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Preface

You are a glowing fragment of consciousness like a boat floating on the sea of the mind. You can no more control the mind than a boat can control the ocean. The boat and ocean analogy holds true only at rare moments of calm and clarity. That's because your so called boat has capsized in the ocean and you no longer have the faintest idea as to who 'you' might possibly be. Ninety-nine per cent of the time you and your mind seem to be a single entity. That's because of a long history of dependence.

You have been using the mind to get things done for you. You have no direct experience of a higher power inside that could be greater - far greater than what your mind can ever be. Since the mind is your only gateway to dealing with the world, you fill it every day with a wish list. Over the years, you and your mind have got interlocked with each other so much that you tend to identify yourself with it. You have become dependent on it. Like all one-sided relationships based on dependence, you tend to start submitting to your mind's whims and fancies. It's like having a millionaire friend who gives you all the fancy goodies you want and now when he asks for something perverted in return, you can't possibly refuse. So when the mind loads up long buried fears into you, you cannot say 'get lost'. You have accepted a subservient position to your mind and you have no choice but to bend to its command. So a hundred times a day your mind throws its secret perversion on to you and makes you submit like a slave.

That's the secret reason you cannot get rid of your fears, because you have no idea what they are, where they are lodged, who is making you feel them or why. You have given away your most precious freedom - your independence from your mind. Now you have no alternative but to suffer. Just imagine, something traumatic happened twenty years ago when you were in your infancy. Today that fear is colouring your decision, your thought and your action. Today, that fear is preventing you from living and enjoying this precious moment in time. Today, that fear has wrapped its tendrils around you and is choking your spirit into submission. And you have no idea of even its existence.

This much is clear when you understand that you are not your mind. Then who or what is the mind? We come to know about the mind only when we experience a blow in our life. Mind can be many things depending on what 'you' want it to be. Ideally it should become a wonderfully subtle instrument that throws up all options at any given moment for 'you' to de-

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cide and make a choice. The ultimate power to feel any particular emotion or thought should be up to 'you'. The mind should just think it all through and present 'you' what's available. Pain is inevitable but suffering is optional. However, it doesn't happen that way. Mostly the mind takes over the entire kingdom of 'your' being and randomly calls the shots, makes 'you' its slave and subjects 'you' to a persistent torture that can range from mild and infrequent to manic and depressive. In the cases of mild torment, the mind shoves up accumulated fears inside 'you' and ensures 'you' never get back to 'your' original pure state. That's the price it extracts when 'you' lose 'your' independence to it. So, what does 'you' denote? The notion of 'you' is an ever enduring mystery. We call it as a floating fragment (boat) of consciousness. Whoever 'you' may ultimately turn out to be — what's really important is that 'you' should regain identity and return as the king of 'your' internal kingdom of mind. Currently 'you' are like an outlaw on the run, and those fears are foot soldiers of the mind who chase 'you' and keep 'you' out of power. So how do 'you' come back and claim the kingdom? In the case of 'you' vs. mind — thinking clearly and discover that observer is not the observed and then act decisively. Crown yourself as the king. State that all emotions will be felt only if you permit it to be felt. Like all rulers, stay aware of potential threats to your sovereignty at all times. This sounds great but we all can try. Yes we can.

From HOD's Desk

Our department organized Eupraxia 2014 national level technical symposium successfully. Mr. Gopichand Bopparaju, Manager, Grid SSystems, R&D, ABB Operation Center, India, graced the occasion to inaugurate and delivered a lecture on Energy Conservation in Electrical Drives.

More than 94 students have been placed in various industries including Bosch and L&T. We have updated facilities available in the Simulation lab in terms of softwares and new computer terminals. I appreciate the efforts taken by Dr.V.Rajini for creating new lab facilities for research scholars in High Voltage lab. I congratulate Dr. Ranganath Muthu for presenting the outcomes and experiences of the C-WET, MNRE funded project titled "Study and Control of Weak Grid Connected Matrix Converter based DFIG systems" at the R&D Conclave on Renewable Energy, organized by MNRE, Vigyan Bhavan on 05 August 2014.

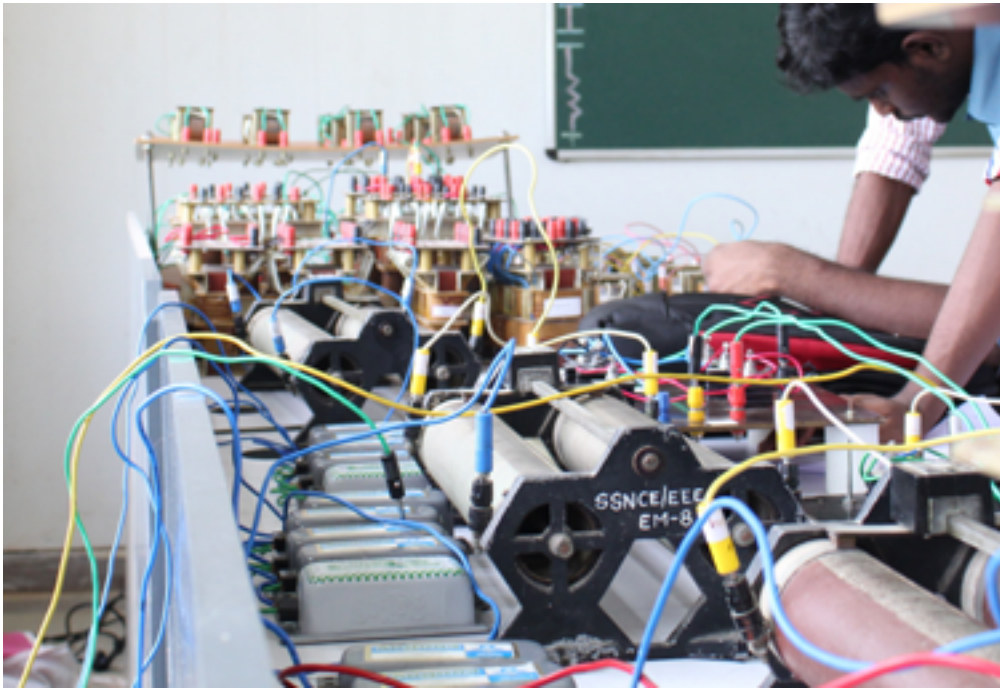
Efforts are being taken for the establishment of R&D facility in renewable energy and electrical drives. I take this opportunity to thank all the contributors who have contributed for this newsletter. Suggestions and feedback are welcome for the improvement of the quality of the newsletter.

