

Nature Amplified

We grab"The Best Research Department" Award

Issue. 05





Interview with Dr. Ashwin Kumar Sahoo

Conference on Power Systems and Drives (PSPED-13)

REDEEM

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Preface

It's a universal principle of nature that you become what you believe. The world has a way of manifesting your deepest thoughts and convictions. So be careful of what you believe for that has a way of coming true. If ever you go deep enough inside your mind and touch the very roots of your negative thoughts, you will have to recall your early childhood and relive the experience of how different people your own father, mother or brother or friend or teacher screwed up your mind and shoved a whole bunch of fears, anxieties and insecurities inside you things which you believed as true then because you were very young and didn't have the mental power to know it wasn't so. It's okay many such things enticed upon you when you are ignorant but it is your stupidity to allow these things to bother you even now .*What is the use of your years of education and experiences? Is the education you received is obsolete?*

If you look closely your talent is not deciding where you are but your psychology which is built up in your early part of your life .

All growth in life is essentially an unlearning, an effort to reverse the deep negativity that is choking you up. *We have to unlearn to relearn*. Start by asserting the very thought you refused to believe so far. *Creativity is an expression of stream of consciousness. The stream is the subliminal flow inside you.* By that I mean half-conscious thoughts your mind naturally throws up all the time. You are responding to every-thing around you in a naturally artistic way, but that artistry is subliminal not easily accessible to your conscious mind. This is the reason why you can enjoy a song or a movie or a painting. Your mind is responding creatively to the artistic effort and because of that response you enjoy it. If you weren't naturally creative, you couldn't appreciate art or music or a movie. *But the difference between you and a movie director is that he knows how to tap his subliminal mind and you don't.*

The moment you start asserting "*I am creative*", you open a window in your conscious mind and allow the subliminal creativity in you to start flowing in. You will become sharply conscious of beauty everywhere, you will start appreciating artistry more acutely and soon enough, you will start getting new original ideas from deep inside.

All creativity is only a tapping of what is thrown up from within. If you relax and allow yourself, your unconscious mind can throw up such fantastic ideas, such great music, such awesome visuals, such complex beauty that can mesmerise you and the world with its grace and power. *Growth doesn't happen by anger, hatred and prejudices. It happens by love, passion and true commitments.* People feel inspired only when you can help them discover what they want to do not what you what them to do. There is no risk free model available in global economy thus taking and managing risk needs to be well developed art. *It is time we accept certainty of uncertainty, stop wasting time worrying about it and find opportunity amidst risk. We should constantly strive towards the possibility we can be from what we are now...*

~Chief Editor

From the HOD's desk.....

It gives great to release the **5th** Issue of our department newsletter— **REDEEM**. I would like to take this opportunity to thank the editorial team for their efforts in the preparation of this newsletter.

Notable achievements by students, alumni, and colleagues have been highlighted in this issue. I wish to congratulate the faculty and students for retaining "**The Best Research Department Award –2013** ". Hope this issue will help us to stay connected. We welcome your valuable inputs for improvement in the future editions.

Thank you.



~ Dr.V.Kamaraj (HOD EEE)



Workshops

The department of Electrical and Electronics Engineering organized an one day workshop on Control of **Power Converters using Matlab-Xilinx Interface** on 22nd march 2013.

The main focus of the workshop was on the Applications of MATLAB-Xilinx interface in the control of power electronics converters using FPGA. There were around 32 registered participants. In the first session the participants were given a brief introduction to FPGA programming using VHDL. The second session was a tutorial session where the participants gained hands on experience in coding the FPGA with the help of the MATLAB-Xilinx interface. **Dr. M.Balaji, Mr.M.Senthilkumaran** and **Mr.M.Pandikumar** organized and coordinated the workshop.



Life is like the ocean. It can be calm and still or rough and rigid but in the end, it is always beautiful.

