

REDEEM

EUPRAXIA 2K13 with an Exciting theme “**TECH-NEXT**”



This issue

- ◆ National Level Workshop on “Advanced **Power Electronics Inter-**
faces for Distributed Energy”
- ◆ Interview with **Dr.R.Ramaprabha**

Preface

Smart, Wise & Cool

The problem of you coming first always is that you lose the experience of being second. The guy who fails in his first attempt is far luckier than the guy who succeeds in his first attempt. That's because failure is a great teacher. It drops you down to the ground immediately, puts you through such a harsh reality test that usually you stare at only two options -either shape up or get out. It forces a regime of self-evaluation on you, tests your inner strength and will. A person who has it in him will bounce back from failure with rare grit and determination like Yuvraj Singh did. He will become far stronger than he ever was before. He would also get mentally tougher; for society is very cruel to the fallen. They submit him to countless closed-door jokes and he would have tasted ridicule in numerous subtle ways.

Failure also brings its own blessings, ridicule is one of those blessings. Ridicule has a way of rewiring your brain, pulling out reserves you never knew existed. Failure is never final, never seals all exits. There is always a faint but unmistakable pathway that leads back to glory. It's up to you to find it and take it. If you do find it and take it you will not only be successful but also failure-proof. I pity the guy who succeeds in his first attempt, for he is a marked man doomed to fail over time. Success fills you with arrogance. Early success is even worse, because all the learning you could have done if you had failed has bypassed you. Be as factual and objective as possible. Face ridicule with a level head and straight face. Meet honest people who can tell you bitter things about yourself and listen to them with humility and gratitude. Learn and learn. Look for the exit that fate has left for you. Start climbing back. Success without risk of failure is mediocre one

Of all human emotions, fear is the most devious, most powerful. Most of your everyday actions and decisions are ordered by your hidden fears..Once you get traumatised, fear acquires a power to twist your mind into acting in strange ways for the rest of your life. The scars of childhood fear can and do last a lifetime. Your mind wasn't developed and grown up then. You didn't have the advantages you now have with age. Your fears expanded into monsters inside your head. Monsters that somehow remained in the shadows even after you grew up and gained control of your life.

By the time you gain a mastery over them you will be well into your middle age, where a new fear of disease and dying will take over. . You have to declare war against fear and fight with it. If you remain fighting in the battle field, you will be successful simply because a vast majority have given up theirs. Being smart is understanding that your life is stuffed with duality in everything you do, feel, think and experience. Being wise is figuring out why it happens, seeing the hidden principle of life working with Newton's third law. Being cool is becoming able to slip out of the rat race of emotions — stepping out of the pendulum, letting the world swing yet refusing to swing with them. Be smart, wise and cool!

“Experiences in life give you comb after you become bald.”

-Adopted from Deccan Chronicle article

3 Conferences Organized

4 Eupraxia 2k13— Tech Next

Faculty Ventures 5

9 Interview with Dr.R.Ramaprabha

Einstein.... That Physics Dude 10

11 BC— AD

Laurels of Students 12

16 Interview with Manohar.K

Thank you Sachin 17

18 From the Alumni

HOD's Desk

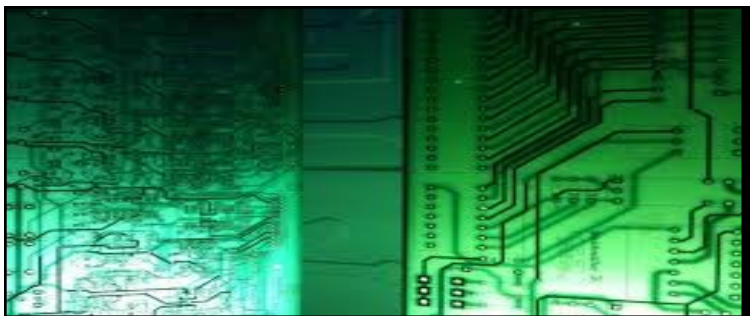
I have great pleasure in releasing this issue of REDEEM. I congratulate all the students and faculty members for successfully organizing Eupraxia 2k13. I would like to congratulate Dr.R.Seyezhai for receiving the Best Faculty Award of SSN from CTS.

I am happy to inform that our department has taken initiatives to create centers of excellence on electric drives and smart grid to promote specialized training, teaching and research. Our college has signed an MOU with Hibrise Technologies to take up industry relevant R&D projects and skill enhancement of students.

I appreciate the effort taken by the faculty and students in submitting project proposals for internal funding and the faculty who have submitted project proposals to external funding agencies such as DST, DRDO and AICTE.

I welcome your valuable inputs for improving future editions

~ Dr.V.Kamaraj
(HOD EEE)



Advanced Power Electronics Interfaces for Distributed Energy

The Department of EEE Organized the Two day National Workshop on “**Advanced Power Electronics Interfaces for Distributed Energy**” during 20-21 September, 2013.

The conveners of the workshop were **Dr.V.Kamaraj** and **Dr.Ranganath Muthu** and the coordinators of the workshop were **Dr. R.Seyezhai**, **Dr.R.Ramaprabha** and **Dr.M.Balaji**.

The total number of participants were 49.

The lecture/tutorial sessions included “**Technical Challenges and Barriers of Power Electronics for Distributed energy**” by **Dr. Ranganath Muthu**., “**Latest Trends in Embedded Controller for Power Electronics, Drives and Smart grid**” by **Dr. R. Vijayarajeswaran** (Managing Director, Vi Micro Systems), “**Demonstration on Smart Energy Meters, Transmission lines and MPPT**” by **Dr.M.Balaji**, **Mr.K.Murugesan**, **Mr.M.Pandikumar** and **Mr.A.Bharathi Sankar**.