EUPRAXIA!!

Eupraxia 2014, our annual national symposium was bigger and better. It started off with the auspicious lamp lighting ceremony at the inaugural. Mr. Gopichand Bopparaju, Manager, GRID SYSTEMS, R&D, ABB Operation Center, India, graced the occasion to inaugurate the event as the respected chief guest. Both technical and non-technical events were conducted. Technical events such as Bridge Balancio, Circuitrix, Technoraption, Megatron, Track-o-mania, Google Guru and the GenTech Quiz witnessed overwhelming participation. Non-technical events like Treasure Hunt, Dumb C and tions were also major crowd pull-ers. Paper presentations were made on a variety of interesting topics. Three workshops were organized – PCB, Arduino and MATLAB – which were a big hit with the crowd. Every participant enjoyed the workshop and found it informative. Overall, with over 3900 online registrations and an on-day crowd of about 4250 people, Eupraxia 2k14 was an unprecedented success. Cash Prizes worth Rs 1,00,000 were awarded to winners of various events from all the colleges around the state.

Gen-Tech Quiz

Gen-Tech Quiz, as the name implies, was a quiz based on technical and general knowledge. This event mainly consisted of two rounds. The preliminary round was a multiple choice question based round, which basically consisted of twenty technical questions and ten non-technical questions. One hundred and fifty teams, each team of two members, participated in the preliminary round. Six teams were selected for the finals. The finals consisted of three rounds. The first round was a technical based written round. The second and third rounds were 'pounce and bounce'. The second round consisted of non-technical general knowledge questions, and the third round comprised of both technical and non-technical questions.



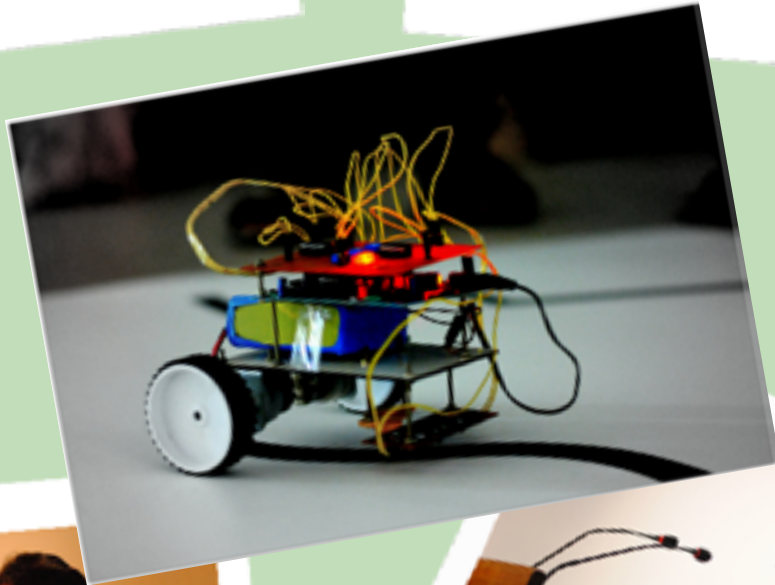
Circuitrix

-Ajith Balaji.N

This event attracted nearly 200 circuit lovers. While it was all about unwinding the tricks in the circuit, the participants were exposed to different levels of testing. The preliminary round which lasted 20 minutes tested the participants on various types of circuits. When asked about the preliminary round, one of the participants from RMK engineering college said that the questions were easy, quite challenging as well as time consuming.

10 teams out of 200 were filtered out for the second round which consisted of solving the given circuits theoretically. The level of difficulty was tough, a bit higher than the first round. The participants were once again given 20 minutes. However, in this round they had to solve five problems based on circuits theoretically. "The questions were really nice. They tested the basics which everybody knows but nobody remembers all of a sudden", said a participant after completing the second round. Among them only five were selected for the final round which involved implementing the given circuit practically.

This event turned out to be successful as had been the case the past couple of years. This was achieved mainly due to the perfect collaboration between the team of volunteers and event heads.



