OCTOBER 2012 - ISSUE 03

REDEEM

- Eupraxia 2012
- Renewable Electrical Energy Workshop
- Dr.Ranganath Muthu's Interview

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

QUARTERLY NEWSLETTER

REDEEM

Preface

Chief Editor

Life is a classroom and you never cease to be a student. The moment you cease to be a student you become deadwood. So the first lesson for all students of life is how to be a good student. And that is the first lesson to be taught to all students from Kindergarten. How can a student be a good or even best student? Knowledge comes first. Gaining knowledge is the primary aim of education. Knowledge metamorphoses into wisdom in the form of understanding-attitude-approach.

But knowledge doesn't favour all. It comes only to those who have curiosity, which is the mother of knowledge. It is the greatest virtue. What do all science, discovery and invention owe their origin to? Curiosity. What made Albert Einstein the greatest of all scientists? Curiosity. Those without curiosity are 'knowledge-challenged'. Knowledge is not rooted in facts but rooted in curiosity. For parents a child is a twenty-year project if they are taught to cultivate curiosity and to have fertile imagination otherwise it is a lifelong project. Certain skills have to be learned in early stages of life because later it is irrevocably suppressed. So cultivate curiosity, for curiosity cultivates knowledge

One of the most reliable and overlooked keys to happiness is cultivating and exercising our innate sense of curiosity that's because curiosity – a state of active interest or genuinely wanting to know something creates an openness to unfamiliar experiences, laying the ground work for the greater opportunities to experience discovery, joy and delight. With practice, we can harness the power of curiosity to transform everyday tasks into interesting and enjoyable experiences. We can also use curiosity to intentionally create wonder, intrude and play out of almost any situation or interaction we encounter. Only curiosity conquers fear not courage. Only with curiosity people grow through life otherwise they simply go through life.

In the present system of education students can't expect curiosity to be taught. So students must teach themselves curiosity. We can see some genetic element of curiosity prevalent in individuals .A few are naturally inclined and many are struggling like in concentration camp in Second World War. Don't just cram lessons. Cultivate curiosity towards what you learn. If you have curiosity, nothing is dull or tough. If you are dull in any subject, it means your teacher has failed in cultivating curiosity in you. Instilling inspiration and cultivating curiosity is the essential duty of a great teacher apart from removing ignorance. Attention is the sharp edge of curiosity. You should become attention density. Be like an arrow set on its aim. To be an arrow set on its aim, you should have no diversions. And to have no diversions you should have your senses in control.

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Contents

"LIFE IS LIKE A CAMERA - Just focus on what's important, Capture the good times, develop from the negatives and if things don't turn out, JUST TAKE ANOTHER SHOT"

Man from a psychological standpoint of development is not what he should be. He does not possess the self-mastery, the self-directing power of concentration that is his by right. He has not trained himself in a way to promote his self-mastery. Every balanced mind possesses the faculties whose chief duties are to engineer, direct and concentrate the operations of the mind, both in a mental and physical sense. When the self-regulating faculties are not developed the impulses, appetites, emotions and passions have full swing to do as they please and the mind becomes impulsive, restless, emotional and irregular in its action. This is what makes mental concentration poor. These can be naturally decreased by avoiding such food and drinks as have nerve weakening or stimulating influences, or a tendency to stir up the passions, the impulses and the emotions.

Watching yourself closely can only develop concentration of the mind. All kinds of development commence with close attention. You should regulate your every thought and feeling. When you commence to watch yourself and your own acts and also the acts of other people, you use the faculties of autonomy, and, as you continue to do so, you improve your faculties, until in time you can engineer your every thought, wish and plan.

Gandhi is not brilliant or talented or has best of education and background but by sheer determination and resolute courage he stands tall among all world leaders. The ordinary became extraordinary by serious commitment and pure intentions. Pure Intention is part of the great intelligence that runs our life and powers our being. Think of it as a helping hand that comes and gives you that final nudge, push, inspiration, courage or support. Do everything in your physical power first before you approach that higher power inside. It's only when you strain and strive, when you sweat and toil that the inner gates to your own being open up and you tap the pure spirit of Intention. That higher power within helps you only after all your personal efforts have been fully applied and your goal is still unreached. Stay tuned to that awesome power. Once you start tapping intention, keep flowing with that instinct. It will silently guide you, remove your rough edges and transform you completely. That inner transformation leads to infinite external possibilities.There's no greater philosophy than living with that divine power every day, every minute of your life.

"We remain big only as long as we understand how small we are"

From the HOD's Desk…

Dr.V.Kamaraj

Dear friends,

On behalf of the department of EEE, I sincerely thank the management, students, and editorial team members, for the successful publication of the 3rd issue of the newsletter. Positive attitude is an important ingredient in life. Optimism, ability with systematic training, confidence and a sense of time are the essentials for any meaningful outcome. Only proper guidance leads to the right path.

I congratulate the students and the staff members of the EEE Dept. for the same. I would also like to congratulate Dr.R.Ramaprabha on being the recipient of the "Best Teacher Award" of the EEE Dept. for the year 2010-11. Paper presentations at International Conferences are a mark of academic excellence, on this note; I would like to congratulate Dr.V.Rajini and Mrs.R.Deepalaxmi for presenting a paper at Bali, Indonesia and Dr.A.N.Arvindan for presenting papers at Kathmandu, Nepal. At the outset, I extend a hearty congratulation to Dr.Ranganath Muthu the success of the national level workshop on "Renewable Electrical energy Systems".