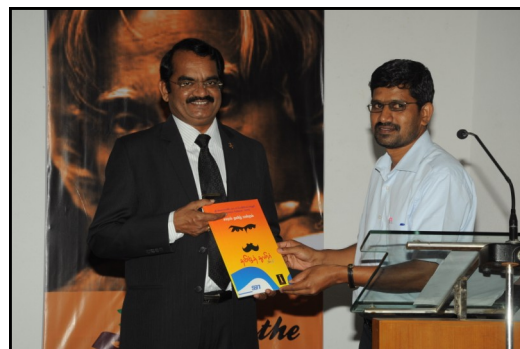
Tutorials on MATLAB Simulation of Advanced DC-DC Converters for Distributed Energy were conducted by **Mr.N.Pandiarajan**, **Ms.Latha Dinesh**, **Ms.S.Krishnaveni**, **Ms.J.Anitha Roseline**, **Ms.S.Malathy**,



Dr.R.Ramaprabha, Dr.Ranganath Muthu, Dr.V.Kamaraj (HOD), Dr.M.Balaji, Dr.R.Seyezhai (from left to right)

“INSPIRE”, a Motivational Science Camp

The DST sponsored Science camp “INSPIRE” was organized during 5-9 August 2013 for school students who scored 97% and above in their 10th std board examinations. Many scientists and academic researchers motivated the school students to pursue their higher studies in basic sciences. **Dr. Maylsami Annadurai** delivered the valedictory address and distributed the certificates to the participants.



Mr.K.Murugesan (on the right), an arganiser of the INSPIRE, Science camp, with Dr.Malsami Annadurai

EUPRAXIA...

Eupraxia 2013- At a glance:

With over **5000** enthusiastic participants from various colleges across the state, Eupraxia roared an emphatic victory. Eupraxia 2K13, was successfully led by a team of four, **Barani,B** (president), **Sindhuri,R** (Vice-president), **Malathy,S** (secretary) and **P.Narapa Naidu** (Treasurer). **Mr.Pandiyarajan** (Associate Professor), was the staff coordinator and the guiding force behind the event.. The theme for this year was “TECH –NEXT”, and the participants were encouraged to envisage about the future technologies.

The Inaugural:

Eupraxia embarked on its success journey, on Monday, **September 2nd**, by invoking the blessings of the Almighty and the lighting of the lamps by the chief guest, **Mr.Sridhar Balaji**, Project Director, Ashok Leyland, Ennore Plant. This was followed by address by the , **Dr.S.Salivahanan**,Principal and **Dr.V.Kamaraj**. Prof&Head. Later, the Chief Guest, Mr.Sridhar Balaji, addressed an amenable gathering about the career opportunities in the field of Electrical Engineering. He also suggested that the students hone their practical skills, to comply with the industrial working environment. Further he insisted that the students should equip themselves with the current needs of the industry to survive in the competitive world. He also gave an insight about the latest trends and technologies in electrical and electronics. This was followed by the launch of, “CYNOSURE”, the annual magazine of the department.

Workshops:

. Three workshops were conducted on the day. The First workshop was a hands-on workshop on PCB fabrication conducted by **R.Karthik Singaram** (IV year). The target audience were the first and second year students. The second workshop was on “**ARDUINO programming**” was organized by **Kamal,P** (IV year). This workshop was primarily for those students who were keen on learning about interfacing electronic devices with computers. Both these workshop reported **800 regis-**

trations. The third workshop was on “**MATLAB and its applications in Digital Signal Processing**”. This was the first workshop on MATLAB in the

history of Eupraxia, and was conducted by a team headed by **Imithiaz,A** (IV year).

Events:

There was a potpourri of events to cater to a wider audience. Some of the technical events included **Paper Presentation, Project Presentation, Circuit debugging, robotics, C-debugging, Contraptions, Technical quiz** etc. **Bridge Balance** was one technical event which was organised and conducted exclusively for second years. The winners were awarded with cash prize and a merit certificate while the participants were given a certificate of participation. The department also hosted some non-technical events like ADZAP, Dumb-C, Photography, mainly to avoid monotony of events.

Benchmarks:

Eupraxia this year saw many innovative ideas and strategies. The most commendable of them all is organizing two separate events for robotics- one the **Robotics Simple**- to encourage novice students and the other the **Complex Robotics**- to attract students from imperial institutions and to showcase the robotics prowess of SSN. Further the registrations this year were made online, and an online database for the prospective attendees was created. This time many online events like quiz, photography, etc were also hosted prior to the main event, to create online publicity.

The technology was also incorporated in the decoration department, which installed **piano staircase, POV (Persistence of vision) display, Backdrop LED lighting and Display of Object following Robot.**



Staff Ventures



Achievements

Dr.Ranganath Muthu, has been elected as the President of International Society & Automation (ISA), South India Section for the year 2013-14

Dr.M.Balaji, has been recognized as the Research Supervisor by the Anna University, Chennai

Dr.RanganathMuthu conducted the PhD Viva-voce Examination for Mr.M.SenthilKumaran at SSNCE (27-8-2013)

Dr.Ranganath Muthu, Dr.R.Seyezhai, and Dr.R.Ramaprabha attended the meeting at SSNRC headed by Dr. Barua and they presented their research works

Dr.R.Ramabrabha has been nominated as Technical program committee member for the 2013 Second IEEE ICIIP (2013 IEEE Second International Conference on Image Information Processing), to be held on December 09-11, 2013 at Jaypee University of Information Technology, Wanknaghat, Solan (H.P.), India (11-8-2013)

Dr. R. Ramaprabha has presented her research activities, progress in roadmap and MNRE proposals at SSNRC in the presence of Dr. Barua (28-8-2013)

U.Shajith Ali was appointed as Technical Program Committee Member for 2013 IEEE Conference on Clean Energy and Technology to be held in Langkawi, Malaysia, 18 to 20 November 2013 (10-9-2013)

Dr.Ashwin Kumar Sahoo attended “**Load compensation through D-SVC**”, Conference on LV Automatic Power Factor Correction Panels, organized by Central Power Research Institute-CPRI, Bangalore, during 22-23, August 2013

Our college has signed an MOU with **Hibrise Technology Pvt. Ltd.** for the benefit of EEE students with the objective to take up industry relevant R&D projects and students skill enhancement..

Mr.K.Murugesan gave a speech in the NSS camp organized by Government Higher Secondary School, Koo-vur, Chennai on 26th September 2013 on “**Personality Development for a successful carrier**”.