Laurels and accolades

Journal Publications



- M.Venmathi (Full-time Research Scholar) and Dr.R.Ramaprabha (Assoc. Prof.) have published a paper titled “Analysis of Photovoltaic Fed Partially Isolated Three-Port Full Bridge Converter with the Centralised Controller” in International Journal of Engineering and Technology (IJET) (ISSN: 0975-4024), Vol. 6, No.3, pp. 1495-1506, Jun – July 2014. SJR Impact factor 0.13 (Listed in Anna University Annexure 2)
- R.Deepalaxmi, Dr.V.Rajini have published a paper titled “Gamma and Electron Beam Irradiation Effects on SiR-EPDM Blends” in Journal of Radiation Research and Applied Science, Elsevier publications, JRRAS-D-14-00028- vol. 7 issue 3. (Now in press and available online from July 10, 2014) ISSN- 1687 8507; Issue 7; p.no-363-370.
- Dr.R.Seyezhai, ASSP/EEE and D.Umarani, AP/EEE published a paper titled, “Design and Simulation of Cascaded H- Bridge Quasi Z-source Multilevel Inverter for Photovoltaic Applications” in International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering, Vol.2, Issue 7, July 2014, ISSN No: 2321-2004.
- W.Margaret Amutha, Renugadevi and Dr.V.Rajini have published a paper titled “A Novel fused converter for hybrid power systems” in Advanced Materials Research Vols. 984-985 (2014) pp. 744-749
- V.Nithin, P.Sivapriya, K.Vigneshwar (IV Yr. EEE, B) and Dr.R.Seyezhai, ASSP/EEE published a paper titled, “Calculation of Performance Parameters and Reliability Aspects of Phase Shifted Semi Bridgeless Interleaved Boost Converter” in International Journal of Scientific & Engineering Research, Volume 5, Issue 6, June-2014 ISSN 2229-5518. This work was internally funded.
- W.Abhitha Memala and Dr.V.Rajini published a paper titled “Virtual instrumentation based analysis of induction Motor” in Advanced Materials Research Vols. 984-985 (2014) pp. 970-976
- R.Subashraj, S.Prabhu, V.Chandrasekar, N.C.Lenin, A.Manikandan and Dr.R.Arumugam have published a paper on “Design and Finite Element Analysis of Switched Reluctance Motor with Exterior Rotor” in International Journal of Engineering Research, (ISSN: 2347-5013), Volume No.3, Issue No.6, pp: 390-395, June, 2014.
- T.Porselvi, Jeyasudha Sankararaman and Dr.Ranganath Muthu Prof/EEE published a paper titled ‘Sensorless Field Oriented Control of Wind Turbine driven Permanent Magnet Synchronous Generator Using Flux Linkage and Back EMF Estimation Methods’, Research Journal of Applied Sciences, Engineering and Technology, Vol. 7, No. 20, pp. 4303-4312, May 2014.
- S.A.Nirmala, B.Veena Abirami and Dr.Ranganath Muthu Prof/EEE published a paper titled ‘Model Predictive Control of Drug Infusion System for Mean Arterial Pressure Regulation of Critical Care Patients’ in Research Journal of Applied Sciences, Engineering and Technology, Vol. 7, No. 21, pp. 4601-4605, June 2014.
- Ms.S.Malathy, AP and Dr.R.Ramaprabha, Assoc. Prof. published a paper titled “Suitability of Asymmetrical Multilevel Inverters for Partial Shaded Photovoltaic Systems” in Applied Mechanics and Materials (ISSN: 1660-9336), Vol. 622, pp. 173-179, 2014. SJR Impact factor 0.027.
- Dr.R.Ramaprabha, Assoc. Prof., S.Ajay, G.Deepika and S.Maneesha (UG Students) published a paper titled “Implementation of an Active Battery Balancer using Fly-Back Transformer” in ARPN Journal of Engineering and Applied Sciences (ISSN: 1819-6608), Vol. 9, No.8, pp. 1344-1347, August 2014. SJR Impact factor 0.13. This work was completed under SSN student internal funded project.
- Dr.R.Seyezhai and A.InbaRexy (Research Scholar) published a paper titled “Simulation Analysis and Im-

plementation of Two - Phase Interleaved Boost Converter with Ripple Steering for Power Factor Correction” in Advanced Materials Research Vols. 984-985, July 2014, pp.1046-1056. (AU-Annexure-2, Impact Factor: 0.03).

- Dr.R.Seyezhai, ASSP/EEE, Sudarshan.V.J, Sunil Kumar.M, and S.Venkat Brama Vignash (Passed out UG Batch 2014) published a paper titled “Design and Analysis of Sub-Harmonic PWM Techniques for a Nine Level Modular Multilevel Inverter” in JETRB4, Journal of Engineering And Technology Research, 2014, 2 (3):58-65, ISSN 2348-0424. This work was funded by Internally Funded Student’s Project, SSNCE.
- Dr.R.Seyezhai & M.Tamilarasi (Research Scholar) published a paper titled “State Space Averaged Modeling and Power Loss Computations for Fuel Cell Powered Four-Phase Interleaved Boost Converter” in Advanced Materials Research Vols. 984-985 (2014) pp. 1037-1045. (AU, Annexure-2, Impact Factor :03)
- Ganesan.P and Dr.V.Rajini, Professor/EEE, published a paper titled “Color space based edge detection for satellite image segmentation” in International Journal of Science Research and Technology, Vol. 2(3), Sep -2014, pp 18-22, ISSN : 2321-9262
- Ganesan.P and Dr.V.Rajini Professor/EEE, published a paper titled “Application of Modified K-Means Clustering Algorithm for Satellite Image Segmentation based on Color Information” in International Journal Of Advanced Research In Computer Science, Volume 4, Number 5, 2014, ISSN 0976-5697
- Ganesan.P and Dr.V.Rajini Professor/EEE published a paper titled “Comparative Study of Denoising Methods for Satellite Image Restoration Using Matlab” in International Journal Of Advanced Research In Computer Science, Volume 4, Number 5, 2014, ISSN 0976-5697
- Ganesan.P, Dr.V.Rajini Professor/EEE, B.S.Sathish and Khamar Basha Shaik published a paper titled “Segmentation and Comparison of Water Resources in Satellite Images using Fuzzy based Approach” in Springer book series Advances in Intelligent Systems and Computing, Springer Publishers, Vol. 309 (1) / 685-692 / 2015,2194-5357
- Ganesan.P, Dr.V.Rajini Professor/EEE, B.S.Sathish and V.Kalish published a paper titled “Unsupervised Segmentation of Satellite Images based on Neural Network and Genetic Algorithm” in Springer book series Advances in Intelligent Systems and Computing, Springer Publishers, Vol. 309 (2) / 319-326 / 2015,2194-5357.
- Dr.K.Murugesan Assoc. Prof/EEE & Dr.Ranganath Muthu Prof/EEE published a paper titled “Prototype Hardware Realization of the DSTATCOM for Reactive Power Compensation” which is accepted for publication in International Journal of Electrical Power and Energy Systems (Elsevier Publications).
- Ganesan.P and Dr.V.Rajini Professor/EEE, published a paper titled “CIELAB color space based high resolution satellite image segmentation using modified fuzzy C means clustering” in MAGNT research report, ISSN 1444-8939, Vol 2, No 6, 2014, pp199-210, DOI: dx.doi.org/14.9831/1444-8939.2014/2-6/MAGNT.30). (Web of Science, ACM Digital Library).
- Dr.R.Seyezhai, ASSP/EEE & D.Umarani, AP/EEE published a paper entitled, “Investigation of Quasi Z-Source Cascaded Multilevel Inverter for PV System with Maximum Power Point Tracking”, in the International Journal, Applied Mechanics and Materials, Transtech Publications. (SJR Factor: 0.13). This research work was supported by AICTE.
- Dr.Mrunal Deshpande Assoc. Prof/EEE published a paper titled “Effect of magnetic water on growth of legumes” in European Journal of Applied Engineering and Scientific Research, Vol. 3, Issue 3 Sept 2014.
- Dr.V. Rajini and R.Deepalaxmi published a paper titled “Performance evaluation of Gamma Irradiated SiR-EPDM Blends” Reference: NED7825, International Journal of Nuclear Engineering and Design, Elsevier Publication, Vol 273 pp 602-614 (Annexure 1)

