

**D**ear cohort,

Happy February everyone!!!

February should be midget history month, after all it is the shortest month. From this month, may this newsletter bring a change in yours to progress. "The world hates change, yet it is the only thing that has brought progress" says a quote. You can expose your skills and can recall your past events here.

As we all are engineer, we should involve in this events. Being a good engineer make a difference. The difference between genius and stupidity is genius has its limits but stupidity doesn't have. All you need in life is ignorance and confidence to taste success.

To my final convey, scientists dream about doing great things, engineers do them.

Any work would never be successful until it has pros and cons. Anticipating your valuable feedback and queries.

Happy reading!!!

*E. Abbiramy Devibala*

*Pre final year*



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## FEBRUARY!!!

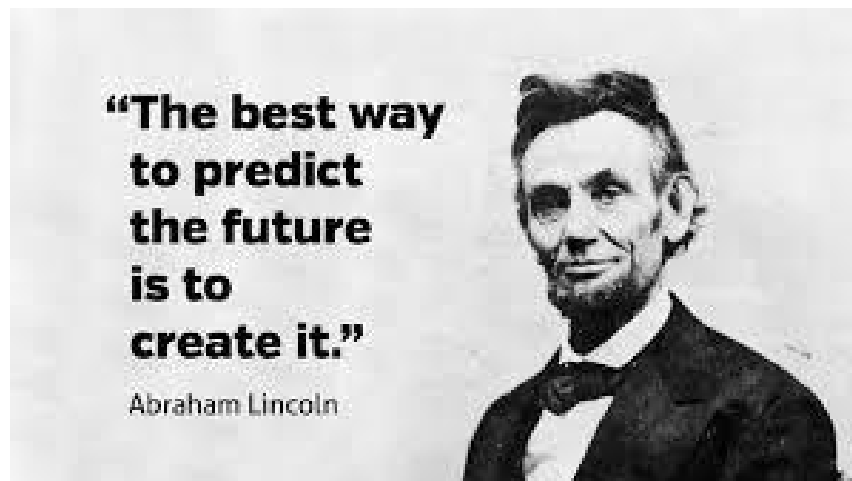
*Dear Friends...*

As we all know this February is a month of **KINDNESS** and **LOVE** since it has Valentine's Day.

So this month I'm here to show you the other side of a man who is well-known for his Kindness. Abraham Lincoln (February 12, 1809 - April 15, 1865) was the 16th President of the United States , preserved the Union, abolished slavery, strengthened the federal government, and modernized the economy. These are the qualities we generally know about him.

Lincoln served as New Salem's postmaster and later as county surveyor, all the while reading voraciously. He then decided to become a lawyer and began teaching himself law by reading Blackstone's Commentaries on the Laws of England and other law books. While he said about his learning methods, he said, "I Study With Nobody".

It shows that, for one to excel in studies he or she need not to be an intelligent person, but should be determined.



So let's predict our Determined Future by following this Kind Legend's path.

**THANK YOU!!!**

- *RaechelAnnisha Angel. L (Second Year B)*

**STAFF ACTIVITIES/PUBLICATIONS/ACHIEVEMENTS****ACTIVITIES:**

S.No.	Name of the Staff	Events/Guest Lecture	Topic/Event	Date	College
1.	Dr.L.Kalaivani, Asso. Prof (SG) & Mr.T.Siva Kumar, Asst. Prof	Two Days Workshop	Optimization Techniques for Engineering Applications	29.01.2016 & 30.01.2016	Kongu Engineering College, Erode
2.	Dr.R.V.Maheswari, Asso. Prof	Guest Lecture	Introduction to Support Vector Machine	30.01.2016	IEEE, National Engineering College, Kovilpatti
3.	Mr. N.B.Prakash Asso.Prof & Mr.J.Sivadasan, AP(SG)	TEQIP-II	Foundation Skills in Integrated Product Development (FSIPD)	19.01.2016 to 23.01.2016	Thiagarajar College of Engineering, Madurai
4.	Mr. S.Senthil Kumar Asst.Prof & Mr.A.Pandiyarajan, Asst.Prof	Two Days National Level Workshop	Smart Grid and Integration of Renewable Sources	18.02.2016 & 19.02.2016	SRM University, Chennai
5.	Ms.A.Tamilarasi, Ms.P.Subathra & Ms.D.Kavitha, Asst.Prof	One Day Workshop	FPGA	20.02.2016	NIT, Trichy
6.	Ms.D.Kavitha, Asst.Prof	Two Days Workshop	Realtime with MATLAB Interface Arm Controller	04.02.2016 & 05.02.2016	Vellamal Engineering College, Madurai