Paper presentations

Dr.R. Ramaprabha and M. Venmathi (Research Scholar) presented a paper entitled, “**Analysis, Design and Implementation of Sliding Mode Controller for the Three-Port Full Bridge Bidirectional DC-DC Converter**”, in the International Conference Electrical Sciences (ICES-2013)) at SASTRA University, Thanjavur, Tamilnadu, India (9-8-2013)

Dr.B.L.Mathur , Dr.Mrunal Deshpande and Dr.R.Seyezhai presented a paper entitled, “**Magnetic Levitation through AC Excitation**”, in the Fourth International Conference on Advances in Power Electronics and Instrumentation Engineering - PEIE 2013, Chandigarh, India (1-8-2013)

Dr.B.L.Mathur, Dr.R.Seyezhai and Dr.Mrunal Deshpande presented a paper entitled, “**Design and Development of Digital control based Asymmetric Multilevel Inverter for Renewable Energy Systems**”, in the Fourth International Conference on Advances in Power Electronics and Instrumentation Engineering - PEIE 2013, Chandigarh, India (1-8-2013)

Journal Publications



Dr.V.Kamaraj published a paper titled "**Sensorless-based speed control of switched reluctance drive using ANN and FPAA for automobile applications,**" Australian Journal of Electrical and Electronics Engineering, Vol 10, No.13 (23-9-2013)

Mrs.R.Deepalaxmi, Dr.M.Balaji and Dr.V.Rajini published a paper titled "**Particle Swarm Optimization Based Selection of Optimal Polymeric Blend**" in IEEE Transactions on Dielectrics and Electrical Insulation (ITDEIS) Vol. 20, Issue 3, pp. 922-931, June 2013 (Anna university- Annexure-I, Rank-3397 ;ISSN -1070-9878, Impact Factor-1.094) (12-6-2013)

Dr.V.Rajini and M.Subramoniam published a paper, "**Support vector machine for diagnosis of Arthritis from digital X ray images using local ternary pattern**", in the Indian Journal of Applied Research, Volume 3, Issue 9, sept 2013, **ISSN - 2249-555X** (16-9-2013).

U.Shajith Ali published a paper titled "**Quasi Z-Source Inverter with Enhanced Voltage Gain for Photovoltaic Power Generation**", International Journal of Scientific and Engineering Research, Vol.4, No.8,[ISSN 2229-5518] [Impact Factor: 1.4] (2-9-2013).

Dr.V.Rajini and M.Subramoniam published a paper," **Computer aided diagnosis of osteoarthritis in knee Xray images using haralick features**", Jokull Journal ,Vol 63, No 8, Aug 2013, (ISSN:0449-0576)-Annexure 1 Imp factor `1.62 (23-9-2013)

U.Shajith Ali published a paper titled, "**Modified incremental conductance algorithm for Z-source inverter based photovoltaic power conditioning systems**", Journal of Electrical Systems, Vol.9, No.3, pp.279-289. [ISSN 1112-5209][Impact Factor: 0.288] (3-9-2013).

Dr.V.Rajini and M.Subramoniam published a paper titled, "**Diagnosis of Arthritis from Digital X-Ray Images Using SVM Classifier**", in PARIPEX, Indian Journal of Research (Annexure 2-Impact factor 0.5), Vol3, Issue 5, June 2013, ISSN 2250-1991 (19-8-2013)

Dr.V.Rajini and B. Shanthi Saravana (Full time research scholar) published a paper titled, "**Application of wind energy source to Large scale desalination system Prefeasibility analysis- Investigation of wind power potential in coastal areas of Tamilnadu**", in the journal of Advanced Materials Research (Annexure 2-Impact factor 0.03),Vol. 768 (2013) pp 57-63 (23-8-2013).

Dr.Mrunal Deshpande published a paper titled, "**Optimization of Magnetic Levitation System**", International Journal of Engineering Research and Development, Vol.8, Issue-7, Sept 2013 (14-9-2013).

"If you loose your dream, you loose your reason to live."

-Anonymous

Project Proposals

Dr.R.Ramaprabha and **Ms.S.Malathy** submitted a project proposal titled, “**Design and development of efficient building integrated PV system under partial shaded conditions**”, for Internally Funded Project for Rs.22.01 lakhs (1-8-2013).

Dr.Ranganath Muthu, Mr.M.Pandikumar, and Dr.R.Ramaprabha submitted a project proposal titled, “**Analysis, Design and Implementation of Photovoltaic Fed Water Pumping System for Agriculture**”, for Internally Funded Project for Rs. 17.5 lakhs (1-8-2013)

Dr.Ranganath Muthu and Mr.M.Senthilkumaran presented the status of the Project “**Study and Control of Weak Grid connected Matrix Converter based DFIG System**”, at the Twenty First Meeting of R & D Council of Centre for Wind Energy Technology (C-WET), Chennai (7-8-2013).

Dr. R. Ramaprabha and Ms. M. Vijayalakshmi (Full-time Research Scholar) submitted a project proposal titled, “**Design and Development of Flywheel based Power Conditioning System for a Renewable energy fed Micro grid**”, to the Department of Science and Technology under Women Scientists Scheme (WOS-A) for Rs. 23 lakhs (7-8-2013).

Dr.MrunalDeshpande and Dr.R.Seyezhai submitted a project proposal entitled, “**Flywheel energy storage with power electronic Interface**”, for internal funding (14-8-2013)

Dr.R.Seyezhai submitted a project proposal entitled, “**Solar based electric vehicle using BLDC Drive**” for internal funding (14-8-2013)

Dr.R.Ramaprabha and Ms.S.Malathy submitted a project proposal titled, “**Development and Validation of Techniques to Mitigate the Effects of Partial Shading in Rooftop Building Integrated PV Systems**” to the Ministry of New and Renewable Energy (MNRE) for Rs.72.43 lakhs (31-8-2013)

Mr.M.Senthil Kumaran has successfully defended his thesis titled “**PWM Techniques for Matrix Converters : Investigation and Applications**” on 27-8-2013.



RHAPSODY



Dr. Ashwin Kumar Sahoo, Professor, in the Department of Electrical and Electronics Engineering has around 18 years of teaching & research experience and 2 years of Industrial experience. Since September 1999, he has been serving at SSNCE.

He received his AMIE (Electrical Engineering) degree from Institution of Engineers (India), M.E. (Power Systems) from College of Engineering, Guindy, Anna University and Ph.D. from Madras Institute of Technology (MIT), Anna University, Chennai.

He has published over 18 research publications in International Journals, International & National Conferences. His areas of research interests are FACTS, HVDC, Power System Protection, Power System Control and Stability and Issues & Challenges in large scale Grid integration of renewable energy sources.

He is in the review panel of many International journal like Electric Power Components and Systems, Taylor & Francis group, Journal of Electrical and Electronics Research, Academic journals, International journal of Physical Science and has also reviewed papers for many IEEE conferences.