We thank all the contributors towards the preparation of this issue. Suggestions and feedback are welcome.

Workshop & Guest Lectures

Department of EEE conducted a two day National Level Workshop on "**RENEWABLE ELLECTRICAL ENERGY SYSTEMS**" during September 14-15, 2012.

Convener: Dr. V. Kamaraj & Dr.Ranganath Muthu

Coordinator: Dr.R.Seyezhai, Dr. R. Ramaprabha & Dr.M.Balaji

Around 40 members (faculty & PG students from various institutions over Tamilnadu) attended the workshop. Lectures on Energy Scenario and Impact of Power Electronics in 21st century, Power Converters for Solar PV Systems, Motor Drives & Applications in the Emerging Clean Energy Technologies, Design aspects of DC-DC Converters, Overview of Digital controllers, Wind Energy Conversion Systems, Power Conversion and Control of Wind Energy Systems, Challenges about Large Scale Integration of Wind Energy and Grid Management and Design and Analysis of Interleaved Boost Converter for Fuel Cells were delivered. Tutorials on MATLAB simulation of Converters for Renewable Energy Sources and practical session on digital controller for power converters were handled. The following subject expertise have handled the sessions:

Lecture sessions:

Dr. Ranganath Muthu, Dr. R. Ramaprabha, Dr.V.Kamaraj, Dr. B. L. Mathur, Dr. V. Rajini, Dr.M.Balaji, Mr. M. Senthilkumaran, Dr.Ashwin Kumar Sahoo and Dr. R. Seyezhai.

Tutorial sessions:

Dr.R.Seyezhai, Dr.R.Ramaprabha, Mr.N.Pandiarajan, Ms.R.Deepalaxmi, Ms.S.Krishnaveni, Ms. J. Anitha Roseline, Ms. Latha Dinesh, Ms. S. Malathy & Ms. RamMeenakshi (Research scholar-EEE)

Practical sessions:

Dr. M. Balaji, Mr. K. Murugesan and Mr.M.Pandikumar

Dr.P.S.Kannan, Principal, Vaigai College of Engineering, Madurai (Former Professor, Thiagarajar college of engineering) delivered a special lecture on "**Research Methodologies**", on 27th of September 2012, in EEE Department Seminar Hall.

Dr.P.S. Kannan has got 31 years of rich experience in Teaching/Research. He has published 35 papers in various prestigious national and international journals and presented his research findings in numerous national and international forums. Under his scholarly guidance and supervision 11 research scholars have obtained Computer Science Ph.D. degree in engineering. He has journeyed along with his research team members to the UK for his academic and research purposes. Driven by his thirst for innovation and passion for teaching, he has registered 2 Indian patents.

On 28th of September 2012 there was a guest lecture by our **Alumni student Mr.K.N.Dinesh Babu** who is currently working as Lead application Engineer in GENERAL ELECTRICS. The lecture was on the topic "**Understanding the importance on protection**". Second, third and final year students of EEE dept. attended this lecture.

Mr.K.N.Dinesh Babu's prior employments include Commissioning engineer at ABB and Graduate trainee at AREVA T&D

Faculty Achievements

Journal Publications

- Dr.R.Seyezhai, Asso.Prof. published a paper entitled, "Analysis and Implementation of Interleaved Boost Converter for Fuel Cell Systems', Journal of Electrical and Control Engineering, Vol.2, issue. 3, June 2012, World Academy Publishing, pp.30-34.
- Dr.R.Seyezhai, Asso.Prof. K.Radhasree, K.Sivapathy & V.Vardhaman (passed out EEE Students batch -2012), published a paper entitled, "Harmonic elimination and DC source equalization in three-phase asymmetric cascaded MLI", IOSR Journal of Engineering, Vol.2, issue 6, June 2012, pp.1313 -1319, ISSN: 2250- 3021.
- M.Balaji, Asso.Prof. & Dr.V.Kamaraj, Prof. & Head published a paper entitled, "Optimum design of Switched reluctance machine using Adaptive Particle Swarm Optimization", in the ARPN Journal of Engineering and Applied Sciences (ISSN: 1819-6608), Vol.7, No: 6, pp. 666-671, June 2012.
- Dr.R.Ramaprabha, Dr.M.Balaji, Asso.Prof & Dr.B.L.Mathur, Prof. published a paper entitled, " Maximum Power Point tracking of partially shaded Solar PV System using modified Fibonacci search method with fuzzy controller", in the International Journal of Electrical power & Energy Systems, Elseiveir Publications (IISN - 0142-0615), Vol.43, pp. 754-765, 2012, Impact factor: 2.247.
- Dr.R.Ramaprabha, Asso.Prof. & Dr.B.L.Mathur, Prof. published a paper entitled, "Application of intelligent control technique for global maximum power point tracking of solar photovoltaic system' in the ARPN Journal of Engineering and Applied Sciences (ISSN: 1819- 6608), Vol.7, No: 6, pp. 699-707, June 2012. Impact factor: 0.03
- M.Senthilkumaran, AP/EEE published a paper entitled, "Fuzzy logic based DTC of Inverters" in the International Journal of Engineering and Applied Sciences, August 2012.
- R.Deepalaxmi, A.P/EEE Dr.V.Rajini/Prof. and Dr.M.Balaji, Asso.Prof. /EEE published a paper entitled "Identification of Optimal Polymeric Blend (SR-EPDM) Using Soft Computing Optimization Techniques-PSO and GA" in ARPN Journal of Engineering and Applied Sciences, September 2012 (Vol-7; No-9).