## DEPARTMENT ACTIVITIES

### EEE ASSOCIATION INTRODUCTION TO COMSOL

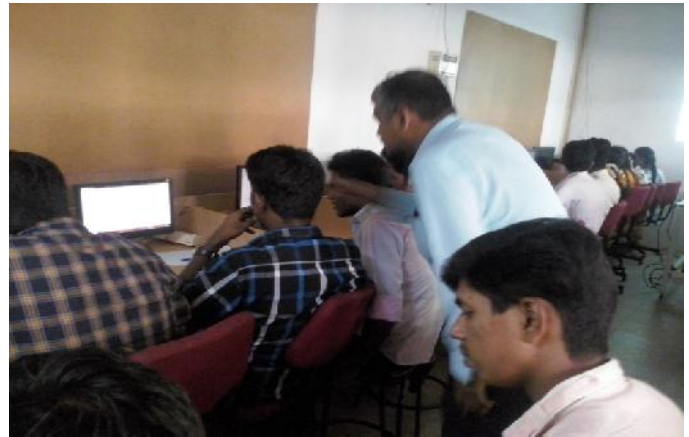
As a part of various activities conducted by EEE Association, a workshop was organized on the 'COMSOL' software package related to the designing the electrical equipments. The workshop was conducted for II year students. The session was handled by *Ms.C.Nivetha Indumathi, M.E, Assistant Professor*, of Electricals and Electronics Engineering department. The session was took part in 06.02.2016 (Saturday) for II second year students.

### HOME BASED APPLIANCES INSTALLATION SERVICING



The EEE Association organized a workshop of II year EEE students on "HOME BASED APPLIANCES INSTALLATION SERVICING" on 06.02.2016 (Saturday) from 10:00am to 1:00pm. The session was handled by our lab technician *Mr.K.Subburaj and Mr. Chelladurai of EEE Department*. The basics of house wiring and basement wiring etc., were taught. The concepts of working of household electrical appliances like mixers etc., were explained in-depth. Fuse wiring systems were described.

### MATLAB WORKSHOP ON TRANSMISSION AND DISTRIBUTION



On 30.01.2016 the course was handled by *Mr.G.Kannayeram, AP(SG)*, 18 students of 3<sup>rd</sup> year EEE attended the session. He gave introduction about Reactive power compensation and its importance in power systems. In simpower system, he simulated for three phase AC system using PQ measurement block and also reactive power compensation carried out by means of shunt capacitor banks. He also explained about power factor and also simulation carried out for a simple AC circuit.

On 06-02-2016 course was handled by *Mr.T.Sivakumar, AP* 20 students of 3<sup>rd</sup> year EEE attended the session. He started the course with modeling of Static Var compensator and explained with the aid of MATLAB Simulink. Then he simulated and explained reactive var compensation carried out by SVC and also explained about output voltage waveforms for different loads in a power system.

## SPECIAL INTEREST GROUP

### HIGH VOLTAGE ENGINEERING



Special Interest Group – HVE organized a interaction session on “Role of Antioxidants” was conducted on 30.01.2016 by **Mr.P.Samuel Pakianathan, Assistant Professor** at H1 hall for Special Interested Group (SIG) members. He discussed about the importance of antioxidants and their types.

### POWER ELECTRONICS AND DRIVES



A seminar on “Modern Power Electronic Drives” was conducted on 30.01.2016 by **Mr.S.Thirumalai Kumar, Assistant Professor** at Elective Hall for Special Interested Group (SIG) members. The objectives of the session are:

- Introduction about Modern power electronic Drives.
- Recent PWM techniques used in multi level inverters.

### POWER SYSTEM AND ENERGY ENGINEERING



A seminar presentation on ‘Development of 1200KV Transmission system in India’ was conducted on 30.01.2016 by **Dr.P.Subburaj Professor** at Seminar Hall. The contents of this seminar presentation are:

- Overview of Indian Power system
- Demand Supply scenario and Need of 1200KV Transmission
- consideration for high capacity 1200KV transmission corridor development
- Transmission line technical parameters and 1200KV test station

Initially, Professor started with the power system (400KV transmission system) in Tamilnadu and then moving on to the overview of Indian power system. He elaborately discussed about the voltage upgradation at different periods and explained about why we are going to 1200KV transmission system.

Finally he concluded that 1200KV UHVAC transmission line from wardha to Aurangabad is already under construction. If it is completed successfully, It will be implemented all over India thereby can transmit the power for longer distance, reduction of total line cost per MW/km, Reduction in volume of conductor material required.

## Placement Details

On behalf of the Chairman, Managing Director, Director, Principal, Head of the Department and staff members, we heartily congratulates the final year students who placed in *M/s. Infosys Private Ltd., Chennai*, *M/s. Cognizant Technology Solutions Private Ltd., Chennai*, *M/s. Maveric System Ltd., Chennai* and *M/s. Vee Technologies Private Ltd., Salem* Campus drive in our campus during the month of February 2016.