He has organized many Workshops, Seminars, FDPs, Conferences and a IEEE Student Congress for the benefits of Staff and students. He is a member of IEEE and life member of Indian Society of Technical Education (ISTE). He is the recipient of Outstanding Volunteer Award from IEEE and the Best teacher from SSN Institutions. His name is included in Marquis Who's Who in Science and Engineering, for the year 2011-12. He is the IEEE Student Branch Counselor, SSNCE, since 2000.

- **Dr.R.Seyezhai** has received the **Best Teacher Award** of SSN Institutions instituted by CTS for the academic year 2012-13.
- **Dr.M. Balaji** and **Mr.K.Murugesan** received The Best Teacher awards of EEE Department On the Teacher's day celebration on 14th September, 2013



Guest Lectures

Dr.M.Balaji delivered a Guest Lecture on , “**Control aspects of Permanent Magnet Synchronous Motor**” at Dhanalakshmi College of Engineering, Chennai (2-7-2013)

Dr.M.Balaji delivered a Guest Lecture on , “ **Control Aspects of Synchronous Reluctance Motor and Stepper Motor** “ at RMD Engineering College, Chennai (6-7-2013)

Dr.V.Kamaraj arranged the ISTE Seminar entitled, "**Role of Science and Humanities in IIT's and Engineering colleges**" at SSNCE (17-8-2013)

Dr.R.Seyezhai delivered a guest lecture on, “**Modeling of DC-DC Converters**” & “**Controllers for Boost DC-DC Converter**” in the National Workshop on , “Modeling of Controllers for DC-DC Converters” conducted by Dept of EEE, SCSVMV University, Khanchipuram. Also, a tutorial on the simulation of boost converters was handled (23-8-2013)

The Association of Electrical & Electronic Engineering (AEEE) was inaugurated by Shri.A.Jyothish Kumar, Associate Director, IGCAR, Kalpakkam who delivered a Lecture on , “ **Emerging Energy Scenario in India and its Challenges**”. The inaugural was followed by a workshop on , “ARDUINO” conducted by the Final Year EEE Students

Dr.R.Seyezhai inaugurated the DRDO sponsored National Seminar on, “**Advances in Power Electronics Technology in Electric Machine Drives**” organized by Vivekananda College of Engineering for Women, Tiruchengode, Namakkal District and delivered the inaugural address on, “**The role of Power Electronics Technology for Electric Drives**”. Also, a special Lecture on, “**Multilevel Inverters for Electric Drives**” was delivered by her in the morning session.

Interview with Dr.R.Ramaprabha

She makes the department more lively and lovely by cracking jokes and engaging the staff and students in her own style. She considers the department as an extension of her family and shows great concern about everything happening here. She is the one who initiates the celebration of any occasion in the department when the rest consider it “out of syllabus”. With her lady next door persona, she is easily approachable by all, someone who is open minded and always willing to help others in her best capacity. She

makes her presence felt in the department. Nobody can escape from her comments. She has the knack of solving problems with her high interacting ability and down to earth approach when the rest struggle with their handicapped intelligence. Her persistent drive in spite of her hard experiences with life and the child-like enthusiasm are inspirations to many. Her tangible and intangible contribution to the department often gets unnoticed.

For this edition of Redeem, we had the opportunity to talk to one of the friendliest teachers in our college, Dr.R.Ramaprabha. With an enthusiastic nod for our request to interview her, she humorously remarks that we ask her easy questions. We quickly give her the assurance and start off.

Ma'am, what do you like the most about our department?

There is a touch of humanity behind everything we do here. Our department is very flexible and still, we manage to get all work done smoothly.

You are extremely organized person, we see that every day in the way you conduct lectures, give notes and set up schedules. How do you manage to be SO organized all the time?

Yes, that is the habit I got from my father. When I was young, he would insist that I maintain everything properly. I would get really irritated but do as I was told. And then, eventually it became a habit. Now I think being organized is a way of life. I wish to inculcate that habit in my son and in all the students who work with me. Giving advice will not work out. I want to set an example for them.

How has research shaped your role as a teacher?

Actually, the research is not done just by me. It's done by my students as well. I started off with the 2009 batch students. The entire research work that my project students and I do is a teaching-learning process on both sides. It enhances me technically. Normally, we tend to ignore the small details. But doing my PhD, I realised that even the smallest of things help a lot.

Do you think more students from our college should get into research after completing their B.E.?

See, we cannot push all students. Students have their own priorities. Some might necessarily have to work. The students who go for higher studies usually work on research. But I would say that at least while you are here, all of you must make use of the facilities available and do some research in an area that you like. That will strengthen your resume even if you want to do a job.

Work or higher studies? Which is better?

It depends on the branch of study. Most of our EEE students normally get placed in the software industry. And then when we meet them after a couple of years, they feel the work they do has no relation to what they studied in their UG. So, if you do not get a core company offer, it's better to go for higher studies. It is better to work in a core

company and then do higher studies. Because then, you will have full practical experience. Based on job relevance, you can acquire higher qualifications. You will have a good understanding of which area you want to specialize in. The problem with direct higher studies is that you do not have the guarantee of practical experience and you won't know which area of specialization you should choose.

But we have so many problems with the university results and correction system. What can be done to remedy the situation?

The university has to take care; the staff with full subject knowledge must correct the papers. Sometimes, the student might have written the correct answer but that may not be there in the key. So those who are correcting must know the subject.

How has the SSN Research Centre helped you with your research?

During the initial stages, we did it on our own. Now, they give us a lot of help and suggestion for improving my work. They have also helped to set up a Solar Lab in EEE Department. But they focus more on solar materials.

We have some high-end labs like the HV Lab and Solar Lab in our college. Do you think we can generate revenue from these labs?

It is the seed now. We are generating funds to bring advanced equipment. Only after this enhancement, we can bring in the industry and let it out to generate revenue.

What is your biggest contribution to our department?

I am constantly motivating students towards PhD. That is my academic contribution.

Other than that, I have contributed to department strengthening activities like setting up the labs, taking up committee in-charge. I worked in the early stages when the labs had to be set up. The entire Measurement and Instrumentation lab was designed by me. All the equipment and component arrangements were done by me.

When asked about what changes can be made to our department, she proudly states that our department is the best as it is. She insists that students and teachers work towards a good teacher-student bond. Students should maintain a rapport with at least one staff.

~ Supriya.V & Srinidhi.R

(4th yr, EEE-B)

EINSTEIN....THAT PHYSICS DUDE....

Albert Einstein, a child who was born with an abnormal big head and was unable to talk with confidence, later became the greatest physicist of all times.

