patent is a complex document including a following all headings or more than a four.

Cover sheet/Bibliography - It contains important particulars about the patent such as Title, Country, Publication No, Publication Date, Inventor(s) Name, Assignee/Applicant Name, Classification codes and an Abstract with a main drawing.

Drawings - It has drawn by the patent inventor used to explain his/her invention to the reader in the form of pictorial representation.

Field of the Invention - This topic tells about the very few points of the perfect invention in which is going to be explaining further.

Background of the Invention - It contains the limitations, disadvantages and cross references of related previous inventions and conventional products to the present invention.

Summary of the Invention - It is the succinct description of the invention. Normally most of the patents have the same description what is in the abstract with addition of some one or two paragraphs.

Brief Description of the Drawings - It is the simple description of the figures in which figures contains what like that.

Detailed Description - This is the main body of the patent application. In this part, the field of the invention and summary of the invention is explained in detail with the reference of figures/drawings

Terminology - Patents use certain words in certain ways, with different meanings. This part illustrates the meaning of those words.

Claims - It specifies what is protected by that patent application legally. The claims are set forth as separately numbered paragraphs in a single-sentence format.

Normally in patent, the patent attorneys tried to explain the simple thing in a very broad manner. The normal patent contains minimum of five to maximum of 50 pages. But we can write a real invention of the patent in a single page after observing the content of the patent. For easy analyzing the patent, one can try the following ideas.

o First try to understand the invention using the above listed headings.
o After the patent invention getting into mind, try to write in your own way.

o Try to focus the concentration on that invention.
o If some idea gets into mind for enhancing that invention, try to note down.
o Compare that idea with the patent claims.
o If your idea is protected using claims, try to think the unprotected idea.
o Try to analyze the invention with the disadvantage or limitation point of view.
o Don't spend more time with the cover page and background of the invention.

FLAG OF VICTORY UNLEASHED

Dreams started hitting my door, when I reached the doorstep of NEC. Positive vibration pinched me out to give out my best as an engineer with quality craftsmanship.

I started emerging out leaving besides my shyness and hesitations. Teachers and friends reached out hands for me, when I fell down from my hillock of success and thought that it would be my final destination.

I thank my Management, HOD of EEE Department and faculties giving me this prestigious award of our college. As Newton rightly quoted “To maintain a balance on a bicycle, we have to keep going”, in the same way my department taught me to balance life and kept me

going continuously in both academics and all extracurricular.

I participated in almost 21 paper presentations which energized me to higher and higher when I stood speechless before my judges initially.

Doing all my duties with almost sincerity and perfection was gained through my participation in National Cadet Corps(NCC). Though my college made me design my track of career, NCC gave me the burning spirit to achieve my goal. I received awards for giving up my best in firing and Coordinating . I hold my B grade in NCC. I also received a gold medal in CATC camp.

My active participation for the department was through EEE Association and IE(I) clubs. I gained my posting as a president in IE(I) and joint secretary in Jaycee club and sports board.

I kept running not only in my educational track but also in tracks of playground.I participated in number of marathon races, 10000 mts & 5000 mts Running, I am also a distinct hockey and cricket player. I have taken part in Anna University Hockey Tournament held in 2014 and 2015. I also proved to be an eminent captain of yellow house for hockey team.

I have also attended an International Conference on “Development in Engineering and Research (ICDER) 2014” in Andhra Pradesh. I had received a fund of Rs.5000 for my project approved by IE(I)-R&D Cell, Kolkatta.

As did the early man, I kept striking my career and finally got my placement in Infosys private limited.

I keep maintaining a good percentage of attendance all these years. I was just a dry seed thrown to the fields of NEC, I was watered, manured and sometimes even stamped with hardships and now I stand majestic as a developed tree promising to share my fruits and shadow forever for my NEC. It was nothing but my college which made my victory flag Unleashed!

Cheers!!

Mr.P.Shanmugam

Final Year, EEE-B

Alumni Achievements

Ms. Karthiga. M
Alumni: ***Batch 2014***

It's a proud moment for the necian to say that one among us have passed the Civil service examination. Our 2014 batch alumnus ***Ms.M.Karthiga*** from the Department of Electrical and Electronics Engineering has cleared the ***Civil Service Examination*** conducted by ***the Union Public Service Commission*** in 2015. Around 4,65,882 candidates participated in the preliminary examination, 15,008 candidates were called for the next level and 2797 candidates were invited for the interview. Out of which, ***she earned 610th position*** after striving hard for a year. She has set a path for the young NECians to walk towards success.