- *Total No. of Students Placed : 10 No.s*



### *M/s. Infosys Private Ltd., Chennai*



*Ms. Jenifer Romina. A*



*Mr. Shanmugam. P*



*Mr. Uma  
Maheswaran. R*



**Cognizant**

### *M/s. Cognizant Technology Solutions Private Ltd., Chennai*



*Ms. Antany Mekala. G*



*Ms. Jenifar. A*



*Ms. Prema Nayagi. G.S*



*Ms. Selvajothi. G*



*M/s. Maveric System Ltd., Chennai*



*Ms. Aravind Mari. T*



*M/s. Vee Technologies Private Ltd., Salem*



*Mr. Amarnath.P*



*Mr. Vaira Prakash. D*

**MAT Score**



*Mr. Aneruthmani.V*  
610/800 – 73 Percentile



*Mr. Felshiya Rajakumari.R*  
527.5/800 – 66 Percentile

**HEARTY CONGRATULATIONS!!!!!!**



## INDUSTRIAL VISIT



We 3<sup>rd</sup> year EEE went for an industrial visit to **Tuticorin pooling station near keelaeral** for one day. It is a 400 kV D/C (Quad) line at Tuticorin Pooling Station along with new 765 kV Pooling Station at Tuticorin (initially charged at 400 kV) including 1x 80 MVAR, 400 kV Bus Reactor under Transmission System associated with Common System Associated with Costal Energen Private Limited & Ind- Bharat Power (Madras) Limited LTOA Generation Projects in Tuticorin Area. We were very excited to see many electrical apparatus such as wave trap, reactor, surge arresters, capacitor voltage transformer. At present it is working as a switching station. This pooling station is under construction. I hope that this industrial visit was very useful in our studies. Thank you for the faculty members for this great opportunity.

## MY EXPERIENCE

*Dear friends,*

I am **P.Selvam B.E-EEE** (2012-2016) currently working in **Indus Teqsite Pvt ltd, Chennai**, get hired through campus drive. I like to share my interview experience that I had during my career. Firstly I had a chance to attend the interview in VVDN technologies which gave me a better experience to clear interview in Indus Teqsite Pvt Ltd. In interview, they ask me to give introduction about myself. After that, they asked lot of questions about my project. Then, they give me an electric circuit and asked me to find the current through an element which was very easy and simple. I mentioned my area of interest as circuit theory and digital circuits. So they asked lot of questions from it. One of them was difference between latches and flip flop. Draw buck converter and asked lot about it. Characteristics of Op-amp and they asked me to explain each characteristics why it so. I gave them the detailed explanation about characteristics alone for about 10 minutes which impressed them slightly. Then a simple question from op-amp.  $I/p V=1V$ , gain=100,  $O/p V=?$

Suggestions:

- Be good in Electronics (Analog, digital, EDC, circuit theory) because 80% of company inviting us was dealing with electronics.
- Don't give wrong answer instead say I don't know because wrong answer will create negative impression.
- In interview the questions will be simple, The important thing was how we answered.

“I wish you all success in your future”

## ALUMNI INTERACTION



01.02.2016 - **Mr.G.Senthil Kumar** - 2011 -  
*Electrical Engineer - Almassam, oman*

03.02.2016 - **Mr.T.Karkuvel Raja & V.Karthik** -  
*2014 - Doyensys - Chennai.*

Department of EEE organized an Alumni Interaction for our students on 01.02.2016 on 11.30 PM at EEE H6 Hall. During his interaction he delivered that all should learn the taste of success from the failure. He advised the students to be strong in basics and fundamentals of electrical. At last he pointed out that “Be a smart worker rather than smart work”. Students interacted with him and gained more about his technical experience. His speech benefited them by providing a unique way to set their goals and achieve them. They also got a clear idea about the current status and job opportunities available in electrical field. Finally, the chief guest conveyed his hearty wishes to the Students to lead a successful life.

## INSTITUTE OF ENGINEERS (INDIA)

- *Mr.M.P.E.Rajamani, AP(SG)/EEE*  
- *Mr.M.Gengaraj, AP/EEE*



The IE(I) Students chapter (code:628503) of Electrical and Electronics department has conducted “TECHNICAL EXAMS” for the pre-final year students of our department. Totally 9 tests has been conducted which were based on placement test papers and technical part. In these, 125 students took the tests which were held in four venues.

## MOCK INTERVIEW

EEE Association & Department Placement forum combined and organizes a Mock Interview for III Year Students. The ultimate aim of the interview is too bring out the students from fear while facing interviews. The interviews were scheduled as two sessions on 18.01.2016 & 09.01.2016. Totally 5 batches with 2 staff members and 1 final year placed students are in the group. After Completion the students came to an idea of Do’s and Don’ts in interview.

## DEPARTMENT ADVISORY BOARD COMMITTEE - PARENTS



The Second Meeting of Department Advisory Board Committee with Parents was held at Research Simulation Lab of the Department on 14.02.2016 for the Academic year 2015-2016. **Dr.M.Willjuice Iruthayarajan, Head of the Department** welcomed the parents. Department Advisory board members have discussed about the following.

Discussed about the Graduate attributes, Program Educational Objective, Program specific Outcome, Program Outcome and the methods to improve the standard of the students. Department Advisory Board requested to give suggestions for refinement of Program Educational Objective and Program Outcome.

Head of the Department also requested the parents to visit the college website periodically for viewing the regulations, syllabus, newsletter, department activities etc.

The elective courses are offered if there is a minimum of five students and elective laboratories are also included in 2013 regulations. Department advisory board conveyed the parents that the department has a separate gate forum and aptitude forum which is training the students from third semester onwards.

## DEPARTMENT ADVISORY BOARD COMMITTEE - STUDENTS

Third Meeting of Department Advisory Board Committee with Students was held at **Research Simulation Lab** of the Department of EEE on **19/02/2016** during the Academic year 2015-2016. **Dr.P.Subburaj, Convener** of the Department Advisory Board welcomed the students in the august presence of **Dr.M.Willjuice Iruthayarajan, Prof & Head**. Department Advisory board members have discussed about the following points.