Paper Presentations

- K.N. Dineshbabu (Research Scholar), Dr. R. Ramaprabha, Asso.Prof. and Dr. V. Rajini, Prof. presented a paper entitled, "Mathematical Modeling and Simulation of Grid Connected Solar Photovoltaic System", in the International Conference on

Rhapsody

Dr. B.L. Mathur, Professor in the Department of Electrical and Electronics Engineering has 47 years of teaching and research experience.

He received his B.E (EE) degree first class from Rajasthan University, M.Tech. Power systems from the Indian Institute of Technology Bombay and Ph.D. from the Indian Institute of Science, Bangalore.

His Ph.D. thesis was adjudged to be the best thesis of the year 1979 for Application to Industry and was awarded GOLD MEDAL by I.I.Sc.

He has published over 165 research publications in refereed international journals and in proceedings of international conferences. He has completed three AICTE funded projects worth Rs. 5 lakhs, 7 lakhs and 20 lakhs and two projects funded by SSN Trust worth Rs. 1.5 lakhs. Six of his students have been awarded Ph.D. in the year 2010 and seven others are pursuing research under his supervision. The subjects on whom the scholars are working/worked under his supervision are: Solar energy systems, Wind energy systems, Protection of transformers, Multi-level inverters, Magnetic Levitation and Brushless D.C. motor.

"To be yourself in a world that is constantly trying to make you something else is the greatest accomplishment."-Ralph Waldo Emerson

Advances in Electrical and Electronics Engineering (ICAEEE-2012) organized by Interscience Research Network-IRNet at Vijayawada, INDIA .The paper received the best paper award.

- R Hemalatha (Research Scholar/ECE), **Dr.R. Ramaprabha** and Dr. S Radha, "Modeling of Photovoltaic Charging System for the Battery Powered Wireless Sensor Networks", presented in *Third International Conference on Advances in Power Electronics and Instrumentation Engineering - PEIE 2012* at Bangalore, India, Aug 03-04, 2012, *published by the Springer* LNEE and available in the Springer Digital Library.
- R.Deepalaxmi, AP/EEE, Dr.V.Rajini, Prof./EEE Mr.M.Balaji, Asso.Prof/EEE have presented their paper entitled "Identification of Optimal Polymeric Blend for Cables using Particle Swarm Optimization Method" in the International Conference on "Condition Monitoring and Diagnosis (CMD)-2012" held at Bali, Indonesia during September (23-27), 2012. Also the paper has been published in the Proceedings of 2012 IEEE International Conference on "Condition Monitoring and Diagnosis"(ISBN-978-1-4673-1020-8).

Best Teacher Award

On the occasion of Teachers day celebration at SSNCE, Dr.R.Ramaprabha of EEE Dept. was awarded the 'Best Teacher Award' of the EEE Dept. for the year 2011. The award function took place in the august presence of Erode Tamilanban, Dr. S. Salivahanan, Dr.K.Kasturi and Ms.Kala Vijayakumar

- Dr.V.Rajini, Prof./EEE, Mrs.R.Deepalaxmi, AP/EEE have presented their paper entitled, "Property enhancement of SiR/EPDM Blend by Electron Beam Irradiation" in an International Conference on " Condition Monitoring and Diagnosis (CMD)-2012" held at Bali, Indonesia during September (23-27), 2012. Also the paper has been published in the Proceedings of 2012 IEEE International Conference on "Condition Monitoring and Diagnosis"(ISBN-978-1-4673-1020-8).
  - ❖ Dr. Tatsuki Okamoto from Japan, Dr. Jitka Fuhr from Swiss gave keynote lectures, while Prof. Cengrong Li from China, Ir. Yanuar Hakim MSc. from Indonesia and Dr. Sang- Jin Kim from Korea have delivered plenary invited speeches. The 2012 IEEE CMD had been planned and organized by the International Advisory Committee, chaired by Prof. T. Tanaka from Japan, International Corresponding members and Dr. Harry Orton from Canada as IEEE DEIS representative and Organizing Committee members. Various companies such as Megger, OMICRON, PT PLN and PTINES executed technical exhibition.
  - ❖ Oral sessions have been conducted in the various topics such as Transformers, Cables, GIS, Diagnosis technique, Rotating machines, Failure Phenomena, Ageing Mechanism, Asset management, PD monitoring Systems, CMD of Power Apparatus."

Dr.V.Rajini and Mrs.R.Deepalakshmi at IEEE Conf, Bali, Indonesia

"When I look inside and I see that I am nothing, that is wisdom. When I look outside and see that I am everything that is love. And between these two, my life"

- Dr. A.N. Aravindan Professor / EEE and A. Aathithya presented a paper entitled "Power quality analysis of single phase motors topology in PWM AC chopper and Cyclo converter mode" in International conference by International Conference in Sustainable Energy Technologies, IEEE-ICSET 2012 at Kathmandu, Nepal.
- Dr. A.N. Aravindan Professor / EEE and V. Muthukumarasamy presented a paper entitled " PSCAD validation of Delta-Wye Transformer as a Harmonic filter for THD mitigation of line currents in Three phase bridge rectifiers in International conference by IEEE-ICSET 2012 at Kathmandu, Nepal.
- Dr. A.N. Aravindan Professor / EEE presented a paper entitled " Single sensor HCC PWM control of 3 – phase boost type AC-DC converter giving unity power factor in International conference by IEEE-ICSET 2012 at Kathmandu, Nepal.
- Dr. A.N. Aravindan Professor / EEE and R. Arun Kumar presented a paper entitled " Single sensor HCCPWM control of the boost type AC-DC converter giving Unity Power factor in International conference by ICSET 2012 at Kathmandu, Nepal.