Some amazing facts about Einstein's Life:

1. Einstein was a very late starter. He started talking at the age of four but still he wasn't fluent till the age of 9. His parents were very much worried about this but he emerged from his cocoon with them one night while eating dinner. He reportedly said, "The Soup is too hot". When his parents asked why he didn't talk before, he replied "*Because up to now everything was in order.*"

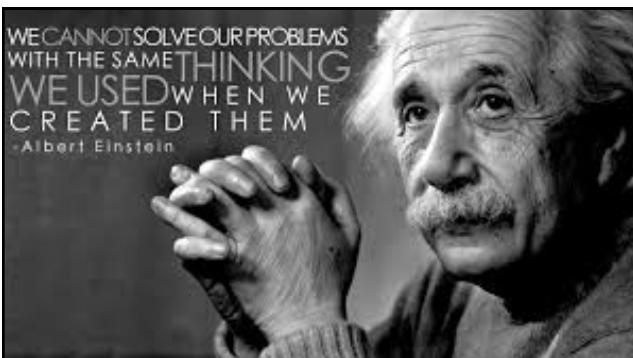
2. At the age of 5 his father gifted him with a compass and this was the starting of a revolution in his brain because he became exceptionally curious to know about the force causing the compass to point in various directions.

3. He once dropped out from his school for his non-serious behavior towards his studies and he also failed the college entrance exam at the age of 17. He failed all the subjects except science and math.

4. According to his Maths professor Hermann Minkowski, he didn't see any enthusiasm in his classes, and he once called Einstein a **Lazy Dog**.

5. After Einstein's death, his brain was removed from his head by Dr. Thomas Stoltz Harvey without the permission of his family. After many years and receiving permission from Hans Albert (Einstein's son), he started to study his brain and sent the slices of his brain to many other scientists where they found that his brain has extra-ordinary cell formations as compared to a normal person.

6. In 1905, he published a paper on mass-energy equivalence where he explained one of the most famous equations of all times, **$E=mc^2$** . This equation said that small masses could be converted into huge amount of energy and this was the start of **nuclear power** development.



Name: Albert Einstein

Born: 14th March 1879 in Germany

Died: 18th April 1955 in United States

Major field: Physics

Major achievements:

- Theory of Brownian Motion
- Mass-energy Equivalence ($E=mc^2$)
- Unified Field Theory

Major awards:

- Nobel Prize in Physics
- Copley Medal
- Time Person of the Century

Some of the coolest sayings and quotes of Albert Einstein:

1. Put your hand on a hot stove for a minute and it seems like an hour. Sit with a pretty girl for an hour and it seems like a minute. That's relativity.

2. A question that sometimes drives me crazy: am I or are the others crazy?

3. Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius — and a lot of courage — to move in the opposite direction.

4. A table, a chair, a bowl of fruit and a violin; what else does a man need to be happy?

5. The secret of creativity is knowing how to hide your sources.

6. If we knew what it was we were doing, it would not be called research, would it?

7. An empty stomach is not a good political adviser.

~ Janani,V

(2nd yr, EEE-A)

BC-AD

“Why do we fall? So that we can get back up again.”



BC: Hey I have got **KitKat**. It is awesome.

AD: What? How did I miss the release?

BC: Release? What do you mean? I took this from the next bench. I'm just hoping that they don't realize.

AD: **KitKat** is Android's latest version. From **Cupcake** to **KitKat**, isn't it great?

BC: Yeah, all the way through **Donut**, **Éclair**, **Froyo**, **Gingerbread**, **Ice-cream Sandwich** and **Jelly Bean**. Whatever tech gizmo happened through the course sounds less appealing to me compared to the fact that my mouth waters just at the thought!

AD: You are hopeless.

BC: By the way, I heard some people taking about **raspberry pie**. Do you want to check it out?

AD: At last, you realized that you are an engineer.

BC: How on earth is raspberry related to engineering?

AD: I should have realized that it is virtually impossible to bring you out of food world. Go! Eat your pie if you find it in our canteen. What you over heard, was not about pie. It's 'pi'. It is a credit card sized single board computer developed by Raspberry Pi Foundation. It is quite useful. You can probably use this where GUIs are not required.

BC: That's great.

AD: By the way, what happened to your specs?

BC: It broke, when I fell asleep with my glasses. I was badly wishing that my specs were also made of gorilla glass like my iPhone. I missed my favourite movie because of this.

AD: I don't know why such spectacles are not in the market. But I do know that, rhino shields are in the spotlight.

BC: Seriously, rhino? I'm pretty sure that in near future, there won't be any animal left in zoo that does not have some technical connection. Poor animals!

AD: Lol! But this is one certainly stands up to its 'rhino-ish' features. It is able to sustain 5 times the impact as compared to gorilla glass. It's highly transparent. It has about 95% transmission rate. It gives scratch protection. Developers claim that it gives protection even from scratches due to a cat! It is oleophobic, which means that it will repel oils and fingerprints. It's pretty cool, right?

BC: Yeah, sure. So are **Google glasses**. It can record what you see, share files upon your voice command and can even translate what you speak in real time! I guess it will be a good bye to typing.

AD: I don't think so. Guess what? Typing has found its way into biometrics!

BC: I don't get it. There is nothing 'biological' with respect to typing. Then, how can it be used for identification?

AD: This involves keystroke dynamics which is a class of behavioral biometrics. Based on the overall speed, variations in speed while moving between specific keys, etc, a person's identity can be substantiated. These factors are distinct for every person.

BC: Won't the speed of typing change based on other external factors such as the person's mood, urgency of the work and so on?

AD: That is true. A margin of difference is allowed. Therefore, this is more useful to prove a person's identity than to check it.

BC: When we think that we are done with a product, something better pops up. It takes everyone by a surprise.

AD: **I guess that is how technology grows...**

~ Nanditha,R

(2nd yr, EEE-A)

Journal Publications

G.Shobana, P.Sornadeepika (passed out UG Students, 2013) and **Dr.R.Ramaprabha**, “**Global Maximum Power Point Tracking of Photovoltaic Array under Partial Shaded Conditions**”, International Journal of Engineering Research (IJER) (ISSN: 2319 – 6890), Vol.2 , No. 3, pp. 223-227 , July 2013

B.S.Dhivya, V.Krishnan, R.Arvind (passed out UG Students, 2013) and **Dr.R.Ramaprabha**, “**Design of Power Converters for Solar Fencing System Employed in Agriculture**”, International Journal of Scientific Engineering and Technology (IJSET) (ISSN: 2277 – 1581), Vol. 2, No. 7, pp. 724-728, July 2013.