- ❖ Department vision, mission and Program Educational Objective are elaborated by the Department UG Programme Coordinator.
- ❖ The students are asked to give their views towards the modification of vision, mission, program outcomes
- ❖ The students are requested to include virtual lab in the curriculum of department which will be helpful for the students for better understanding the subjects.
- ❖ The students suggested to include innovation in the program outcomes of programme which helps to improve research skill of students.
- ❖ The importance of Non CGPA courses and its categories were explained to the members by the UG Programme Coordinator and a minimum of 4 credits should be earned by the students for the attainment of Degree.

## Students Achievements/Activities

### Students Achievements



*Mr.M.Sathiyarayanan, IV year EEE* has received ISTE CHAPTER – BEST STUDENT AWARD for his overall performance in academic, extracurricular activities and involvement in ISTE Student Chapter activities of our college at 15<sup>th</sup> ISTE TN&P section.

### Students Achievements

#### Second Year B

S.NO	NAME	EVENT	VENUE	PRIZE	DATE
1.	R.Prem Kumar	GYAN MITRA 2k16 – Circuitrix	Mepco Schlenk Engineering College	First Prize	20.02.2016

#### Second Year C

S.NO	NAME	EVENT	VENUE	PRIZE	DATE
1.	Sathiya Bamaa.S	CONNECTIONS (conducted by RRC)	NATIONAL ENGINEERING COLLEGE	SECOND	15/2/16
2.	S.Suriya	PAPER PRESENTATION (conducted by YRC)		SECOND	15/2/16
				FIRST	22/1/16
		NATIONAL LEVEL ESSAY COMPETITION		SECOND	30/1/16
3.	N.Shameema Farhana	PAPER PRESENTATION (conducted by YRC)		FIRST	22/1/16
4.	Sunanathaa.S.P	SINGING	KOVILPATTI	FIRST	24/1/16

## Third Year A – Paper Presentation

S.NO	NAME	VENUE	PRIZE	DATE
1.	R.Bavithra	PSR Engineering College	2 <sup>nd</sup> Prize	24.02.2016

## Final Year A

S.NO	NAME	EVENT	VENUE	PRIZE	DATE
1.	V.Amsaveni	Newspaper Review Quiz	Central Library, National Engineering College, Kovilpatti	First	8.2.2016
		Book Review Quiz		Second	12.2.2016

## Final Year B

S.NO	NAME	EVENT	VENUE	PRIZE	DATE
1.	M.Shunmugaraj	GYAN MITRA 2k16 – Idea Presentation	Mepco Schlenk Engineering College	Second Prize	20.02.2016

## Students Activities – Second Year A

S.NO	NAME	WORKSHOP	VENUE	DATE
1.	N.Deepa A.Dhanushya	SOLAR	NIT (TRICHY)	19/2/2016
2.	G.Gowsalya Devi	PCB		18/2/2016 & 19/2/2016
3.	S.Divya Prithi	PCB /SOLAR		18/2/2016
4.	M.Iswariya	SOLAR/PCB		19/2/2016
5.	S.Bala Abirami	SOLAR		20/2/2016
6.	M.Abdul Hameed Sharik	LIFI		19/2/2016 & 20/2/2016
7.	M.Abdul Kader Riyaz S.Arun Jeyakumar	SOLAR/LIFI		20/2/2016
8.	V.Jagadish M.Aswanth Navamani J.R.Abishek Jayanth K.Chella Kili Manoharan	LIFI		19/2/2016
9.	I.Anjana M.Krishna Shini	SOLAR		18/2/2016 & 19/2/2016
10.	K.Koodammal M.Krishna Kumari	SOLAR/PCB		

11.	M.Hariharan S.Aravind R.Aswin S.Chokkalingam K.Chellakili Manoharan D.Franklin R.Dinakar Raja P.Joel Joshua U.Iswara Moorthy U.Ajith Kumar M.Jagadeeshwaran A.Karthik M.Ajith Kumar K.Karthick	PCB	NATIONAL ENGINEERING COLLEGE	8/2/2016
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### CAMP

S.NO	NAME	NATURE OF CAMP	PLACE	DATE
1.	R.Ajith	POLIO CAMP	KAYATHAR	21/2/2016 & 22/2/2016

### Second Year B

S.NO	NAME	EVENT	VENUE	DATE
1.	L.Rachel Annisha Angel G.Ponmala	Paper Presentation	Kalasalingam University	19-2-2016
2.	P.Rajasree M.Nalini			

S.NO	NAME	WORKSHOP	VENUE	DATE
1.	P.Pon Sharmila	LIFI, Solar Tech.	NIT,Trichy	19&20-2-2016
2.	S.Maheswari	Solar Tech		19-2-2016
3.	M.Maragathalakshmi	PCB Design, Solar Tech		18&20-2-2016
4.	V.Manikka Vasuki			
5.	S.Meena Sanjeevini			
6.	M.MaragathaValli	LIFI, Solar Tech		19&20-2-2016
7.	S.Meenakshi Meyyammai			
8.	R.Nikkitha	Image Processing		19-2-2016
9.	A.U.Najeeba	Solar Tech		NIT,Trichy
10.	Mohamed Azarudeen	LIFI		