The Management, Director, Principal, Heads of the Departments, the staff members and the alumni congratulate and wish her a victorious career.

MY EXPERIENCE IN CONNECT TRAINING

- ***J.Aksha, Prefinal Year A***

Right from our schooling, we used to focus much about our careers. Though we focus on our academics much, knowingly or unknowingly we prepare for our careers also! And being a second or third year engineering student we foster much to get placed, rather than doing highers. Getting placed when the drive visits our college has become a fashion now! It's one way to get clung to our career easier. But the strongest fact of all is all the competitative exams require a slice of aptitude to be eaten up. Luckily, as a student of NEC, we are provided with a bundle of aptitude training and career development exercises in our college itself, instead of rushing up to coaching centres. The saddest part would be, if you don't use these value added freebies. I bet, our department provides tons of motivation. I can assure you strongly because, I am one of the rewardees of Rs.1000 given towards my performance in aptitude skills during our college training through CONNECT Training Solutions Pvt. Ltd., There are much more rewards based on your performance during these training. Put out your Best and Leave the Rest. Wishing you all the very best friends!!!

MY EXPERIENCE IN INDUSTRIAL VISIT

- ***O.Chitra, Second Year A***

In this semester, we second year ***EEE- 'A' section*** went on an industrial visit to Tuticorin "***Thermal power station***". Being the first time to the power station I was excited a lot and all my excitements have been completely satisfied by our guide who is at a position of SE in the power station.

The motor capacity of the station is said to be 3.5 µw. The overall capable output of that station is 420µw. He also said that the whole station is controlled by the use of digital controls & sensors.

On being there I have got a lot of useful information which have me the motivation to study more about a thermal power station. As we all know "***Experience is the best teacher***". I suggest all my friends to have a practical experience on the working of the station.

In continuation to that the remaining students went for IV

II Year B Sec, April 12th	*Mr.B.Venkatasamy and Ms.C.Nivetha Indhumathi, AP/EEE*
II Year C Sec, April 18th	*Ms.K.Gowthami and Mr. M.Siva Palani Rajan, AP/EEE*

MY EXPERIENCE

- *Ms.A.Jenifer, Final Year A*

I am happy to share my interview experiences in placement. Before that, let me introduce myself, I'm A.Jenifer of Final EEE, an enthusiastic and helping buddy. I would like to help my dear juniors which initiate me to write this article. As far as CTS is concerned, there are four rounds. First round is "Just a minute" for my batch, but it was "Group Discussion" for some other batches. Second round was written test. Questions were mainly from logical reasoning and the time allotted was 60 minutes for 60 questions. This section was quite easy. The next round was "Technical HR". In addition to technical skills, my confidence, positive attitude and presence of mind were tested. Initially he asked me to elaborate the concept of my final year project followed by my mini project. Most of the questions were from electrical machines and I was asked to explain the operation of various motors. The questions were not only from my area of interest but also from other electrical subjects. Coming to programming, the questions were very basic. He also asked me to write a program which I am comfortable with. The final round was "HR Interview. In this round, my willingness to work in shifts, adaptability and my communication skills were tested. They expect an additional language like Hindi to be known by the freshers. The CTS interview process was not a complex one. They expect the freshers to be bold enough to express what they know. It is giving me pleasure to share my interview experiences to my juniors and wishing you all success in placements. Thank you.

- *Ms.A.Jenifer Romina,Final Year A*

I am A.Jenifer Romina from final EEE. Herewith I share my interview experiences. As far as Infosys is concerned, maximum marks is allotted to verbal ability. During my aptitude preparations, I was concentrating more on verbal ability by learning new words each day and taking online tests to manage time. Since I am very much interested in vocabulary, it was easy for me to clear online tests within time limit. Infosys interview process consists of two rounds. First round is written test consisting of three sections – Verbal ability (40 questions, 35 minutes), Quants (10 questions, 35 minutes), Logical reasoning (15 questions, 25 minutes)

The total time duration is 95 minutes. It is easy to clear quants and logical reasoning if you are good at basic aptitude. Clearing the first round was quite tough. The second round was one-to-one H.R interview. The first question from the interviewer was to say about myself. Then I was questioned about my strength and weakness along with some experiences. He asked me to explain about my project work and questioned about the current status of our project work. Only communication skills and my presence of mind were tested. Finally the interviewer asked me whether I have any questions. My question to him was "What are the qualities do you expect from a fresher?" He answered that attitude and communication skill plays a major role in Infosys selection process. I hope my interview experience would be useful to my junior friends and I wish you all the best for your placements. Thank you.