Project Proposals

- Dr.R.Seyezhai, Asso.Prof. submitted a project proposal titled, " Design and Development of Hybrid Multilevel Inverter for Grid connected system" to Department of Science & Technology, for Rs.23 Lakhs.
- Dr.V.Rajini, Prof/EEE submitted a MODROB project proposal for High Voltage Lab to AICTE.
- Dr. R. Ramaprabha, Dr. B. L. Mathur & Dr. M. Balaji submitted a project proposal titled, "Analysis of Converters for Solar Photovoltaic System under Partial Shaded Conditions" to AICTE under RPS.
- Dr.R.Seyezhai, ASSP/EEE, Dr.B.L.Mathur & Ms.Mrunal Deshpande submitted a project proposal entitled, "Development of Cascaded Z-source Multilevel Inverter for Photovoltaic Applications", to AICTE under RPS.
- Dr.V.Kamaraj, Prof. & Head & Dr.M.Balaji, ASSP/EEE submitted a proposal entitled, " Development of Sensorless Controller for PMSM Drive" to AICTE under RPS.

Guest Lectures

- Dr. Arumugam.R Professor / EEE delivered a special talk on " Electromechanical Energy Conversion" on 18.09.12 at Dhanalakshmi Srinivasan College of Engineering and Technology, Mamallapuram.
- Dr.Ashwin Kumar Sahoo, Prof./EEE delivered a Guest lecture on "FACTS Modeling on Transmission System", at Sankara University, Kanchipuram.
- Dr.M.Balaji, Asso.Prof/EEE delivered a guest Lecture on, 'Special Machines" at RMK & RMD Engineering College, Chennai.
- Dr.V.Rajini/Prof delivered a Guest lecture on "HVDC-An Emerging Trend in Evolving Future Power Systems" in a National Level Workshop on "Energy Systems" which is held at SASTRA University, Thanjavur.
- Dr. Ranganath Muthu delivered a Lecture on, Energy Scenario and Impact of Power Electronics in 21st century " in two days National Workshop on "Renewable Electrical Energy Systems" at SSN College of Engineering, Kalavakkam.
- Dr.V.Kamaraj delivered a Lecture on, "Motor Drives & Applications in the Emerging Clean Energy Technologies "in two days National Workshop on "Renewable Electrical Energy Systems" at SSN College of Engineering, Kalavakkam.
- Dr. B. L. Mathur, Prof./EEE delivered a Lecture on, "Design aspects of DC-DC Converters", in two days National Workshop on "Renewable Electrical Energy Systems" at SSN College of Engineering.

Dr.Ashwin Kumar Sahoo delivering a guest lecture on FACTS at Shankara University

- Dr.R.Ramaprabha, Asso.Prof/EEE delivered a Lecture on "Power Converters for Solar Photovoltaic Systems" in two days National Workshop on "Renewable Electrical Energy Systems" at SSN College of Engineering, Kalavakkam.
- Mr. M. Senthilkumaran, AP/EEE delivered a Lecture on, "Power Conversion and Control of Wind Energy Systems' in two days National Workshop on "Renewable Electrical Energy Systems" at SSN College of Engineering, Kalavakkam.
- Dr.V.Rajini, Prof./EEE gave an invited speech on "Wind Energy Conversion Systems" in National Level Workshop on "Renewable Energy Systems" at SSN College of Engineering, Chennai.
- Dr. R. Seyezhai, Asso.Prof/EEE delivered a Lecture on, "Design and Analysis of Interleaved Boost Converter for Fuel Cells", in two days National Workshop on "Renewable Electrical Energy Systems" at SSN College of Engineering, Kalavakkam.

Paper Reviews

- Dr.A.N.Arvindan, Professor accepted the invite and completed the review of four papers associated with IEEE- International Power & Energy Conference, IPEC-2012 to be held in Dec.2012 at Ho Chi Minh City, Vietnam.
- Dr.R.Ramaprabha, Asso.Prof/EEE acted as a Reviewer for the paper titled "Modeling and Performance Enhancement of DC Feed Photovoltaic Array by using Fuzzy Logic Controller Based MPPT" for Journal of Electrical and Electronics Engineering Research
- Dr.M.Balaji, ASSP/EEE has been assigned as designated reviewer for the following conferences:
  - PECON 2012 (IEEE International conference on power & Energy)
  - Fourth International congress on Engineering Education (ICEED 2012)

Academic Activities

- Dr.V.Rajini, Prof./EEE visited L&T ECC division at Manapakkam and had discussions with the R&D Head Mr.Srinivasan, for possible research consultancy for Desalination Plants power saving and also visited the Plants at VadaNemili under construction by WBAG-Israel along with the L&T team.
- Dr.A.N.Aravindan attended tutorials "Micro/Pico Hydel Generation Systems" and "Grid Integration of Renewable Energy Sources and Electric Vehicles" by Prof. L. Umanand (I.I.Sc. Bangalore) and Profs. Udaya K. Madawala (University of Auckland, New Zealand) and Mahinda Vilathgamuwa (Nanyang Technological University, Singapore) respectively and participated in the IEEE 3rd International Conference on Sustainable Energy Technologies, organized by IA/PELS Joint Chapter, IEEE Singapore Section, IEEE-ICSET'2012, held in September 24-27, 2012, at Kathmandu, Nepal.