Conferences

- S. Lakshmi (Part-time Research Scholar) and Dr.R.Ramaprabha (Assoc. Prof.) presented a paper titled “Review on Design and Analysis of Interleaved Boost Converter for Photovoltaic Applications” at International Conference on Control, Instrumentation, Communication and Computational Technologies-2014, (ICCCICT-2014), Noorul Islam University, Kumarankoil, July 10-11, pp. 318 – 323, 2014 (will be archived in IEEE digital library)
- Dr. R. Ramaprabha (Assoc. Prof.), R.Priya, P.Sadhana and J.Shiny Auxilia (Final Year UG Students) presented a paper titled “Design Methodology for Single Phase Cycloconverter using PSpice” at International Conference on Energy Materials (ICEM 2014), Sathyabama University, Chennai, July 28-30, 2014
- M.Vijayalakshmi (Full-time Research Scholar) and Dr. R. Ramaprabha (Assoc. Prof.) presented a paper titled “Design of Auxiliary Resonant Boost Converter for Flywheel Based Photovoltaic Fed Micro grid” at International Conference on Energy Materials (ICEM 2014), Sathyabama University, Chennai, July 28-30, 2014.
- Ms.G.Ramya, Full-time Research Scholar and Dr. R. Ramaprabha, Assoc. Prof., published a paper titled “Comparative Study and THD analysis of Multilevel Converter and Modular Multilevel Converter” at International Conference on Emerging Trends in Electrical Engineering (ICETREE 2014), T. K. M. College of Engineering, Kollam, Aug 04-06, 2014.
- Ms.M.Venmathi, Full-time Research Scholar and Dr.R.Ramaprabha, Assoc. Prof., presented a paper titled “Implementation of SEPIC/Zeta Three-Port Bidirectional DC-DC Converter for Renewable Energy Applications” in Proceedings of the International Conference on Inter Disciplinary in Engineering and Technology (ICIDRET 2014) (ISBN: 978-81-929742-0-0), pp. 57-63, held during Aug 21-22, 2014 at Palladam, Coimbatore.
- Dr.Ashwin Kumar Sahoo, Prof/EEE Participated and Presented a research paper titled ‘ Protection of Micro-grid through coordinated Directional Over-current Relay” at IEEE Global Humanitarian Technology Conference (IEEE GHTC –SAS 2014) , 26-27 Sept. 2014, Trivandrum
- R.Leo, AP/EEE Participated and Presented a research paper, titled “Reinforcement Learning for Optimal Energy Management of a Solar micro-grid” at IEEE Global Humanitarian Technology Conference (IEEE GHTC –SAS 2014) , 26-27 Sept. 2014, Trivandrum
- Dr.R.Seyezhai, ASSP/EEE & A.Bharathi Sankar presented a paper titled, “Investigation of Sensorless control technique for three-phase the BLDC Drive” in the International Conference on Emerging Trends in Science & Cutting Edge Technologies, organised by Conference World in association with at Connaught Place, New Delhi.
- Dr.Ranganath Muthu Prof/EEE, presented the outcomes and experiences of the C-WET, MNRE funded project on ‘Study and Control of Weak Grid connected Matrix converter based DFIG systems’ at the R & D Conclave on Renewable Energy, organized by Ministry of New and Renewable Energy (MNRE), Vigyan Bhavan, New Delhi on 5th August 2014.

Guest Lectures

- Dr.V.Rajini delivered a guest lecture at Easwari Engineering College on “Insulators and cables for Transmission” at Anna University sponsored FDP
- Dr.V.Rajini was invited as a chief guest for EESA 2k14 at Dhaanish Ahmed College of Engineering and inaugurated EESA 2k14. Presented a Guest lecture on “Recent trends on Power system Research” at DACE in the afternoon of 11-7-14
- Dr.R.Ramaprabha, Assoc. Prof. delivered a guest lecture on “Design of Power Converters for Solar Photovoltaic Systems” in a National Workshop on Role of Power Electronics Converters for Renewable Energy Sources (held during 7th& 8th, Aug 2014) on 8th August 2014 at Karunya University, Coimbatore.
- Dr. R. Ramaprabha (Assoc. Prof.) delivered a guest lecture on “PSpice for Circuit Analysis” on 22nd July 2014 at Sri Sairam Engineering College, Chennai.