Students Achievements/Activities

Students Achievements

Second Year - Paper Presentation

S.NO	NAME	TITLE	VENUE	DATE
1.	U.Iswaramoorthy	Super Capacitor	VOC college of engineering, Tuticorin	29-03-2016

Project Presentation

S.NO	NAME	TITLE	VENUE	DATE
1.	S.Arun Jeyakumar M.Abdul Kadeer Riyaz M.Abdul Hameed Sharik	Energy Conservation	VOC college of engineering, Tuticorin	29-03-2016

Extra Curricular Activities

S.NO	NAME	EVENT	VENUE	DATE
1.	U.Iswaramoorthy	Crush your cerebellum	VOC college of engineering, Tuticorin	29-03-2016
		Acting words		
2.	Dinakar Raja	Jugging		
3.	S.P.Sunanthaa	Singing	National Engineering College, Kovilpatti	22.04.2016
4.	M.Saravana kumar	Basket Ball	National Engineering College, Kovilpatti	23.03.2016
5.	S.P.Sunanthaa			

Final Year

S.NO	NAME	TITLE OF PAPER	VENUE	DATE
1.	P.Balamurugan I.Kaleeswaran R.Muthu Karthik A.Daniel Praveen Raj	FPGA Implementation of MPPT Hybrid Algorithm for Photovoltaic System	CMS College of Engineering, Namakkal	22.04.2016
2.	K.Arunkumar V.Logesh Raja R.Manikandan A.Anto Sharon Prakash	A reliable smart election system for eliminating counterfeit voters and facilitating voting at any polling booth		

TECHNICAL ARTICLE BY STAFF MEMBER

STATCOM control scheme for power quality improvement in Grid connected Wind Energy System

Mr. A.Pandiyarajan

Assistant Professor

Department of Electrical and Electronics Engineering

INTRODUCTION

The wind energy generation, utilization and its grid penetration in electrical grid are increasing worldwide. In sustainable energy system, energy conservation and the use of renewable source are key paradigm. The need to integrate the renewable energy like wind energy into power system is to make it possible to minimize the environmental impact on conventional plant. The integration of wind energy into existing power system presents technical challenges and it requires consideration of voltage regulation, stability, power quality problems. The issue of power quality is of great importance to the wind turbine. In the fixed-speed wind turbine operation, all the fluctuation in the wind speed are transmitted as fluctuations in the mechanical torque, electrical power on the grid and leads to large voltage fluctuations.

During the normal operation, wind turbine produces a continuous variable output power. The power variations are mainly caused by the effect of turbulence, wind shear, tower shadow and of control system in power system. Thus, the network needs to manage such fluctuations, and also power quality problems such as voltage sag, voltage swell and flicker issues.

This article demonstrates the power quality problem due to interconnection of wind turbine with the grid. In this, STATCOM is connected at the point of common coupling to mitigate the power quality issues. Normally, the induction generator based wind energy system needs reactive power from the grid for its operation.

Due to this reason, loss of power in the transmission system occurs and also voltage fluctuations take place in the grid. When the generated active power of an induction generator is varied due to wind, the absorbed reactive power and terminal voltage of induction generator are varied. So, STATCOM is used to compensate the reactive power required by the induction

generator. If the load connected to the grid is non-linear, it will generate harmonics. To mitigate power quality problems like harmonics and voltage variations, STATCOM is used. The battery energy storage is integrated with the STATCOM to sustain the real power source under fluctuating wind power.

Schematic Diagram

Fig. 1 shows the schematic diagram of grid connected wind turbine system.