Dr.V.Rajini, Prof/EEE visiting the Desalination Plant at VadaNemili under construction by WABAG- Israel along with L&T team

- Students Project (Sowndharya & Malavikka, IV Year EEE) on, "Online temperature estimation for BLDC Machine" has been approved by M/S Danfoss Industries as collaborative project under the guidance of Dr.V.Rajini, Prof/EEE.
- Dr. R. Ramaprabha has been approved as recognized guide by Anna University, Chennai (Ref. No.: 19.399.04).
- Mr.R.Leo, AP/EEE attended a NEN Workshop on, "Building Technology ventures", at VIT, Chennai.
- Ms.Alagu Dheeraj, AP/EEE attended the one-day Workshop on, "SCILAB" free open source software for numerical computation at SSNCE.

Words of Wisdom

- From Dr.Ranganath Muthu

Dr. Ranganath Muthu exudes a great deal of warmth and bonhomie each time you meet him. The hearty welcome that you are treated to, every time you pass by his office endorses this very fact. This is rather uncharacteristic of most highly experienced professors like him. With a massive 21 years of teaching experience in the areas of Instrumentation, Control and Power Electronics, he is indeed a highly cherished treasure of the Electrical and Electronics Department of SSN College of Engineering. Dr. Ranganath Muthu acquired his Undergraduate degree in Electrical Engineering from the Banaras Hindu University and went on to pursue his M.S and PhD at Madras Institute of Technology, Anna University. The Tamil Nadu State Council honoured him with the Young Scientist Fellowship during the year 1994-95 for Science and Technology. He is an active member of the ISA (International Society of Automation), IEEE and also a fellow of the prestigious Institution of Engineers, India. He was his usual affable and enthusiastic self as he responded to the barrage of questions that were posed. Here are the excerpts from the exclusive one-on-one:

What, according to you, are your contributions to the Engineering community and to the EEE Dept. of SSN?

I have been associated with the field of engineering for quite a number of years teaching UG and PG students the concepts of control engineering. At present, seven research scholars are working under my guidance and mentoring them is the contribution that I value the most. In addition, at SSN, I have organized a couple of conferences and a few workshops. Also, I, along with Prof. B.L.Mathur, was instrumental in setting up the calibration lab, equipped with a highly advanced calibrator, within the college. Now, we are also in talks to set up a wind energy lab with funding from CWET- Centre for Wind Energy Technology.

The recent Shanghai Rankings of World Universities, based on research, proved to be a shocker with no Indian University appearing on it. What do you think are the reasons for this and how do you think the research standards in India can be improved?

I think the research scenario in India is definitely not up to speed with the current trends because of the lack of proper support and facilities within the country. The funding that is allocated to research projects is meager and so does not help research scholars to implement their innovative ideas. If the stipends and grants for research scholars are increased and the scholars are freed of time-based restrictions, the research standards in the country are sure to be boosted. Furthermore, a basic research instinct has to be inculcated in students of science, right from a young age, by exposing them to a multitude of practical and hands-on training sessions….

You share a great rapport with your students and are truly Mr. Approachable…how do you manage to keep your humility and child-like enthusiasm intact, even after scaling great professional heights?

Honestly, I don't think I've achieved enough on the professional front to actually become less humble and enthusiastic. I strongly believe that a good teacher is someone who interacts with his students freely and grabs every opportunity of learning something from them. Being a control engineer, most of my knowledge in the field of Power Electronics can be attributed to my students and research scholars only. I think my experiences at the University of Bahrain, where I taught for a few years, have played a major role in making me more congenial and accessible to my students. Having said that, I also make sure that I maintain a certain distance with my students so that I do not lose the respect that is due….

Do you think the students of today are prepared to face the challenges of the industry? How can they better equip themselves to face the same?

In my view, the students of this generation are highly capable and can easily tackle the challenges thrown at them in an industrial environment, provided they are technically sound. The only way to acquire technical expertise is by a rigorous and thorough approach to understanding the core subjects with interest and enthusiasm. It is indeed heartening to see more and more students wanting to get into core industries and working hard on publishing technical papers and journals even when they're pursuing their undergraduate studies. So, if they keep putting in efforts to strengthen their fundamentals and technical skills, there's no stopping the students of this generation….

What kindled your passion towards teaching?

I was greatly inspired by one of my professors at BHU, Prof. A.N.Tripathi. He was an ideal teacher who made sure that he passed on all the knowledge that he possessed to his students, and also ensured that we learnt discipline and values. By the time I was in the final year, I was pretty sure that teaching was my ultimate passion. Even though I worked at the Rourkela Steel Plant for a couple of years, I always knew at the back of my mind, that teaching was my ultimate calling….

What are your non-engineering passions?

I like to unwind by following the stock market and the day-to-day business news, as I'm extremely interested in Finance. Also, I watch quite a bit of cricket….

Finally, what is the message that you would like to convey to the student community?

It is very important for every student to follow his/her passion. If you find that you're not whole-heartedly interested in what you are doing, you can always move on to something else that you are truly passionate about. You still have plenty of time in life to make mistakes, learn from them and become better individuals. So be sure to follow your heart and don't do anything to just follow the tide….

Laurels of Students

V.Supriya, R.Srinidhi, A.Rajalakshmi & B.Rajeswari (III Year EEE, B) along with their project mentors, Dr.V.Rajini, Prof/EEE and Mrs.S.Krishnaveeni, AP/EEE, have won the Chellammal Agro project Fund for the year 2012 for their project titled " Investigation on increase in Seed germination rate due to Electric Field" and they will receive Rs.25,000 for their project on the Scholarship Day.