- Dr.R.Seyezhai, ASSP/EEE delivered a lecture on, “Power converters for Fuel cells”, in the National Workshop on at Karunya University, Coimbatore.
 - Dr.R.Ramaprabha, Assoc. Prof. delivered a guest lecture on “An Overview of Photovoltaic Systems and Technical Challenges” in a Workshop on Photonic and Photovoltaic Devices (WOPPD -14) on 14th August 2014 at SRM University, Chennai.
 - Dr.M.Balaji , Assoc. Prof/EEE, delivered a guest lecture on Special Electrical Machines at R.M.K College of Engineering and Technology
 - Dr.R.Seyezhai, ASSP/EEE delivered a guest lecture on “MATLAB Applications” in the Second annual EEE Research Consortium held at Jeppiaar Engineering College, Chennai.
 - Dr.R.Arumugam Prof/EEE delivered a keynote address entitled “Computational Analysis of Electrical Machines”, at VIT University, Chennai, for the participants of a training program on 06-09-2014.
 - Dr.Ranganath Muthu Prof/EEE – Delivered guest lecture on ‘Lyapunov Direct and Indirect Methods’, at VIT University, Chennai Campus.
 - Dr.Ranganath Muthu Prof/EEE – Delivered the Inaugural Address on ‘Fuzzy Applications in MATLAB’ at the National Workshop on ‘MATLAB Applications to Electrical Engineering’ at Sri Venkateswara College of Engineering, Sriperumbudur.
 - Dr.V.Rajini Professor/EEE, delivered a guest lecture on” Understanding Machines and their magnetics” at Bajrang Engg. College, Thiruvallur
 - Dr.R.Ramaprabha, Assoc. Prof. delivered a guest lecture on “Neural Network Application to Electrical Engineering using MatLab” on 27th September 2014 at Sri Venkateswara College of Engineering, Chennai in the National workshop on “MatLab Application to Electrical Engineering” held during Sep 26&29, 2014.
- ## Project Proposal
- Dr.R.Ramaprabha, Assoc. Prof. submitted a proposal titled “Implementation of FPGA Based SEPIC/Zeta Four-Port Bidirectional DC-DC Converter Interfacing Photovoltaic System” for internal funding.She has presented her proposal for an internal funding on 09.09.2014.
 - Dr.R.Seyezhai, ASSP/EEE and Ms.D.Umarani, AP/EEE submitted a project proposal titled, “Design of High Efficiency Quasi Z-source Multilevel Inverter for Photovoltaic Applications” to MNRE.
 - Dr.M.Balaji, Assoc. Prof/EEE submitted a proposal titled “Design and Development of Hybrid Switched Reluctance Motor Drive” to DST under Fast Track Scheme for Young Scientist
 - Dr.Ranganath Muthu Prof/EEE, Submitted Project Proposal - Department of Science and Technology (DST) on ‘Design and development of a back-to-back converter for the unbalances in the grid connected DFIG wind energy conversion system’. Principal Investigator – Dr.Ranganath Muthu, and Co-Investigators – Dr.K.Murugesan and Dr.M.Senthil Kumaran.
 - A Project proposal was submitted by Dr.R.Ramaprabha, Assoc. Prof. and Ms.S.Malathy, AP, to DST under Solar Oriented Fundamental Research (SERI- Call B) has been shortlisted and called for interview on 30.08.2014. They presented the project in the solar expert group meeting on R & D (SEER-EG) at Indian National Science Academy (INSA), New Delhi.
 - Dr.R.Seyezhai ASSP/EEE & Vaishnavi (II Yr. M.E., PED) submitted a project proposal entitled, “Implementation of Seven-level Inverter with reduced number of Switches for BLDC drive “ to the Tamilnadu State Council for Science & Technology for DOTE Campus, Chennai for Rs.10,000/- under Student Project Proposal.
 - Dr.R.Seyezhai ASSP/EEE & Arthi (II Yr. M.E., PED) submitted a project proposal entitled, “Investigation

of IBC with voltage multiplier for battery charging of hybrid Vehicles” for Rs.15,000/- for the Concentric research Foundation .This project has been shortlisted for final presentation on Oct.7th, 2014.

- Dr.Ashwin Kumar Sahoo, Prof/EEE Submitted a research proposal on “Adaptive Relay Coordination Technique for Microgrid Protection” to Central Power Research Institute(CPRI), Ministry of Power.
- Dr.R.Seyezhai, ASSP/EEE and D.Umarani, AP/EEE submitted a project proposal entitled, “Cascaded Multilevel Inverter for Grid Connected Photo Voltaic Systems” to CPRI, Bangalore for Rs.38.76 Lakhs.
- Dr.R.Seyezhai, ASSP/EEE and A.Bharathi Sankar (Full-time research Scholar) submitted a project entitled, “Solar based Electric Vehicle using BLDC Drive”, for research funding to the Tamilnadu State Council for Science & Technology for DOTE Campus, Chennai.
- 35 batches of II, III and IV year (EEE) and M.E (PED) guided by various EEE faculty members presented project proposal before the committee of internal funding for student on 26.09.2014.

Reviewers

- Dr.V.Rajini reviewed a paper titled ,”5000 Hours Aging of EPDM Nano/Micro Composites as Outdoor Insulation” for JEEER
- Dr.V.Rajini acted as interview Panel member for M.E PED Student admissions 2014
- Dr.R.Ramaprabha, Assoc. Prof. acted as one of the judges for project display in the EEE student technical symposium Eupraxia on Sep 3, 2014.
- Dr.R.Ramaprabha, Assoc. Prof. has reviewed two papers for an International journal on IET Renewable Power Generation.
- Dr.R.Seyezhai conducted Project Review for II Year M.E. (PED) for phase-1.
- Dr.R.Seyezhai, ASSP/EEE reviewed a project proposal entitled, “DSP based speed control of BLDC Motor” for the Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya University, Kanchipuram.

en route to phd

- Ms.R.Deepalaxmi, research scholar of Dr.V.Rajini, has submitted her PhD thesis to Anna University on 24th July 2014 and the scrutiny report was received on 6th August 2014.
- Mr.U.Shajith Ali successfully defended his Ph.D. dissertation titled “Modelling and Analysis of Z-source Inverter for Photovoltaic power conditioning systems” through viva-voce examination on 5th September 2014.
- Oral defense was held for K.N.Dinesh Babu(research scholar of Dr. V.Rajini), at University of Petroleum and energy studies. Title of the thesis: Design and Control of Grid Connected Solar Photovoltaic System
- Thesis report submitted by Mr.Subramoniam, AP, Sathyabama University, (who is a research scholar of Dr.V.Rajini) was accepted. Oral defense details are:- Indian Examiner: Dr.Sivakumaran, NIT, Trichy, Rep for foreign examiner: Dr.Venkatraman, Associate Director, Radiological safety division, IGCAR



Dr. Shajith Ali has successfully completed his PhD program.

We congratulate him.