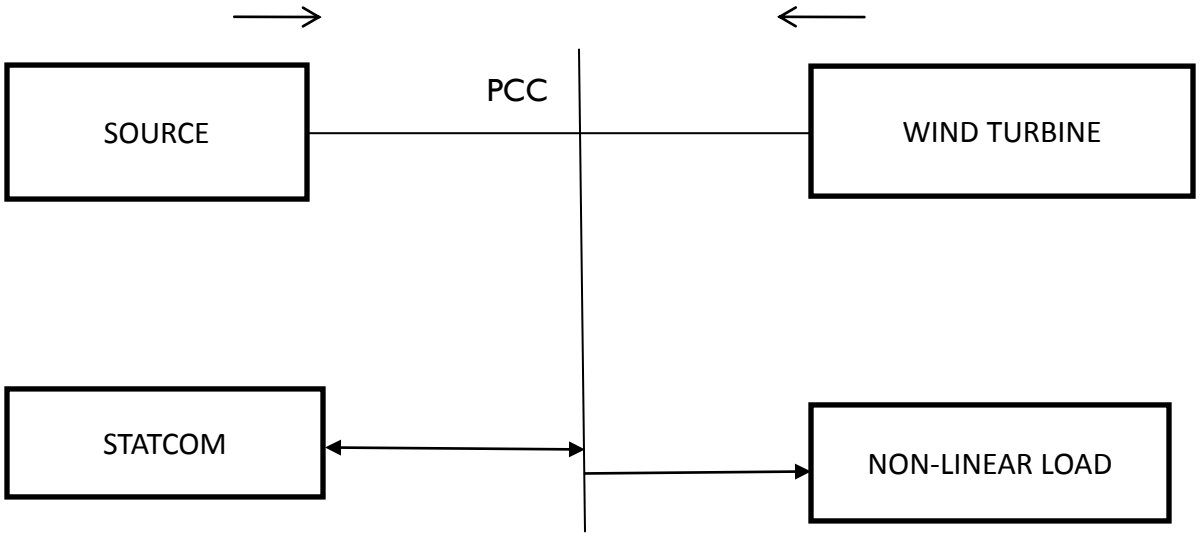


Fig.1. Schematic diagram of grid connected wind turbine system.

Wind Energy Generating System

The induction generator is preferred because of its simplicity and it does not require a separate field circuit, it can accept constant and variable loads, and has natural protection against short circuit. The available power of wind energy system is given below.

$P_{wind}= 1/ 2\ \rho AV^3$

Where, ρ(kg/m) is the air density, A(m) is the area swept out by turbine blade. V is the wind speed in meters per second. It is not possible to extract all kinetic energy of wind, thus it extract a fraction of power in wind, called power coefficient Cp of the wind turbine, and is given in $P_{mech}=C_pP_{wind}$

Where,Cp is the power coefficient which depends on type and operating condition of wind turbine. This coefficient can be expressed as a function of tip speed ratio λ and pitch angle θ. The mechanical power produced by wind turbine is given as

$P_{mech}=1/2\ \rho\Pi R^2V^3C_p$

Where, V is the velocity of wind in m/sec

R is the radius of the blade in m

STATCOM

The STATCOM is a shunt-connected reactive power compensation device that is having the capable of generating and or absorbing reactive power and in which the output can be varied to control the specific parameters of an electric power system. It is in general a solid-state switching converter capable of generating or absorbing independently controllable real and reactive power at its output terminals when it is fed from an energy source or energy storage device at its input terminals.

Specifically, the STATCOM considered here is a voltage-source converter that, from a given input of dc voltage, produces a set of 3-phase ac-output voltages, each in phase with and coupled to the corresponding ac system voltage through a relatively small reactance (which is provided by either an interface reactor or the leakage inductance of a coupling transformer). The dc voltage is provided by an energy-storage capacitor.

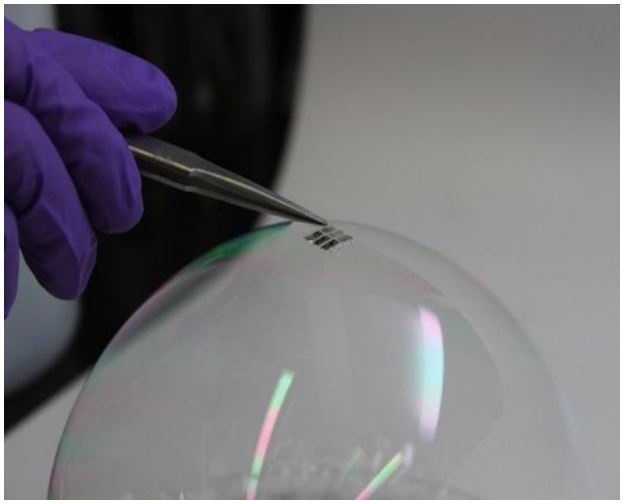
A STATCOM can improve power-system performance for the following areas.