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CSIR - IEEE sponsored Second National Conference on "Power Systems, Power Electronics and Drives" (PSPED-2013)

As our beloved Dean Dr. K. Kasthuri had rightly addressed in his message column for PSPED – 2013 that "the days of a single person carrying the gamut of laurels no longer exists and any good gadget that could be done by an individual can be done better by a team of likeminded men and women". That we all agree. The outcome of the synergized effort results in conduct CSIR - IEEE of



sponsored Second National Conference on "Power Systems, Power Electronics and Drives" (PSPED-2013) during March 1-2, 2013, by department of Electrical and Electronics Engineering of our Institution. Out of 175 technical papers received, 35 were selected by the conference technical committee after a peer review process and published in the proceedings. The papers in the proceedings focus on the areas like Power Systems and Control, FACTS & HVDC, Power Quality, Renewable Energy, Power Electronics and Drives. The oral sessions of the conference were spread over 2 days (1 and 2nd March, 2013) and four keynote addresses were delivered.

Dr. Gopichand Bopparaju, Manager, Grid Systems R & D, ABB- Chennai was the chief Guest for inaugural function. He also delivered his keynote address in the areas of "Recent Trends in HVDC Technology". Next Key note address was by Dr. K. Shanti Swarup, Professor, IIT Madras, Guest of honor, on the topic "Energy Management Systems in Power Systems and Smart Grid". Dr. S. Saliva-

gates. On the second day Dr. P.Aravindababu, Professor, Annamalai University, TN delivered his talk on "Power System Optimization Problems" and Dr. Sarat Kumar Sahoo, Associate Professor, VIT University, Vellore, TN, delivered his address on "Recent Advances and Application of Motor Drives".

On behalf of the organizing committee PSPED -2013, we congratulate all the authors for their commendable papers, which include rich, innovative, relevant and pragmatic developments in the field of Electrical Engineering.

~ Dr.Ashwin Kumar Sahoo and Dr.V.Rajini

(Organising chairs PSPED 2013)

Insanity is doing the same thing over and over again and expecting different results. -Albert Einstein



Staff Ventures





- **Dr.V.Kamaraj, Prof & Head** published a paper entitled, "Explicit necessary and sufficient conditions for Quadratic linearization "in the Asian Journal of Control, Wiley, Vol.15, Issue1, Jan.2013. (Impact Factor: 1.034).
- **Dr.R.Seyezhai and T.Tamizhselvan** published a paper Entitled, "A Comparative Study of Multiple Reference and Multiple Carrier PWM Technique for a Hybrid Multilevel Inverter" in the European Journal of Scientific Research, Vol.94, No: 3, Jan.2013, pp.414-422. (Listed in Anna University, Annexure-II),
- **Dr.R.Seyezhai** and **M.Sudhakaran** published a paper entitled, "Analysis of level shifted PWM techniques for a three phase nine-level inverter", in the European Journal of Scientific Research, ISSN 1450-216X Vol. 95 No 1 January, 2013, pp.76-88(SNIP 0.493, SJR 0.033).
- **Dr.R. Seyezhai, A. Arul Robin** and **V. Chamundeeswari** published a paper entitled, "Implementation of Digital control for Negative Output SuperliftLuo Converter", European Journal of Scientific Research ISSN 1450-216X Vol. 94 No 3 January, 2013, pp.442-451(SNIP 0.493, SJR 0.033)

Dr.R.Seyezhai received First place in Best Faculty award for encouraging students for publishing journal papers (24 students published their papers under her guidance in IJ).She also won Third place in Best Researcher award (with 21 Journal publications)

Dr.B.L.Mathur received award for getting First Place in Publishing highest number of papers (10) in Energy Research along with **Dr.R.Seyezhai** and **Dr.R.Ramaprabha**

Dr.R.Seyezhai, ASSP Received an AICTE RPS Project titled, " Development of Cascaded Z-source Multilevel Inverter for Photovoltaic Applications" for **Rs.24.5 Lakhs**. The co-investigators are **Dr.B.L.Mathur** and **Dr.Mrunal Deshpande**.