Industrial Visit

- Industrial visit to CSIO, CSIR, Tharamani Complex, Chennai was arranged for the II Year M.E. (PED) Students. The students along with five faculty members visited Calibration lab, Induction motor testing unit, Development of Smart buildings in CSIO, Nanomaterials Lab and Embedded system lab at CSIO, CSIR, Chennai. Dr.V.Rajini, Dr.R.Seyezhai, Dr.Mrunal Deshpande ASSP/EEE and Mr. R.Leo visited CSIO, CSIR, Chennai along with II Year M.E. students and interacted with the Principal Scientist Mrs. Chenthamarai Selvam, CSIO, Chennai.
- Dr.V.Rajini Prof/EEE Visited Ms. Alfo Electricals Ltd, a leading transformer manufacturers for possible research collaboration for testing new aluminium foil transformers made by them

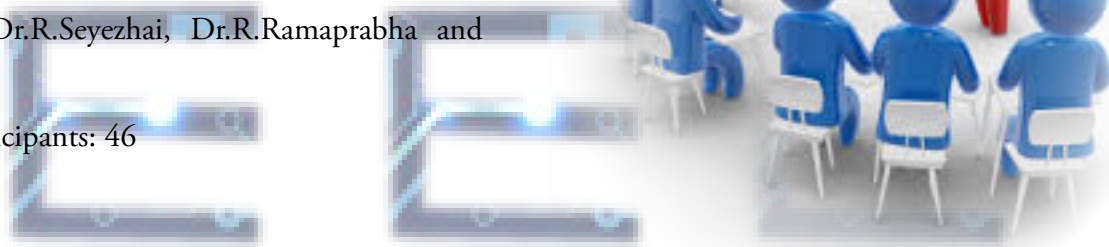
Workshops

Department of EEE organized a two-day national workshop on “Power Conversion for Smart Grids” during July 18-19, 2014

Conveners: Dr.V.Kamaraj and Dr.Ranganath Muthu

Coordinators: Dr.R.Seyezhai, Dr.R.Ramaprabha and Dr.M.Balaji

Number of Participants: 46



Lecture/Tutorial Sessions Handled by:

- Smart Grids and Smart Meters by Mrs. Chenthamarai Selvam, Deputy Director & Sr. Principal Scientist, Central Scientific Instruments Organisation (CSIO), CSIR Madras Complex, Tharamani, Chennai on 18.07.2014.
- Overview of Smart Grid Technology by Dr. Ranganath Muthu, Professor, SSN College of Engineering on 18.07.2014.
- Integrating Distributed Energy Sources into Smart Grid by Dr. R.Ramaprabha, Associate Professor/EEE, SSNCE on 18.07.2014.
- Voltage Control with Distributed Energy Resources by Dr. M.Balaji, Associate Professor/EEE, SSNCE on 18.07.2014.
- Smart grid: Protection Issues and Control by Dr. Ashwin Kumar Sahoo, Professor/EEE, SSNCE on 19.07.2014.
- Silicon Carbide (SiC) Power Devices for Smart grid Systems by Dr. R.Seyezhai, Associate Professor/EEE, SSNCE on 19.07.2014.
- Embedded Controller for Smart Grids by Dr. R.Vijayarajeswaran (Managing Director, Vi Micro Systems), Chennai on 19.07.2014.
- Demonstration on Controllers by M/s. Vi Micro Systems, Dr.M.Balaji (Assoc. Prof/EEE) & Mr.M.Pandikumar (AP/EEE) on 19.07.2014.

- Mr.P.Saravanan, AP/EE attended a seminar on “Mathematical Modeling and Control System Design using MATLAB and Simulink” conducted by Mathworks.
- Dr.R.Ramaprabha, Mr.U.Shajith Ali and Ms.S.Malathy coordinated Texas Instruments (TI) Project Contest for UG/PG students at EEE department associate with ECE department on 22.07.2014.
- Dr.Ranganath Muthu Prof/EEE, attended the ‘Next Generation Digital Energy Conclave’ organized by National Instruments in association with ICTACT (ICT Academy of Tamil Nadu).
- Dr.Ashwin Kumar Sahoo, Prof/EEE, IEEE Student branch and WIE conducted a workshop on “Women safety” –workshop was conducted by expert from a Chennai based NGO
- Dr.R.Seyezhai, ASSP/EEE attended the IEEE power electronics society meeting at IEEE Madras Section, Chennai to discuss the activities of the society for the month of October & November 2014.
- Dr.Ashwin Kumar Sahoo, IEEE Student branch, SSNCE in association with ACM-SSNCE chapter and CSE dept., organized a workshop on ‘LaTeX’ for students.

Other Achievements

- Dr.R.Ramaprabha, Assoc. Prof., and Ms.S.Malathy, AP completed the installation of 1kW solar array as a part of an internal funded project
- Dr.R.Seyezhai, ASSP/EEE has been nominated as the Secretary for the IEEE Power Electronics Society Chapter, Madras Section.
- Dr.R.Seyezhai, ASSP/EEE has been nominated as the editorial board member for the International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering from August 2014 onwards.
- Dr.R.Ramaprabha, Assoc. Prof. received “IET CLN Sir C. V. Raman Research Award 2014” in IET Chennai Network Achievements Awards 2014 function by IET (The Institution of Engineering and Technology) on 16th August 2014.
- Dr.R.Seyezhai, ASSP/EEE has been nominated as the advisory board member for the IRAJ Conferences & International Journals on Electrical, Electronics & Computer science Engineering.

Committee Meetings

- Dr.V.Rajini Professor/EEE, conducted Doctoral committee meeting for two research scholars Mr.Natarajan, Mr.Mohamed Ghouse, at SASTRA University.
- Dr.V.Rajini participated in energy researchers meet and presented the activities on 8th July 2014
- Dr.R.Ramaprabha (Associate Professor) has presented her research activities and progress in roadmap on 08.07.2014 at SSN Research center in Energy Research Group meeting on 8th July 2014.
- Dr.V.Rajini presented the progress of research in Material research group meet on 24th September 2014
- Dr.R.Ramaprabha, Assoc. Prof. has presented her research activities and roadmap at SSN Research center in the presence of Dr.Barua on 24th September 2014
- Dr.R.Seyezhai, ASSP/EEE presented her research work at the Energy Researcher’s meet at SSNCE on 24th September 2014.