## Second Year C

S.NO	NAME	VENUE	WORKSHOP	DATE
1.	T.Sathish F.Sam Christopher Ponraj R.K.Rajkumar A.Sangeetha S.Suriya N.Shameema Farhana P.Ramachandra Bharathi J.Senthila Devi S.Vinoka Sanjeevini R.Vinsly	NIT (TRICHY)	SOLAR AND LIFI	19/2/16 -20/2/16

S.NO	NAME	EVENT	VENUE	DATE
1.	P.TAMILARASI S.RAMYA	Paper Presentation	Kalasalingam University	19-2-2016

## Third Year B

S.NO	NAME	WORKSHOP	VENUE	DATE
1.	M.POOLAMMAL N.NANDHINI K.PREMA P.MUTHUPRIYA S.VENSIYA	DIGITAL SUBSTATION WORKSHOP	PSG TECH, COIMBATORE	12-13.02.2016

## Final Year A

S.NO	NAME	EVENT	CLUB	DATE
1.	A.Anto Sharon Prakash	Cultural Function	National Service Scheme	21.2.2016

## Final Year B - Internship

S.NO	NAME	VENUE
1	R.S.Saravana Kumar	HCL, Chennai
2	P.Selvam	IndusTeqsite Pvt Ltd

## Camp

S.NO	NAME	CLUB	VENUE	DATE
1	Sathianarayanan. M Sunitha. R	NSS	Athimarapatti	30-12-2015 TO 05-01-2016
2	Pradeep. M	Social Awareness Cell	Athimarapatti Govt Higher Secondary School, Vanaramutti.	04-01-2016 06.01.2016

## Cycle Rally

S.NO	NAME	CLUB	EVENT	DATE
1	M.S.PranavaKartikeyan P.Shanmugam P.Sathyananthan	NCC	Cycle Rally (150 kms)	12-02-2016 and13-02-2016

## Third Year A

### PARTICIPATION PAPER PRESENTATION

S.NO	NAME	VENUE	DATE
1.	A.Acsal Premi Subha S.Kavitha	Mepco Schlenk Engineering College	20.02.2016
2.	Jerlin	P.S.R Engineering College, Sivakasi	24.02.2016
3.	R.Bavithra	Kalasalingam University	23.02.2016

### WORKSHOPS

S.N O	NAME	TOPIC	VENUE	DATE
1	J.Aksha K.Maheswari	Solar Energy And Design Of Power Converters	NIT , TRICHY	19.02.2016
2.	Amala Aani	Solar Energy And Design Of Power Converters	NIT , TRICHY	19.02.2016
3	S.Abinaya	SVC	NIT , TRICHY	04.03.2016
4.	P.Esakkiammal			
5.	N.Azarudeen	Haptic Robotic	NIT , TRICHY	27.02.2016 AND 28.02.2016
6.	R.Lakshmana Balakrishnan & K.Mariappan	PCB Design	CURRENTS 16 –NIT TRICHY	18.2.2016 AND 19.02.2016
7.	V.Mullai Vaneshwaran	Pcb Design	CURRENTS 16 –NIT TRICHY	18.2.2016 AND 19.02.2016
8.	E.Jeeva Bharathi	Solar Power Plant And Pwm Module And Lifi Technology	CURRENT 16 – NIT TRICHY	19.02.2016 TO 20.02.2016
9.	M.Jegan A.S.Anand	Solar Power Plant And Pwm Module And Lifi Technology	CURRENT 16 – NIT TRICHY	19.02.2016 TO 20.02.2016



<b>10.</b>	K.Ganesha Moorthi M.Arun Kumar S.Ganapathy Vinayagam M.Kannan R.Balaji Karikalan L.R.Kaushika Lakshmanan M.Alagu Selva Kumar N.Deepan Raj Abdul Rahuman	HAPTIC ROBOTIC	NIT , TRICHY	27.02.2016 AND 28.02.2016
<b>12.</b>	R.Bavithra K.Kiruthika B.Jerlin J.Manisha Mariel Raj	Mobile Controlled Robotics	Nit Trichy in University College of Engineering , Nagercoil	13.02.2016 & 14.02.2016

## CONVOCATION - 2016

More than a thousand people had waited for the day with their breath held tight. That was the day they finally earned their scrolls of honor. The college witnessed its 28<sup>th</sup> convocation on 20.02.2016. The function was presided by Mr.H.Devaraj, Vice Chairman, UGC, NewDelhi, at college auditorium. The degrees were awarded to students of various B.E, B.Tech, M.E, M.C.A, and Ph.D programmes.

Dr.R.V.Maheswari, Asso. Prof has received her Ph.D., Degree in Electrical and Electronics Engineering Department during the academic year 2015-16. Apart from them, 14 Postgraduate students from the field of High Voltage Engineering and 115 Undergraduate students in person received the respective degrees in person.

Many students came in person accompanied by their families to receive their degrees and met their faculty before entering into their avenues of life.



Ms. C.Nivetha Indumathi and Mr. K.Kumar receives their PG degree from the chief guest Mr.H.Devaraj



Dr.R.V.Maheswari receives her Doctoral degree from the chief guest Mr.H.Devaraj

### PTA MEETING

The Second Parent Teacher Association Meeting of National Engineering College for the academic year 2015 – 2016 was held on 14<sup>th</sup> February 2016 at 10.30 am in the college auditorium. The Parents and students from all the years were attended the meeting to verify the students performance both in academic and extracurricular activities and for continuous improvement.