Submissions for Internal Funding

- B. S. Dhivya, V. Krishnan and R. Arvind (Final year students) have submitted a project proposal titled, "Solar Fencing system for agriculture" for Chellammal Agro Engineering Project (SSNCE) under the guidance of Dr. R. Ramaprabha. They have also applied the same project for internal funding.
- B.Jeevitha, V.Kavitha & M.Manu Prasad (IV Year EEE) submitted a student project proposal to Dean Research for Internal funding entitled, "Harnessing Wind energy via Modern 3-Phase Matrix Converter", under the guidance of Dr.A.N.Arvindan, Prof/EEE.
- Pallamreddy Nirupa, Mounica Ganta & Thimmadi Akshitha (IV Year EEE) submitted a student project proposal to Dean Research for Internal funding entitled, "Analysis, Modeling and Implementation of a MD Interleaved Boost Converter for Fuel Cell Hybrid Electric Vehicles", under the guidance of Dr.R.Seyezhai, ASSP/EEE.
- Abinaya.K, Akshaya.V & Induja.U (IV Year EEE) submitted a student project proposal to Dean Research for Internal funding entitled, " Design and Development of Quasi Z source Inverter for Photovoltaic Power Conditioning System ", under the guidance of Dr.R.Seyezhai, ASSP/EEE.
- G. Shobana and P. Sornadeepika (Final year students) have submitted a project proposal titled, "Global Maximum Power Point Tracking of Photovoltaic Arrays" for internal funded project (SSNCE) under the guidance of Dr. R. Ramaprabha.

Journal Publications

- V.Adwaith, M.Banuchandar (IV Year EEE A), M.Senthilkumaran (AP/EEE) & Dr.Ranganath Muthu (Prof./EEE) published a paper entitled, "Fuzzy Logic Methodologies for torque ripple frequency reduction in direct torque control of an Induction Motor drive", in the International Journal of Engineering and Applied Sciences, Vol.7, No: 7, July 2012.

- P.Geeth Prajwal Reddy, L.A.Abishek Rajaraman, P.Ganesh and M.Senthilkumaran, AP/EEE published a paper entitled, "FPGA Triggered Space Vector Modulated Voltage Source Inverter Using MATLAB/System Generator®", in the Third International Conference on Advances in Power Electronics and Instrumentation Engineering - PEIE 2012 at Bangalore, India, Aug 03-04, 2012, published by the Springer LNEE, New York and available in the Springer Digital Library.

Project Proposals

- The student proposal titled, "Compact Maximum Power Point Tracking of Solar Photovoltaic System using Analog ICs", has been selected by Texas Instruments India for phase-I submitted by S. Ajay, S. Maneesha, G.Deepika and A. Arunkumar (III EEE students) mentored by Dr. R. Ramaprabha.
- N.Jenani (PG Student) submitted a student project proposal to Dean Research for Internal funding entitled, "Modern Line commutated Converters based HVDC Power Transmission with Digital Control" under the guidance of Dr.A.N.Arvindan, Prof/EEE.

Symposium Achievements – Paper Presentations

- M.Saravanan, S.Santosh Kumar of final year secured second prize in the technical paper presentation held at Frueza 2012 of Sri Sai Ram College of Engineering.
- G.Soundariya, S.E.Kayalvizhi, Nithya Sridhar of final year secured first prize in the paper presentation event held at Blitzkrieg 2012 of RMK Engineering College.
- N.Sabareesh, P.Prithiviraj of final year secured second prize in the paper presentation event held at Sree Sastha Institute of Technology.
- M.Saravanan, S.Santosh Kumar of final year secured second prize in the technical paper presentation held at VIT University.
- M.Saravanan, S.Santosh Kumar of final year secured first prize in the paper presentation event held at MNM Jain Engineering College.

Robotics

- Karthik Singaram and Kamal Prakash of third year secured first place in IIT-Bombay's "Grid Master" qualifiers, south zone.
- Siddharth R, Ramsamy V, Pradeep, Vignesh D of final year secured first prize in the robotics event held at Saifurza 2012 of Sri Sai Ram College of Engineering.
- Vignesh C, Siddharth R, Vignesh D of final year secured second prize in the robotics event "king of the ring" held at Saifurza 2012 of Sairam College of Engineering.
- Siddharth R, Sudharshan S, Pradeep M, Vignesh D of final year secured second prize in the line follower event held at Surge 2012 of Velammal Engineering College.
- Vignesh C, Ramasamy V, Pradeep M, Sudharshan S S of final year secured second prize in the robotics event "Robotaxi" held at Alconsey 2012 of Alagappa Chettiyar College of Engineering.
- Vignesh D, Ramasamy V, Shivaghnaneshwar S, Siddharth R of final year have won second prize in the robotics event "Robowar" held at Alconsey 2012 of Alagappa Chettiyar College of Engineering.
- Pandiya Raaj Kumar A T, Velmurugan C, Saravanan M of final year secured first prize in the robotics event held at InfoTech 2012 of SRM Valliammai Engineering College.
- Banuchandar M, Bharath Kumar J, Bhaskar B, Aravinthan A of final year secured third prize in the robotics event held at Surge 2012 of Velammal College of Engineering.
- Banuchandar M, Bharath Kumar J, Bhaskar B, Aravinthan A of final year secured first prize in the robotics event "Robotaxi" held at Alconsey 2012 of Alagappa College of Engineering.
- M.Saravanan, C.Velmurugan, A.T Pandia Raajkumar of final year secured first prize in the robotics event held at Valliammai Engineering College.
- M.Saravanan, C.Velmurugan, A.T Pandia Raajkumar of final year secured third prize in the robotics event (GRID FOLLOWER) held at VIT University.
- M.Saravanan, C.Velmurugan, A.T Pandia Raajkumar of final year secured first prize in the robotics event held at Madha Engineering.