Mangalyaan – An Indian Mars Odyssey

Devika.B.S., II year, EEE-A

September 24th 2014 was a moment of pride for Indians as Mangalyaan began orbiting Mars.

It filled the front pages of almost all national newspapers and appeared in many international newspapers as well.

A large number of people had been anxiously waiting for its success ever since it was launched on 5th November 2013.

Yet there are some others who aren't (sadly) much bothered about it. This article is about some facts regarding Mangalyaan.

Mangalyaan is basically a Mars orbiter launched by ISRO for a mission duration of 6 months (planned as of now). It is also known as Mars Orbiter Mission (MOM). Mangalyaan is a Sanskrit name literally meaning "Mars Craft".

Timeline of Mangalyaan

Date	Event
3rd August 2012	Government of India approves the project
5th August 2013	Assembly of launch begins
5th November 2013	Launched from Satish Dhawan Space Centre, Sriharikota, Andhra Pradesh
1st December 2013	Escapes the Earth's gravitational field
24th September 2014	Mangalyaan begins orbiting Mars

Some Technical Details regarding Mangalyaan

Dimensions	1.5m cube
Power	840 watts
Period	72hours 51 minutes 51 seconds
Launch mass	1337 kg
Dry mass	500 kg
Payload mass	15kg

Why Mangalyaan is so special for India?

1. Mangalyaan is one of cheapest interplanetary space missions ever accomplished costing 450 crores or \$67 million only (sounds huge but definitely less in terms of space missions. For instance the 2001 Mars Odyssey launched by NASA costs \$279 million)
2. With Mangalyaan, India reached Mars in the very first attempt and is the only country to accomplish this.
3. ISRO is the 4th organization in the world to send a successful Mars orbiter (after NASA, European Space Agency and Russian Federal Space Agency).

So my friends , please keep following the mission on news regularly. Who knows? Soon we may be part of a team that designs spacecrafts – perhaps Mangalyaan itself!!!

Latest entrees in the Apple world

Anjana.C, III year, EEE-A

Apple recently introduced the 4.7-inch iPhone 6 and the 5.5-inch iPhone 6 Plus. Both devices launched on September 19 in the first wave of countries. The first reviews describe the units as “thin”, “bigger and better”, with impressive battery life. Along with larger screens and a completely new iPad-style design with an ultra-thin body and rounded corners, the two new phones offer faster processors, better cameras, and Apple’s new Apple Pay payment system.

Apple’s new iPhones are available in Gold, Silver, and Space Gray, and are available in 16, 64, and 128 GB capacities. The iPhone 6 pricing starts at \$199 on contract, while the iPhone 6 Plus pricing starts at \$299.

While both models include the same 64-bit A8 chip and the same general design, there are several differences between the two phones. The iPhone 6 measures in at 6.9mm, while the iPhone 6 Plus is slightly thicker at 7.1mm. Apple’s iPhone 6 Plus also has three major differentiating factors: optical image stabilization for the camera, and a longer battery life, and an iPad-style landscape mode that displays more content on the screen.

Though the iPhone 6 Plus has optical image stabilization, both phones got some major camera improvements in form of sensor upgrades, improved tone map-

ping, better noise reduction, and new “Focus Pixel” technology, which improves the phone’s ability to select autofocus points. The front-facing camera was also upgraded, with an f/2.2 aperture that lets in more light and new burst mode capabilities. The phones have an impressive new “Retina HD Display,” with the iPhone 6 featuring a resolution of 1334 x 750 (326 ppi) and the iPhone 6 Plus featuring a resolution of 1920 x 1080 (401 ppi).

Design wise, the phones more closely resemble the iPad and the iPod touch than the iPhone 5s.

Both models have soft, rounded corners and a curved glass screen that melds smoothly into the thin metal body of the device.

The volume buttons on the left side of the device are now pill-shaped, and the power button is located on the right side of the device for easier one-handed use.



To further make its devices easier to use one-handed, Apple has added in a new double tap home button gesture called “Reachability,” which moves items from the top of the screen to the bottom of the screen for quick access. Other new features in the iPhone 6 and iPhone 6 Plus include WiFi calling support, faster 802.11ac WiFi, and support for Voice over LTE (VoLTE). Thus the apple iPhone 6 and 6 plus are great assets to the gadget family!

Placement Record

No of students placed:94

Bosch	14
L&T	4
MuSigma	8
Latent View	1
Accenture	35
CTS	25
Infosys	4
Wipro	3

	Name	Company
1	Nivedha T.	Accenture
2	Pranaya.M	Accenture
3	Priya R	Accenture
4	Riya R Vaishnaw	Accenture
5	Sandhya Sriraman	Accenture
6	R.Santosh Kumar	Accenture
7	Shiny Auxilia J	Accenture
8	Shreenithi.K.S	Accenture
9	Shrinidhi Sridhar	Accenture
10	Srinath R	Accenture
11	Syed Riazudeen. S	Accenture
12	Thilagavathy P	Accenture
13	Venkatesh R	Accenture
14	Vignesh S	Accenture
15	Vimal R	Accenture
16	Viswabaavani.M	Accenture
17	Yuvasree S	Accenture
18	Subhesh.R.R	Accenture
19	Akilesh L	Accenture
20	Ashwni U	Accenture
21	Deenadayalan K	Accenture
22	Deepika.R	Accenture
23	Dharani.M	Accenture
24	Dharmigari Shri Surya	Accenture
25	Digvijay Raghunathan	Accenture
26	Duvvuri Venkata Pavan Kumar	Accenture
27	Fathima Humaira.A	Accenture
28	S.Hamsa Niranjani	Accenture
29	Indhu Leka.G.B	Accenture