## ALUMNI ARTICLE

### CONFUSED WITH GRE OR GMAT???

- Mr. Mailappan.R – Passed Out 2012  
FLSmidth, Chennai

Once you decided to do your higher studies abroad, take either GRE or GMAT even though it is not required for your shortlisted university or your specialized course. It will be useful during the profile evaluation on admission process, even some may deserve scholarships if your scores are good. Here I will share you the difference and difficulties between GRE and GMAT. While reading you may encounter the advantages of GRE mostly because I took GRE only ☺



	<b>GRE</b>	<b>GMAT</b>
<b>Popularity</b>	~7 L Test takers/year	~2.5L Test takers/year
<b>For whom</b>	Master’s degree and for B-schools	Only for B-schools
<b>Exam Time</b>	~3hrs 45mins*	~3hrs 30mins*
<b>Cost</b>	US\$ 195	US\$ 250
<b>When, Where &amp; How</b>	Given year around, Authorized test centres in all main cities, Computer based test	

\*including breaks

Test Format: Both GRE and GMAT concentrate on Verbal & Quants but it differs on the subject it emphasis. Lemme show you the Verbal section of both GRE & GMAT.

<b>GRE</b>	<b>GMAT</b>
Sentence Equivalence, Text Completion, Reading Comprehension	Sentence Correction, Critical Reasoning, Reading Comprehension
20 questions X 2 sections (30mins/section)	41 questions on 75mins
Section adaptive i.e. if you did well in first section, 2 <sup>nd</sup> section will be comparatively harder than first	Question adaptive i.e. if you answered the 1 <sup>st</sup> question right you will receive a tougher question next
You can skip the questions on the given section	You can’t skip the questions either right or wrong you have to submit your answer
Emphasis on <b>vocabulary</b> , it’s a piece of cake if you’re an active reader of books & magazines	Emphasis on <b>grammar</b> , you have to go through some basic grammar rules you studied on schoolings

If you are a hard core English fan with good grammatical base go for GMAT. I’m not that kinda person so I took GRE and I have no real time experience on GMAT but worked out

some practice sections. Final decision of whether GRE or GMAT is on your hands and decide only after taking mock test on both GRE & GMAT. At the end of the section I will give you the link for the mock tests.

Coming to the Quants section, both will test our basic maths only (Arithmetic, Algebra, Geometry, Data Interpretation and Word Problems). But many felt GMAT is bit tougher than GRE, I would say if you are math lover (kinda having good patience and short cut trickster) then go for GMAT. On the other side, GRE also tests the same but not that much long only you have to do is managing your time. Also in GRE you are allowed to use calculator and it will be on your test screen whereas in GMAT you are not having this option.

GRE	GMAT
Quantitative Comparison, Multiple Choice, Numeric Entry	Multiple Choices, Data Sufficiency
20 questions X 2 sections (35mins/section)	37 questions on 75mins

There is one more section naming Analytical writing on both GRE & GMAT.

On GMAT, you have to right only one essay. You will be give an argument and you have to analyse, take a position on the argument and state your points with examples on a time frame of 30mins. It will be separately scored on 0-6 scale basis.

On GRE, you have to write 2 essays – 1 will be argument type: you have to analyse an argument and state your points as like GMAT for 30mins and 1 will be issue type: you have to analyse an report and point out assumptions made on the issue for 30mins. Analytical section will not be that much weighted on both GRE or GMAT, all you have to do is express your points and that must be relevant to the given topic with a good structure of flow.

So both GRE and GMAT comprises of same sections like verbal, quants and analytical writing although with bit different format or sections. GMAT is not yet completed you will have an extra section named integrated reasoning with 12 questions concentrating on analysis of tables, graphs and reasoning for 30mins. Only taking a mock test on both format helps you to decide which one suits you best. From my knowledge I would say GRE for anyone who willing to do master's in aboard. But for B-schools applicants check with your shortlisted universities admission committee or current students to know how much weightage is given to GRE as many B-schools prefer GMAT slightly higher than GRE.

#### **Reference:**

- ✓ GRE Mock Tests and relevant queries: [ETS GRE](#)
- ✓ GMAT Mock Tests and relevant queries: [GMAT](#)

**Practising sites:** Magoosh (I used this site pretty well), Kaplan (you can take free practice tests), ETS GRE official book (I have an e-book you can contact me but it is not advised to share so don't publish it on any sites), GMAT official online packs, Byju – I heard some good reviews about them but I have no hands on experience with them.

## TECHNICAL ARTICLE BY STAFF MEMBER

### *System Identification*

*Ms.C.Nivetha Indumathi*

Assistant Professor

*Department of Electrical and Electronics Engineering*

*Most probably we deal with unknown dynamic system. . How to design, conduct, process and interpret the results from an experiment applied to this system such that we will get an accurate model of its internal working?"*The solution to this question is a method known as *System Identification*

System identification has been a valuable tool in identifying the model of the system based on the input and output data during working of the studied system. The overall behaviors are referred as the **system** and the internal (mental) representation as a researcher use in order to study the system is called the **model**.

System Identification aims to estimate system parameters by using real-time acquired data. Three aspects of system identification are of critical importance in practice: Precision, data size, and reliability of the estimates.