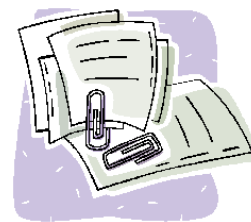
R.Anitha, S.Mahalakshmi, S.Bhavani (passed out UG Students, 2012) and **Dr.R.Seyezhai** published a paper entitled, “**Simulation and Implementation of High Gain Interleaved Boost Converter for Fuel Cell Applications**”, International Journal of Innovative Research In Computer and Communication Engineering, Vol.1, Issue, 5, July 2013

K.Abhinaya, V.Akshaya and U.Induja (Passed out UG Students, 2013) and **Dr.R.Seyezhai** published a paper entitled, “**Simulation, Analysis and Development of PV fed Quasi Impedance Source Inverter**” International Journal of Electrical & electronics Engineering, Vol.3, Issue 3, July 2013

(This work was funded by SSN Management under Student's Project Internal funding.)

B.Angeline Jerusha, S.Anu Vadhana, A.Arrul Dhana Mathy (passed out UG students) and **Dr.R.Ramaprabha**, published a paper entitled “**Comparative Study of Hard Switching and Soft Switching Boost Converter Fed from a PV Source**”, International Journal of Engineering Research (IJER) (ISSN: 2319 – 6890), Vol. 2 , No. 5, pp. 328-331 , Sep 2013 (1-9-2013)

Abhinaya Venkatesan, Aiswarya Mohan and Gayathri. K (passed out UG Students, 2013 batch) and **Dr.R.Seyezhai** published a paper entitled, “**Comparative Study of Active Power Factor Correction in AC-DC Converters**”, International Journal of Electrical, Electronics and Data Communication, Vol.1, Issue-1, 2013 (12-8-2013).



Paper Presentations

P. Praveenkumar (ME passed out -2013) and **Dr.A.N.Arvidan** presented a paper entitled “**Investigation of Triplen and Non-Triplen Harmonic Content in Line and Neutral Currents of Delta-Wye (Dy1) Transformer Feeding 2-Pulse Rectifiers**” in Proc. of the International Conference on Electrical Sciences, ICES 2013, at Shanmuga Arts, Science, Technology and Research Academy, Sastra University, Tanjavur,

M. Monica Sree (ME passed out -2013) and **Dr.A.N.Arvidan** presented a paper titled “**Performance Analysis of the Symmetrical Multipulse Modulated Cycloconverter Operation of the Matrix Converter Topology**” in the International Conference on Electrical Sciences, ICES 2013, at Shanmuga Arts, Science, Technology and Research Academy, Sastra University, Tanjavur, Tamilnadu, India (9-8-2013)

S.Meena of final year, presented a paper titled “**Application of RFID in railway track inspection**” at ICICE-2013, Bangalore.

V.Nithin, P.Siva Priya, N.Siva Sumanth, K.Vigneshwar (III Year Students) and **Dr.R.Seyezhai** presented a paper entitled, “**Investigation of Two Phase Bridgeless Interleaved Boost Converter for Power Factor Correction**”, International Conference on Electrical and Electronics Engineering (ICEEE 2013) at Hyderabad (19-8-2013).

N. Janani (ME passed out -2013) and **Dr.A.N.Arvindan** published a paper titled “**Validation of Power Quality Parameters in Modern 12-Pulse Converters using PSCAD and Experimental Data**” in the International Conference on Electrical Sciences, ICES 2013, at Shanmuga Arts, Science, Technology and Research Academy, Sastra University, Tanjavur, Tamilnadu, India (10-8-2013).

Project Proposals

S. Gowtham (II M.E. Power Electronics & Drives) has submitted a project proposal titled, “**Implementation of Power Flow Control in Hybrid Renewable Energy Generation Systems**”, for internal funded project (SSNCE) under the guidance of **Dr.R.Ramaprabha** (9-8-2013).

V. Cynthia Percy (II M.E. Power Electronics & Drives) has submitted a project proposal titled, “**Design and Implementation of a Novel Multilevel Type Full-Bridge Converter for Telecom Power Supplies**”, for internal funded project (SSNCE) under the guidance of **Dr.R.Ramaprabha** (9-8-2013).

Arthi, M.Bhavani and M.Deepa, (IV Yr. EEE, B) submitted a project proposal for the Student’s Internally funded project, “**Switched Inductor Z-Source Inverter for Photovoltaic Applications**”, under the guidance of **Dr.R.Seyezhai** (9-8-2013).

M.Sudershan, Sunil and B.Vignesh (IV Yr. EEE, B) submitted a project proposal, “**Development of Modular MLI for Photovoltaic Applications**”, for the Student’s Internally funded project under the guidance of **Dr.R.Seyezhai** (9-8-2013).

D.Umarani (IIYr.M.E., PED) submitted a project proposal for the Student’s Internally funded project , “**Energy Capture improvement of a Solar PV system using Quasi Z-Source Multilevel Inverter**”, under the guidance of **Dr.R.Seyezhai** (9-8-2013).

Sreemallika.R (IIYr.M.E., PED) submitted a project proposal for the Student’s Internally funded project , “ **Design And Control SEPIC PFC AC/DC Converters for LED Applications**”, under the guidance of **Dr.R.Seyezhai** (9-8-2013).

V.Nithin, N.Siva Sumanth, P.Siva Priya and Vigneshwar.K (III Yr.EEE, B) submitted a project proposal for the Student’s Internally funded project, “**Implementation Of A Bridgeless Interleaved Boost Converter Power Factor Correction Circuit For Hybrid Electric Vehicles**”, under the guidance of **Dr.R.Seyezhai** (9-8-2013).

Pridhi Prashanth, Nithya, Subesh Srinivasan (III Yr. EEE, B) submitted a project proposal for the Student’s Internally funded project, “**Development of Multiphase Boost Converter With Ripple Cancellation Network For Photo-Voltaic Applications**”, under the guidance of **Dr.R.Seyezhai** (9-8-2013).

Sports Activities

Manohar.K of final year won **the Inter Zonal Table Tennis competition**. He was also the runner up in the zonal level.

R.Surya of final year, was the part of the Basket Ball team of our college which won the **MIT tournament** held at Pune. The team also secured third place in a zonal level tournament.