- Power-oscillation damping in power transmission systems.
- Dynamic voltage control in transmission and distribution systems.
- Improvement of transient stability.
- Voltage flicker control

Various types of control strategies used for STACOM to mitigate power quality issues like harmonics and to compensate reactive power effectively in the grid connected wind energy system.

STUDENT ARTICLES

ULTRA THIN SOLAR CELLS



Scientists have created the thinnest, lightest solar power cells yet so lightweight that they can be draped on top of a soap bubble without popping it.The researchers suggested that these ultrathin solar cells could be placed on almost any solid surface, including fabric, paper and glass.Solar cells, technically known as photovoltaic cells, directly convert energy from light into electricity. The new solar cells are as small as 1.3 microns thick. In comparison, the average human hair is about 100 microns thick. The new devices are also super lightweight, weighing only about 0.01 lbs. per square yard. In comparison, typical piece of office paper weighs about 20 times more.. The new cells use an organic compound known as DBP as their primary light-absorbing material. The solar cells are sandwiched between layers of parylene, a commercially available, flexible, transparent plastic that is widely used to protect circuit boards and implanted biomedical devices from environmental damage.

The solar cells and their parylene supports and coatings are fabricated in a vacuum chamber at room temperature without the use of any solvents, the scientists said. In contrast, conventional solar-cell manufacturing requires high temperatures and harsh chemicals. "Using this approach, you could imagine laminating lightweight or even invisible solar cells onto windows or other solid surfaces for building- and device-integrated electronics,". "A more robust consumer product might use these cells laminated onto a conventional flexible plastic sheet, which you could carry around with you for portable power." one of the main challenges in scaling up this approach for commercial use might include developing an integrated system for high-throughput manufacturing — for example, roll-to-roll processing increasing the deposition speed, and identifying applications where an ultralight and flexible cell would provide some unique value to the user."

Ms. P.Tamilarasi, Second year EEE

FONTUS-Humid air into drinkable H2O

German The Fontus device uses the principles of condensation to convert humidity in the air into drinkable water. The solar-powered device consists of a condensator (which functions like a cooler) that is connected to a series of hydrophobic surfaces that repel water. As the bike-mounted gadget takes in air, and these surfaces get cold, condensation occurs as they're hydrophobic, they immediately repel the condensed water that they created, so you get a drop flow into the bottle. It takes air in a vapor state and then converts it into a liquid state

Fontus can produce 0.5 quarts (0.5 liters) of water in 1 hour with temperatures between 86 degrees and 104 degrees Fahrenheit (30 to 40 degrees Celsius) and between 80 percent and 90 percent humidity. The prototype includes a filter at the top to keep dust and bugs out of the water.

But originally, this water bottle was thought to be used in nature, and places where you wouldn't have contaminated air."

Ms. S.Suriya, Second year EEE

FLOURISH YOUR SOFT SKILLS!!!!

- *R.Uma Maheswaran, Final Year*

"At the end of the day, the most overwhelming key to a child's success is the positive involvement of parents", says Jane D. Hull.

Today the most challenging job is the parenting. Yes!!! Being a parent to child(ren) and growing them is most important part of humane life. Parenting is also a piece of cake in the soft skill. This edition we are going to see about the skills of parenting.

Parenting:

Parenting may well be the hardest job that you ever do. Unfortunately, babies do not arrive with an instruction manual. The plethora of books and websites that are available can sometimes seem to be making the difficulties even worse, with conflicting advice and approaches that just may not feel right.

Stages of Parenting:

The art of good parenting starts right from the stage of pregnancy.

The next stage is the part of looking after the babies. Since these two parts are almost well known to everyone we focus on the most important parts.

Mindful Parenting:

Mindful parenting is the concept of being present, in the moment, with your children. Your attention may well be the greatest gift you can ever give your children, and mindful parenting is a way to help you to do that.

Children, especially small children, live quite naturally in the moment.