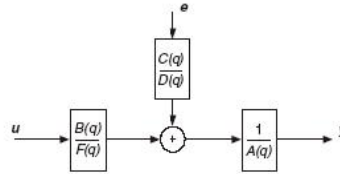
The process of system identification requires that you:

- Measure the input and output signals from your system in time or frequency domain.
- Select a model structure.
- Apply an estimation method to estimate value for the adjustable parameters in the candidate model structure.
- Evaluate the estimated model to see if the model is adequate for your application needs.

Models of dynamic systems are typically described by differential or difference equations, transfer functions, state-space equations, and pole-zero-gain models. System identification uses the input and output signals you measure from a system to estimate the values of adjustable parameters in a given model structure. Obtaining a good model of your system depends on how well the measured data reflects the behavior of the system.

#### **Black-box Model**

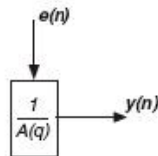
A parametric model structure is also known as a black-box model, which defines either a continuous-time system or a discrete-time system. The general-linear model structure provides flexibility for both the system dynamics and stochastic dynamics. This method requires intensive computation with no guarantee of global convergence.



**General-Linear Model Structure**

**AR Model**

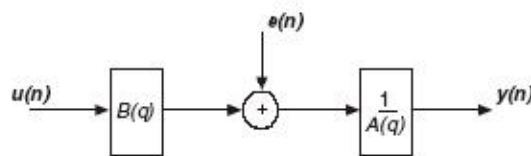
The AR model structure is a process model used in the generation of models where outputs are only dependent on previous outputs. No system inputs or disturbances are used in the modeling. Time series analyses, such as linear prediction coding commonly use the AR model.



**AR Model Structure**

**ARX Model**

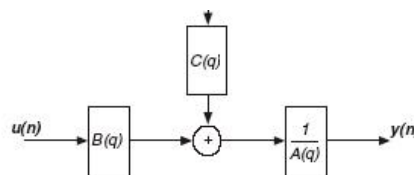
The ARX model, is the simplest model incorporating the stimulus signal. The ARX model therefore is preferable, especially when the model order is high. The disadvantage of the ARX model is that disturbances are part of the system dynamics.



**ARX Model Structure**

**ARMAX Model**

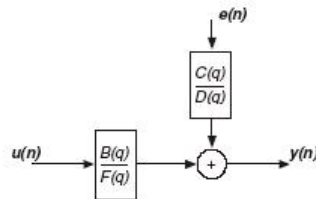
Unlike the ARX model, the ARMAX model structure includes disturbance dynamics. ARMAX models are useful when you have dominating disturbances that enter early in the process, such as at the input.



**ARMAX Model Structure**

### Box-Jenkins Model

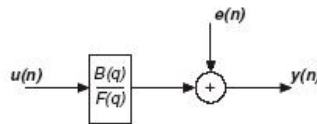
The Box-Jenkins (BJ) structure provides a complete model with disturbance properties modeled separately from system dynamics. The Box-Jenkins model is useful when you have disturbances that enter late in the process. For example, measurement noise on the output is a disturbance late in the process



**Box-Jenkins Model Structure**

### Output-Error Model

The Output-Error (OE) model structure describes the system dynamics separately. No parameters are used for modeling the disturbance characteristics.



**OE Model Structure**

On selection of model, validation and estimation is done to identify the system. The data are detrended and then divided into halves. The first half is estimated and is validated or compared with other half. Upon trials, the model showing best fit is finalized

## STUDENT ARTICLES

### LIGHT FIDELITY

Light Fidelity (Li-Fi) is a bidirectional high speed and fully networked wireless communication technology similar to Wi-Fi. It is wireless and uses visible light communication or infra-red and near ultraviolet (instead of radio frequency waves) spectrum, part of optical wireless communications technology, which carries much more information, and has been proposed as a solution to the RF-bandwidth limitations. Light Fidelity or Li-Fi is an exciting breakthrough in 5G visual light communication systems and the future of wireless Internet access.



With Li-Fi, information hitches a ride along a spectrum of visible light. Light-emitting diode (LED) bulbs, transmit data when they are switched on and off so rapidly in nanoseconds, that the human eye cannot see it. This data is registered by special equipment, making it possible to provide wireless Internet connectivity at a current experimental speed up to 10 Gbps, which is estimated to be 250 times faster than 'superfast' broadband. The vast availability of LED light bulbs will drive the future ubiquity of connectivity even in places where Wi-Fi fails-on an airplane and in submarines etc.

#### **ADVANTAGES:**

- ❖ Li-Fi is zero electromagnetic interference, allowing connectivity even in areas where Wi-Fi isn't accepted - hospitals and nuclear plants among others.
- ❖ Li-Fi offers better data defence as light waves can't pass through walls, making it impossible to hack any internal systems in high-security buildings
- ❖ As radio waves used by Wi-Fi get more congested and the demand for faster and more efficient wireless communication escalates, the future is bright for Li-Fi as a reliable, affordable and more secure solution.