Other Events

- Manohar K, Barani B, Akshya Padma Varshini B of third year secured second prize in the robotics event "Magnetronics" held at Jet Signum 2012 of St.Joseph's College of Engineering.
- Vani Shree, A.Poorani of final year secured second prize in the circuit tackle event held at Velammal Engineering College.
- Karthikeyyan.S, Ekambaram.A, Goutham.E, Ashok Raj.R secured second prize in the contraption event held at Sastra University.

Sports Achievements

- R.S.Mohanakrishnan of Third year won the Badminton All India inter-collegiate tournament conducted by SASTRA UNIVERSITY also was the winner of the SSN TROPHY. He is the winner in both Men singles and doubles event in the District Championship (Chennai District).
- K.Manohar of Third year won the Table Tennis All India inter-collegiate tournament conducted by SASTRA UNIVERSITY also secured third place in the SSN TROPHY.
- Mohanakrishnan.R.S of third year was the winner of the Kongu trophy and was the winner of Anna university zone – 3 and Inter Zone. He has also been selected to represent ANNA UNIVERSITY in the inter-institutional tournament in the event of Badminton.
- P.D.Subhadhra of second year was the winner of Colosseum conducted SASTRA University and Kongu Trophy in the sport of TABLE TENNIS.
- Sakthivel.M of final year Captained the team that was the runners up in the SSN Alumni Cricket Tournament

Student Placements

Aishwarya Ramesh	Thought Works
Saipraveen D	Arabian Industries LLC
Aswin Gautam	
Manuprasad M	Ashok leyland
Tiruna R	
Nithya Sridhar	
Akshaya V	Lister Technologies
Abhinaya Venkatesan	
Kavitha R	
Sudharshan S	

NSS Activities

- Vijayakumar.K of final year was the judge of the Debate conducted by NSS on the topic 'boon and bane of Nuclear power plant'. R.Kotteswaran, E.Gowtham, Vignesh Mahesh of third year and Rasu.M of second year participated in the Debate.
- Rasu.M of second year won second prize in the Environmental Quiz conducted by NSS.

Television Appearances

- Rasu.M of second year and Udaya Baskar of third year participated in the debate program named 'SANGAE MUZHANGU' in IMAYAM channel.
- S.Siva Ganesh of second year participated in LALITHA'WIN PATUKU PATU telecasted by KALAIGNAR TV.

Eupraxia 2012 *Excitement Electrified*

Eupraxia is a national level technical symposium conducted by AEEE annually during the last week of August. On 24th July 2012, the department of EEE held the inauguration of Association of Electrical and Electronics Engineers (hereinafter AEEE) in a grand manner in the presence of Dr. V.Kamaraj, HOD, EEE, Mr.Pandiarajan, Staff coordinator, AEEE and Dr. Rajesh Katyal, scientist and unit chief, R&D, C-WET, Chennai, Mr.K.Vijayakumar, President, AEEE. Over 300 students had assembled to witness the inauguration.

28th August 2012 was a big day in the history of EEE department. Eupraxia 2012 was held on that day in the presence of honorable chief guest Dr. P.Iyamperumal, Executive Director, Tamil Nadu Science and Technology Centre, Dr. Salivahanan, Principal, Dr. V.Kamaraj, HOD/ EEE, Mr. Pandiarajan, Associate Professor-EEE, Mr.Vijayakumar K, President, AEEE. On this occasion Dr. P.Iyamperumal released our department magazine CYNOSURE 2012.

This year Eupraxia had two new events summing up to a total of fifteen events. Five final year students were appointed to conduct every event. Second and third year students were encouraged to volunteer for any one event so that they gain exposure to the events. In addition to the events Eupraxia had three workshops out of which two workshops were introduced this year. Unlike other symposiums these three workshops were organized and conducted by students of EEE dept. themselves. Out of the three workshops, Arduino workshop was a purely hands on workshop. PCB workshop had a theory session as well as a practical session. The team, which conducted the Android workshop, had developed an Android application (first ever in the history of SSN), which served as an offline application for mobile device to spread information about the events to be held at Eupraxia. At the end of the month the download hit had crossed over 700. Eupraxia 2012 Facebook page (www.facebook.com/eupraxia.ssn) has crossed over 1100 likes and had a massive reach of over 26000.