They have very little thought for the past, and usually none at all for the future. They are, in fact, fully mindful, although not necessarily aware of that. Sensations are immediate: pain, discomfort, happiness, hunger. It can be very hard to stop and give your full and mindful attention to your children. But it is rather important to do so.

"If you want your children to turn out well, spend twice as much time with them, and half as much money", Says Abigail van Buren.

Attention and Awareness:

Mindfulness is all about attention and awareness. It requires a non-judgemental approach, which in turn leads to acceptance.Mindfulness is all about attention and awareness. It requires a non-judgemental approach, which in turn leads to acceptances.

The stages of babies and toddlers are a famed one and the parenting of teen agers are most crucial one.

Adolescence:

Adolescence, the period between childhood and adulthood, is rightly viewed as a period of enormous change.

Adolescence: Brain vs. Hormones

There are two main elements that affect maturity of both body and emotions.

- Hormonal changes lead to and guide the body through puberty, resulting in sexual maturity.
- The brain develops and changes throughout childhood and adolescence.

It seems, that although the brain and hormonal systems come together to create the various changes seen during adolescence, the majority of the behavioural changes are due to the brain.

Brain Changes:

There are two main features of the brain that change massively during the maturation process. Both, unfortunately, seem to coincide with adolescence:

Myelin is added to neurones, which has the effect of speeding up neural messages: everything gets through quicker.

The brain seems to take ‘time out’ to rewire the pre-frontal cortex, the area primarily responsible for things like planning, organisation and risk assessment.

Together, these two result in some key behavioural changes that are seen during adolescence:

- An increase in excitement-seeking.
- A tendency to have more heightened emotional responses
- A focus on self, to the exclusion of others
- A tendency to have more heightened emotional response

[Keep on Flourishing…..]

MEMORABLE MOMENTS

Dr.P.Subburaj receiving incentives in 32nd Annual day 2016

Dr.M.Willjuice Iruthayarajan receiving incentives in 32nd Annual day 2016

Dr.L.Kalaivani receiving incentives in 32nd Annual day 2016

Dr.R.V.Maheswari receiving incentives in 32nd Annual day 2016

Mr.S.Senthil Kumar receiving incentives in 32nd Annual day 2016

Mr.R.Madavan receiving incentives in 32nd Annual day 2016

Mr.M.Bakrutheen receiving incentives in 32nd Annual day 2016

Mr.P.Shanmugam final year receiving the "Best Outgoing Student award" in 32nd Annual day 2016

Mr.S.Mohammed Suhail receiving the award for being the "Best IEEE Volunteer" in 32nd Annual day 2016

Mr.P.Anto Sharon Prakash final year receiving the "Best NSS Volunteer" award in 32nd Annual day 2016

Mr.S.G.Sivaram, Final year receiving the award for being the "Best IE(I) Volunteer" in 32nd Annual day 2016

Mr.M.Dhanu Maheswara, Second year receiving the award for being the "Best Yoga Volunteer" in 32nd Annual day 2016

The Institution of Engineers(IE) celebrates "ENGINEERS DAY"

Office Bearers selection for "The Institution of Engineers" 2015

3rd year PREMKUMAR.A performed as a pilot in college independence day Aug '15

3rd year student AJITHKUMAR.T performed as a commander in college independence day Aug '15

Final year student M.S.PRANAVA KARTIKEYAN got Camp Senior award SD in ncc catc camp Tisaiyanvilai

Final Year student *P.SHANMUGAM* got 1ST prize in 5000mts running in catc sports camp, Tisaiyanvillai

Our 3rd yr student *AMALA AANI.A* got 1st prize in 100mts running in ncc catc camp,Tsaiyanvilai

Our final year students *P.SHANMUGAM,M.S.PRANAVA KARTIKEYAN* performed as a pilot in *LAKSHI AMMAL MEMORIAL ALL INDIA HOCKEY TOURNAMENT '15*

Quarter Guard award for NEC with our Associate professor *Mr.N.B.PRAKASH* and 3rd year students *AMALA AANI.A,ANUSUYA.R & GULSHAN.S*

Quarter Guard Drill by our 3rd year students *AMALA AANI.A, ANUSUYA.R,GULSHAN.S in NCC catc Camp*

Dr.L.Kalaivani, has presented her paper in 3rd World Summit Organized by NBA, NewDelhi

Paper Topic: Gap Analysis and Implications to develop Employability skills A case study of NEC

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