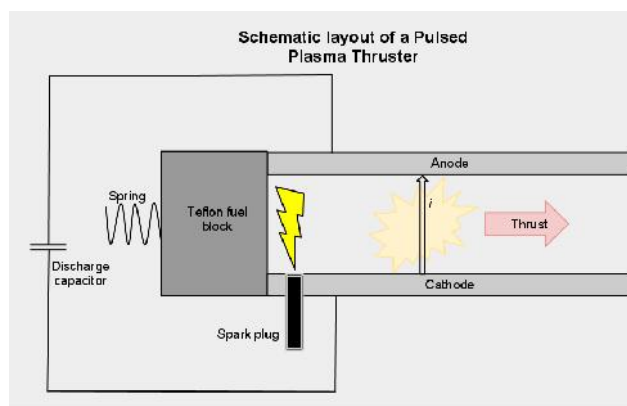
- Mr. S.Kandhalakshmi , Second Year

### ELECTRIC PROPULSION SYSTEM

A PPT is an MPD electric propulsion system. This means, it uses the electric power provided by a spacecraft to accelerate propellant by means of the electromagnetic Lorentz force. As only charged particles can be accelerated, the ablated propellant is transformed into ionized



plasma. To maximize the power supplied 630 ELECTRIC THRUSTERS Figure. 1 Operation principle of a PPT to the plasma while keeping thermal loads at a tolerable level, the plasma is created by a high-current discharge pulse.



As a result, the thruster assembly represents an electric circuit. The parts and operation principle are presented in Fig. 1. The PPT consists of four main parts: capacitor, electrodes, propellant feed system, and igniter plug. The capacitor is needed to store electric energy for a discharge pulse. The two electrodes, anode and cathode, are connected to the capacitor terminals to carry their electric potential. A block of solid PTFE propellant is placed between the electrodes and fed by a mechanic feed system, for example, by a spring as shown in Fig. 1. Prior to a discharge pulse, a voltage is applied to the capacitor.



ADD SIMP-LEX thruster the Russian partner Research Institute of Applied Mechanics and Electrodynamics of Moscow Aviation Institute (RIAME MAI) have led to the introduction of the ADD SIMP-LEX thruster. The design was optimized to improve thrust efficiency and to further allow for a closer study of the dependence of the SIMP-LEX thruster on its electrical parameters. Measurements of the ADD SIMP-LEX performance resulted in a specific impulse of 2500 s and a mass bit of 53  $\mu\text{g}$  at a pulse frequency of 0.5 Hz. However, the pulse frequency on PERSEUS will be closer to 1 Hz. Currently, developments are ongoing at IRS to characterize performance and electrical parts as well as life testing of the thruster for optimization and eventually integration of the SIMP-LEX sight model. In the next step, the propellant feeder, electronic control, and telemetry for on-orbit testing will be integrated for subsequent acceptance testing of the PERSEUS unit.

- Mr. S.Chokkalingam , Second Year

## **FLOURISH YOUR SOFT SKILLS!!!!**

- *R.Uma Maheswaran, Final Year*

In this edition let us view in brief about the personal and social competences. They are the most important parts of the emotional intelligence part.

### **Personal Competences:**

The personal competences include:

- Self-awareness
- Self-regulation
- Motivation

#### ***Self-awareness***

Self-awareness encompasses:

- Emotional awareness
- Accurate self-assessment
- Self-confidence

Self-awareness is the skill of being aware of and understanding your emotions as they occur and as they evolve. It is wrong to think of emotions as either positive or negative. Instead, you should think of them as appropriate or inappropriate.

#### ***Self-regulation or Self-management***

Self-regulation includes:

- Self-control
- Trustworthiness
- Conscientiousness
- Adaptability
- Innovation

Having learned to be aware of your emotions, the skill of self-regulation relates to managing them appropriately and proportionately.

#### ***Motivation***

The final personal skills aspect of emotional intelligence is Motivation.

Self-motivation includes our personal drive to improve and achieve, commitment to our goals, initiative, or readiness to act on opportunities, and optimism and resilience. Self-motivation and personal time management are key skills in this area. Do not make unreasonable demands on yourself; learn to be assertive rather than just saying, 'Yes' to the demands of others.

**Social Competences:**

There are two key social competences:

- ❖ Empathy
- ❖ Social skills.

***Empathy:***

Empathy is an awareness of the needs and feelings of others both individually and in groups, and being able to see things from the point of view of others. Empathy helps us to develop a stronger understanding of other people's situations.

**Elements of Empathy**

- Understanding Others
- Developing Others
- Having a Service Orientation
- Leveraging Diversity
- Political Awareness

***Social skills in Emotional Intelligence***

In emotional intelligence the term 'social skills' refers to the skills needed to handle and influence other people's emotions effectively. The term 'social skills' covers a wide range of skills.

Social skills, in the Emotional Intelligence sense, include:

- ❖ Persuasion and Influencing Skills
- ❖ Communication Skills
- ❖ Conflict Management Skills, Leadership Skills
- ❖ Change Management Skills, Building Bonds (Rapport)
- ❖ Collaboration and Cooperation | Team-Working Skills

As a summarised part we can tell that Working on your emotional intelligence could well be the most important aspect of your personal development. Research has shown that people with higher levels of emotional intelligence enjoy more satisfying and successful careers and relationships. If you think about ways to enhance your EI, you are likely to become more interesting and attractive to others, and you will also give your self-esteem a boost.

***KEEP ON FLOURISHING.....***

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