The Core Committee of AEEE comprised of

- President – Vijayakumar K
- Vice President – Arrul Dhana Mathy A
- Treasurer – Poorna Chandran S
- Secretary – Harish V
- Technical Advisor – Geeth Prajwal Reddy P
- Joint Secretary – MohanaKrishnan R S

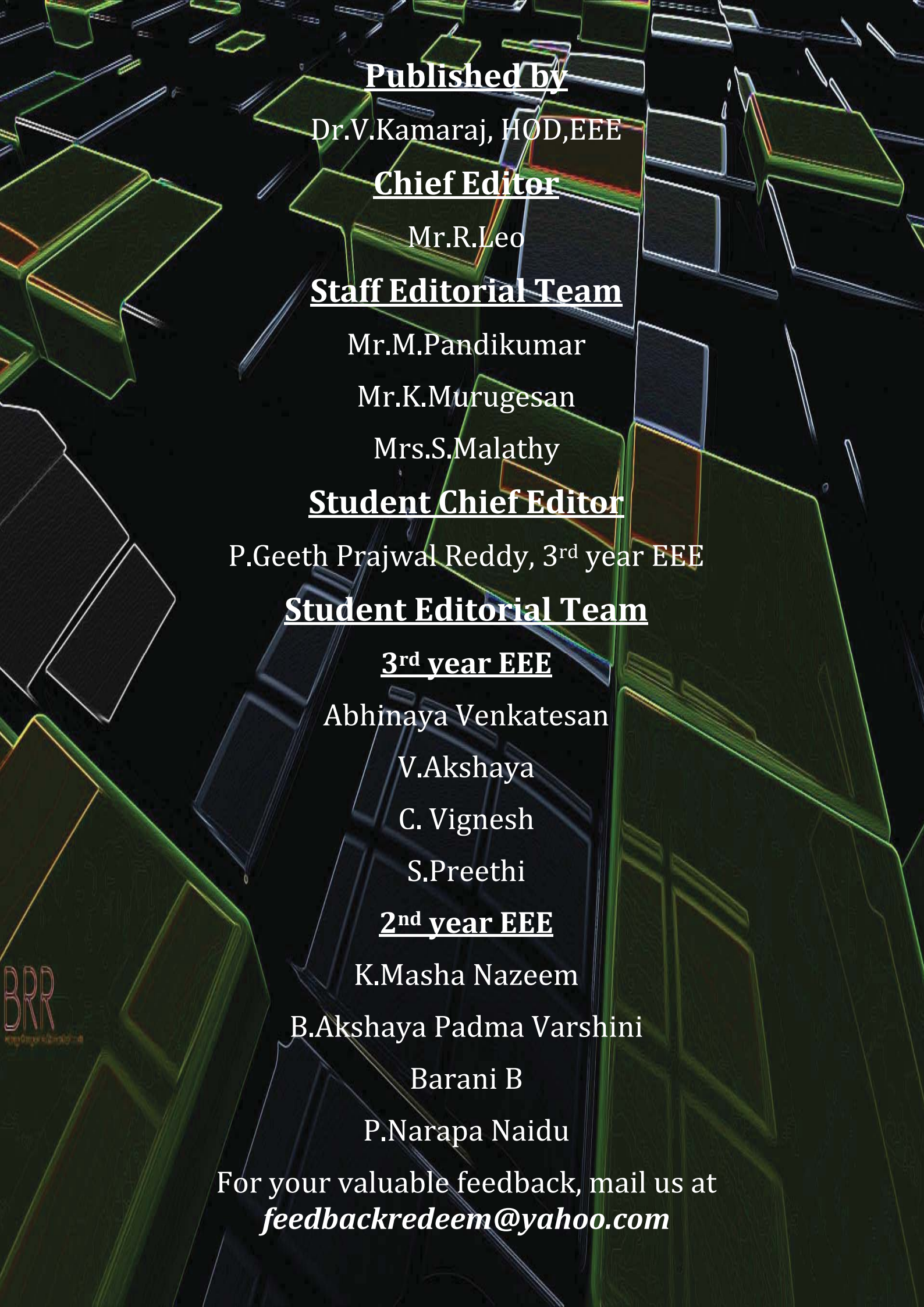
The highlights of Eupraxia 2012 were:

- Over 1500 online registration from all over Tamil Nadu
- Over 2500 on spot registration on the day of the event
- 258 participants for PCB workshop
- 70 participants (27 teams) for PCB Hands on Workshop
- 274 participants for Android workshop
- 120 participants for Arduino Hands on Workshop
- 746 papers have been received for the Paper presentation event

Essential Applications for Engineers

- V.S.Nagarajan, Alumnus

Quick Graph (ios)	**Sensor and Electrical toolkit (ios)**	**Scientific calculator (android)**	**C programs (android)**
It is a graph plotting app wherein once you enter the function to determine the plot,a 2D and 3D graph plot is obtained,which can be extended regardless of the limits.	It has an electric circuit calculator,which can be used for evaluating the expressions for the basic ciruits which everyone works with in their undergraduate courses.	It is a scientific calculator, which can be used as a substitute to the physical scientific calculator one uses in the classes, if there is need for calculator when you don't have it.	It is an app that is an essential one to the starters in the programming course.With this app, one can have a glimpse of basic programming stlye involed.
Features - Library for commonly used equations. - Support for Cartesian, polar, cylindrical and spherical coordinate systems. - Pinch to zoom. - Drag to rotate - move. - Swipe to delete equations from the equation list. - Shake to reset view to original state, or to clear entry fields. - Double tap to change visualization modes. - In-app email so you can share graphics and equations. - Save to photo library. - Copy to clipboard. - Hyperbolic and Inverse functions. - New functions such as Min, Max, if.	**Features** **Circuit Tools:** Resistor Circuits, Capacitor Circuits, Transistor Circuits, Op-Amp Circuits, Filter Circuits, 555 Timer Circuits. **EE Tools:** Signals, Resistor, Capacitor, Inductor, ADC, DAC	**Features** Has functions such as Sin,Cos,Tan,Sqrt,Ln. It has an exclusive 'Plot' feature ,by which equations can be plotted and visualise in 2D.	**Features** It has programs for generating and determining Prime numbers, Factorial, Palindrome, Leap year, All types of sorts etc.



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