30	Karthick T	Accenture
31	Karthik T J	Accenture
32	D.Krishnamoorthy	Accenture
33	Kurapati Vinuthna	Accenture
34	A.Mathivathani	Accenture
35	H.Mohamed Ramiz Raja	Accenture
36	Niharika.K	Bosch
37	Neha M	Bosch
38	Rohit V.V	Bosch
39	Sai Shruthi G.S	Bosch
40	S.Samyuktha	Bosch
41	Sanjay S	Bosch
42	Sathish Kumar M	Bosch
43	P Siva Priya	Bosch
44	S.Sneha	Bosch
45	N.Amirthavarshini	Bosch
46	Balaji R	Bosch
47	Jayalakshmi.K	Bosch
48	F.J.Jeffy	Bosch
49	Ishwarya.M	Bosch
50	Nagineeni Siva Sumanth	CTS
51	Nilesh M Raisinghani	CTS
52	Pandian.A.K	CTS
53	Parvathy G	CTS
54	E.Ramprasad	CTS
55	Saikrupa C Iyer	CTS
56	Sathish R	CTS
57	Senthamizh Selvan C	CTS
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61	Vibhu S R	CTS
62	Vigneshwar K	CTS
63	Vimal Raj P	CTS
64	Abirami.A	CTS
65	Allen Renold Christy	CTS
66	Ananya.T.Jaisimha	CTS
67	Deva T	CTS
68	Divya B	CTS
69	Ellappan. N	CTS
70	Ganesan.C	CTS

71	Gokul D	CTS
72	Harish Manikandan R	CTS
73	Isewarya Tm	CTS
74	Janaranajani.V	CTS
75	Saravanan V P	Infosys
76	Vimala L	Infosys
77	Bhakiyaraj.J	Infosys
78	B Mohanakrishnan	Infosys
79	Pridhivi Prasanth	L&T
80	R.M.Sahdhashivapurhipurun	L&T
81	J.Srihari	L&T
82	Mandala Deekshith	L&T
83	Bamini.R	Latent View
84	Catherine Rency	Mu Sigma
85	Avinash Ramanathan	Mu Sigma
86	Athirai.V	Mu Sigma
87	Keerthika.D	Mu Sigma
88	Balaji Nagaraj	Mu Sigma
89	Nithya Subramanian	Mu Sigma
90	Priyanka B	Mu Sigma
91	P.D.Subhadhra	Mu Sigma
92	Padma Priya.M	Wipro
93	Sahana .A. S	Wipro
94	K.Madura	Wipro



Alumni Talk

- Geeth Prajwal Reddy Putchakayala

It is only through effort, perseverance and guidance can diamond be excavated from coal. The coal, I am, firstly would like to extend my heartfelt gratitude to my mother and father, and my teachers, professors, friends and all individuals who have bolstered my life and growth. Experiences, good or bad, have always helped in moulding me into a better person. Thank you.

Fresh out of school and very naive, SSNCE instilled several lessons and values, ranging from the technical education to human values and even hints of spirituality and sociality. Being an Alumna of SSN College of Engineering, will always be a feather to my hat.

Currently, I'm pursuing my Masters in Electrical Power Engineering at Rheinisch-Westfälische Technische Hochschule (RWTH) Aachen University, Aachen Germany. RWTH, one of the most Elite institutions in Europe, offers several interesting courses ranging from basic sciences and mathematics, engineering disciplines, up to advanced bio technology and medical research. Electrical Power Engineering offers a new and extensive insight into the fields of Electrical Engineering. The prospect of pursuing higher studies in Germany or other European countries offers a whole new horizon to language, interactions, education and culture.

Right from the screw drivers we use to the completely automated production plants around the globe, the

“Made in Germany” tag always speaks above the rest. This is true for education as well. Common choices for higher education are the United State of America, Australia, and sometimes Singapore, but I would urge all to consider European countries and preferably prioritize Germany for core electrical engineering disciplines such as Power Electronics, Electrical Machines and Drive technologies, Renewable Energy, High Voltage and Power transmission and distribution. University courses in Germany offer industry oriented knowledge with a strong theoretical foundation which not only help us to learn our subjects better, but also an insight into its applications. The best part is that many universities offer courses in English. Another point worth mentioning are the examinations. They are as tough and challenging as the courses themselves but unlike the American system of weekly assessments and tests that add up to the final grade, there is only one final examination for each course that will challenge you theoretical knowledge, analytical skill and most importantly, with only 90 minutes, time management! Most of the courses require a mandatory 14 week internship in a core electrical company for completion. This will help us acquire valuable industry knowledge and may also pave way to thesis and employment opportunities in future. The vast infrastructure such as libraries, study centers and laboratories and academic forums sustain a very productive and creative learning environment.

Despite education being the primary goal, learning a new language and experiencing European culture are added advantages. Denouncing the assumption of racism (and the fear of a few, fascism), I have to say, the Germans are very friendly and helpful people. Their openness and tolerance to people of other nationalities is definitely noteworthy. The food junkies also need not fear (as long as you know how to cook), with the support from our Sri Lankan counterparts, several stores that sell Indian groceries are available. So our sambhar saadham and thyr saadam with pickles could still fill our tummies every day. The well connected network of public transport throughout Europe, makes commutation a very easy and safe task. Except for the rarest occasions, buses and trains are a standing example of German punctuality. All universities in German offer “semester tickets” to their students at a much subsidised price, enabling us to use all forms of public transport, within a stipulated region ranging from a city to a state.

Ya ya alright, but how much is all of this going to cost me? Yes, that’s one of the highlights to education in Germany. Other than the very nominal living expenses, several university offers tuition free courses (such as mine). Just to give an idea, my entire expenditure in Germany for a period of one year was just a little over eight lakh rupees, making Germany an ideal option for economic considerations during Masters.

To all my fellow SSNites, who are considering pursuing their Masters abroad, do take time and effort to research courses being offered in Europe. However do keep in mind the following while researching courses offered by European Universities - Language of the course and examination, duration of the course, local climatic condition, especially for countries like Sweden and Norway which have very short daytimes. Wishing you all the very best.

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