R.S.Mohana Krishnan of final year, was the winner of **Anna University Zonal Badminton tournament** and an inter zonal Badminton tournament held at Madurai. He also won the Badminton competition which was a part of SPORTVIA, held at **IIT Madras**. He was also the part of Anna University Badminton team.

Other Activities



The members of the theatre club of our college, “Lights Out Please!” staged a play in the “**Music Academy**”.

R.Kavya (IV year) was a part of the cast and **R.Lakshmi Priya, S.Aparajith** (IV year) were a part of the crew.

R.Karthik Singaram and **P. Kamal** of final year gave a speech in “**Geek Night**”, an event conducted by THOUGHTWORKS.

P.Senthil Kumar of final year attended an internship in SV Computer Service Centre, Chennai for 3 weeks.

Pushkar.J of final year won second place in a dance event held in **Stanley Medical College**. He also secured Third place in Chengalpet Medical College. He was also the Runner up in **Fresh Face 2013**, an event organised by **The Times of India**.

R.Srinidhi, B.Rajeswari and K.Akshaya of final year were the semi-finalists in “**NIYANTHARA**” a project presentation event conducted by National Instruments.

Krithiga and Divya of second year won the **First prize** in crossword conducted by Tamil Mandram.

Mounica of second year won Second prize in **TRIPLE JUMP** in Loyola College of Engineering.

Kaviya.A and Nanditha Raman (second year) participated in the multimedia workshop “APIAX POINTS”.

Aashish Nikhil Ghosh (second year) won the First Prize in SSN Short Story writing contest.

Subesh (third year) and **Supriya,V** (fourth year) organized Solar Lamp Workshop in association with IEEE.

Dileep Gadepalli won IPAD in **International Youth Fellowship Quiz competition**.

Tulsi Ramanujam(third year) won first prize in Adapttunel Intra college cultural-Dance competition.

Nithya Subramanian (third year) participated in International conference in Electricals, Electronics&Computer Science, Hyderabad(on 22nd September) and was also awarded “**The Best Paper**”(Paper Title: **Study and design of Inductors for DC-DC Converters**)

Internships

Company	Student Name	Year & Section
IIT Madras	Nithya.S	III-B
The Elitists	Samyuktha.S	III-B
The Elitists	Ajay.S	IV-A
Research internship at Research Institute Hyderabad	Supriya.V	IV-B
Teja Soft Innovations Pvt. Ltd, Bangalore	Smruthi.K	IV-B
SV Computer Service Centre	P.Senthil Kumar	IV-B

Meenakshi College for Women conducted an **All India General Quiz** on account of the the birth centenary celebrations of Prof K.R.Sundararajan. The quiz was held for three days. The first day consisted of the prelims and it had an astounding turnout of over 550 teams across the country. The team consisting of **Karthikeyan.M.S (EEE 4th year)**, **Nandha Kishore (ECE 4th year)** and **Kris Srishak (ECE 4th year)** qualified for the quarter finals which was held on the second day and they topped their quarter finals group. The semi finals and finals were held on the third day and they won the second prize in the quiz. They were rewarded with **INR 60,000** along with other goodies. The quiz will be telecasted in **DD Pothigai** during November.

Placements

Company	Student Name	Year & Section
MuSigma	Meenakshi.S	IV-B
	Kamal.P	IV-A
	Dinesh.P	IV-A
Zoho Technologies	Karthik Singaram.R	IV-B
Latent View Analytics	Smruthi.K	IV-B
	Barani.B	IV-A
	Supriya.V	IV-B
	Bhavani.J	IV-A
	Siddharth.N	IV-B
Lister	Srinidhi.R	IV-B
	Pranav Narayan	IV-B
ITC	Lokesh	IV-A

“Use this day to do something daring, extraordinary and unlike yourself. Take a chance and shape a *different pattern* in your personal cloud of probability!”

-Audrey Niffenegger

Interview with Manohar.K

An interview with Table Tennis Player K. Manohar final year EEE A

He is cool relaxed guy always. He balances the academic and sports well. He is great table tennis player .With his busy campus interview schedule he finds some time to chat with us.

How did you get into TT?

I studied in a school where there was lot of preference for sports. When I was in 8th grade we had a compulsion to take up any one sport and play after class hours. As many of friends I fascinated cricket but as there were large number of students who took up cricket I was literally forced to take up some other game. I started playing 'TT' as my best friend happened to play. As I started playing 'TT' I created interest towards the game. I was surprised to see lot of spin variations. I wanted to play 'TT' professionally and so I joined an academy where I was fortunate to have a national level Coach named Mr.Kannabiran. So it all started like this for me!!

What are your achievements so far?

I started playing TT very late. It was difficult for me in the initial stages to compete at the national level. I represented the state twice in **School Games federation** of India. I went on to win a **Gold Medal** in the Sports meet conducted by **SDAT at the national level**. Recently I happen to win the **All India Inter-University** that took place at Delhi. I have won numerous Inter-Collegiate matches representing our College.

How do you manage sports and academics?

As a Sports person I always had an advantage of learning things quickly. I used to spend little time for learning concepts. I feel fresh after a good practice session. I find it difficult at times when I had travel for matches and miss theory and lab classes. I always made it a point to finish when I return. Being sincere and dedicated is the key. Thanks to all the support from my Teachers.

How do I overcome pressure situations?

As a sports person I'm prone to many pressure situations. I found it difficult initially but as time passed by I handled those kinds of situations calmly. It's very important to think before we act to a pressure situation and as a sports person one would expertise that overtime. Personally I take time out which would bring down the pace and also gives me time to think to act. So the key here is to slow down the process and act accordingly.

Why India is not performing well at International Level?

This would be the case a few years back. At present there are many talented lads who are performing well at the international level. But to become a super power in 'TT', it's going to take time. The Chinese are doing really well in 'TT'. To overcome the Chinese, India has to build more infrastructures, bring good quality coaches and support the players well. I assure that one day there is going to be an Indian player in top 5 and it's not far away.

How SSN helps to progress?

SSN has a good sports facility, where it can nurture new talents. Our sports Director Dr.P.Balaji is working really hard to bring more facility. Also there are other National level players with whom I can practice and gain more knowledge. The teachers are also very kind enough to help me out in case I miss out on any classes due to matches.

What do I learn when I interact with other international players?

As many people say, you always need to learn from experience. I assure that you are bound to have a wonderful experience and a great share of knowledge when you interact with international players. It'll change the dimension through which you look at the game. There is going be a sudden spike in your game when to play or interact with such high ranked players.

How to cope with failures?

In sports one is sure to experience both victory and defeats. A sports person always analyses what went wrong in case of a failure. I have learned that analysing a failure is very important to overcome it. This would lead way in protecting the failure from happening and it also teaches you how to react to the similar kind of situation when it happens the next time.

Future ambition in TT?

I always wanted to start a Table Tennis Academy where I can produce some extra ordinary talents. It is not an easy task to complete but with the help of other 'TT' players I hope I'll surely achieve this and make India's flag fly high in the Kingdom of Table Tennis.

~ EditorialTeam@EEE

Sachin Tendulkar : Thank you Sir

Thanks for all the magic you have created over and over again since 1994 when you sent the Kiwis on a quick leather hunt, thanks mainly to an indisposed Navjot Singh Sidhu and an unrelenting quest for timeless glory. You were barely 21 that wintry morning and chalked your own destiny with that spur of the moment decision to open the Indian innings. That 82 off 49 balls remain a cherished memory in every fan and critic of your's till date. First compositions last a life time and transcend generations akin to Ilaiyaraaja's Annaikili or Rahman's Roja...so was your composition that day. A combination of elegance and brute power, simply put an amalgam of Vivian Richards and Javed Mian-dad two of the best in the one day formats.

Your path to legendary status was charted long back in 1989 itself when you shook the likes of Abdul Qadir and took on Imran, Akram and Younis. The battery of stars who will give nightmares to any rookie cricketer just hearing their names...But you didn't care for reputations. You went in, saw the red cherry and sent it packing. In spite of your test match exploits from the tender age of 16, an age where teens are still drooling in their fantasies reading Mills and Boon and James Hadley chase..you were seriously taking on a more serious pursuit that of playing for India and taking the nation to flying heights. Not something any one can think of at that age. But then you were different..unique in many ways..and till date you have maintained that uniqueness..grace, humility and records..a rare combination indeed.

In your time you have seen legends falling like nine pins unable to handle the dizzying success such as Tiger woods, Lance Armstrong, Mike Tyson and a few more who left



disgraced, but you stand at a little under 5.5, but on top of the Everest and that too after spending an amazing 23 years in the cauldron of crick-eting life. Something that is unheard of in any serious sport with the exception of individual games such as Chess, Snooker and Boxing where you are your own man whether you succeed or fail. In a team game it is impossible to last that long and mind you, you are still left with some more years in test cricket...Let's say 25 years by the time you call it quits from all forms of the game...it requires an unending passion for the sport you love, leading a disciplined life and being a disciple of the game forever. This you have done better than any one else in World sport.

That's your gift to people.

Youngsters need not look beyond you for lessons in wisdom. Many people are now saying that you could have called it quits in one dayer's after the high of the 2011 world cup, but then no has the benefit of hind-sight in life..you thought you could continue to serve the team's cause but you also understood that you were fighting a lonely battle here..with your mind and body just not cooperating with your passion

and dedication. You have main-tained the same preparation regimen for 23 years. Hat's off for making the nets your temple and the pitch your altar from where you have drank from the elixir of life. And in the process allowed each of us the opportunity to bask in your pristine glory.

One cannot forget many unfor-gettable inning's that you have es-sayed..starting from the 82 at New Zealand, the hundreds in Sharjah when you tamed the desert storm, your battery against Henry Olunga, the magical innings during the 1996 world cup when you blasted McGrath in Mumbai, the pull shot you played against Caddick and the combination of flick, upper cut and straight drive against Akthar in the 2003 world cup and many more.... One can work on this never ending compilation for life.

A nation stood still when you were batting on 99...and we will continue to stand and salute you for all that you have left behind. Sachin you have given us love, laughter, pride and solace over two dec-ades...You have soothed the mind and calmed the hearts...You have given us the warmth and glow that as a nation we were missing...In short you singularly put Cricket In-dia on the World Map.

We wish you the very best in Life..Thanks for all that you have done..

Dr.K.S.Vijaya Sekar

Essential apps for you.

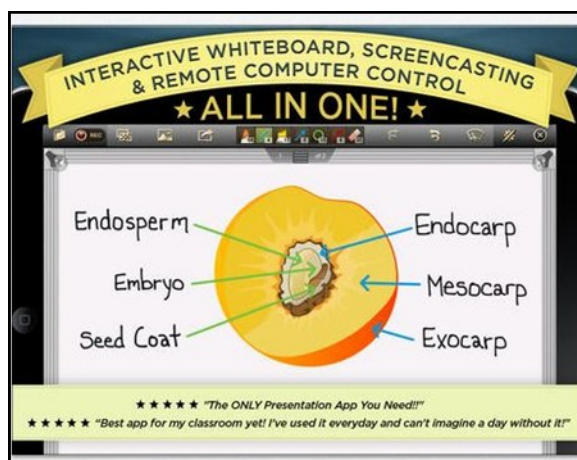


Doceri (ios)

It is an interactive whiteboard in which lecture notes can be taken down by one's handwriting and one's voice can be recorded while the notes are being dictated. The notes can be saved as pdf, making it useful to be shared among the students and

Features

- Hand-drawn lessons
- Presentations
- Graphics
- Sharing by still images, PDFs or audio/video screencasts
- Mirroring to Apple TV via AirPlay.



Teacher kit (ios and windows 8)

It is an essential application for the staffs. By using this application, there is no requirement to have a separate attendance book, grade register, excel files for performance tracking. Every possible feature has been made available using this application.

Features

- Classes and Students
- Seating Charts
- Attendance
- Behavior and Notes
- Gradebook
- Import and Export Files
- Data Backup



~ V.S.Nagarajan

(Alumni)

Chief Editor
Dr.Ranganath Muthu
Mr.R.Leo

Staff Coordinators
Mr.K.Murugesan
Mr.S.Malathy
Mr.M.Pandi kumar

Student Chief Editor
Iswariya.M (III Year)

Student Coordinators

Narapa Naidu (IV Year)
Masha Nazeem (IV Year)
Akshaya Padma Varshini (IV Year)
Barani.B (IV Year)

Nithya.S (III Year)
Sebi.S (III Year)
Balaji,N (III year)

Asish.G (II Year)
Nandhitha.R (II Year)
Sermisha.A (II Year)
Vignesh.M (II Year)

Art-Work
Dharani.M (III year)
Charan.P (IV year)

For your valuable feedback,
Mail us At redem.eee@gmail.com