Dr.V.Rajini, Prof., received AICTE-MODROS project titled, "Modernisation of HV lab in Power Systems Lab"

Dr.V.Rajini, has been appointed as reviewer in IEEE Transactions on Dielectrics and Insulators.



Dr.M. Balaji receiving his Ph.D Degree at Anna University.



- **Dr.Ashwin Kumar Sahoo** delivered an invited talk on "WIND ENERGY GRID INTEGRATION & CHAL-LENGES - A Case Study" at the CSIR sponsored One Day National Symposium on 'Role of Power Electronics in Grid Integration of Renewable energy sources- Issues and Challenges' ,on 16th March 2013, at VIT University-Chennai campus.
- **Dr.Ashwin Kumar Sahoo** was invited as Chairperson to chair paper presentation sessions on 21/3/2013 for MNRE sponsored National conference on 'Application of AI Techniques for Hybrid Renewable Energy Systems AITHRE 2013' conducted at SRM University during 21-22, March 2013.
- **Dr.RanganathMuthu, Prof.** delivered an Invited Lecture on 'Fuzzy Logic Control & Applications' at the Workshop on Artificial Intelligent Controller Applications to Power Electronics and Power Systems at Velammal Institute of Technology, Chennai on 23/1/13.
- Dr.Ashwin Kumar Sahoo was invited as the Chairperson for one paper presentation session on 1/03/2013 at Second National Conference on "Power Systems, Power Electronics and Drives" (PSPED-2013) held during March 1-2, 2013, SSNCE.
- **Dr. R. Ramaprabha** has delivered an invited talk on "Power Converters for Solar Photovoltaic Systems" in MNRE sponsored one day seminar on Power Converters for Renewable Energy Applications at VIT, Chennai on 5/1/13.
- **Dr. R. Ramaprabha** has delivered an invited talk on "Neural Network Controller for DC-DC Converters" in DRDO sponsored Workshop on Artificial Intelligent Controller Application to Power Electronics and Power Systems using MATLAB/SIMULINK on 24th Jan 2013 at Velammal Institute of Technology, Chennai.
- **Dr.M.Balaji** delivered a lecture on "Introduction to FPGA" at National Workshop on "Control of Power Converters using MATLAB Xilinx Interface" on 22.3.2013 at SSNCE.
- **Dr.M.Balaji** delivered a Guest Lecture on "Power Electronics and Drives" at MIET Engineering College, Tiruchirappalli on 22/2/13.
- **Dr.R.Seyezhai** delivered a guest Lecture on , "Introduction to Electrical Drives & Control" in the National Level Workshop on Advanced Digital Controllers for Electrical Drives at VIT University, Chennai on 15th February.
- **Mr.P.Saravanan** delivered a guest Lecture on, "Introduction to Embedded and real time operating system", in Ranipet Engineering College at Chennai on 8/2/13.
- **Mr.U.Shajith Ali** participated in the MNRE sponsored one day seminar on, "Power Converters for Renewable Energy Applications" at VIT, Chennai.

Life isn't about waiting for the storm to pass; it's about learning to dance in the rain.

Paper presentations......

- **Dr.RanganathMuthu,Prof.** and **Ram Meenakshi** published a paper entitled, 'An Overview of Power Point Tracking Techniques for Wind Energy Conversion Systems', Advanced Materials Research, Vols. 622-623, January 2013, pp. 1030-1034 (SNIP 0.158, SJR 0.030).
- **Ms.Krishnaveni**, presented a paper entitled, "Design and Simulation of nano pulse generator" in International conference on Global Challenges and Strategies in Engineering Management and Disaster Management-ICBDM-2013 at Noorul Islam University,Kumarakoil,Tamilnadu.
- **Ms.Krishnaveni**, and **Dr.V.Rajini**, published a paper entitled, "Design and Simulation of nano pulse generator", journal of Emerging Technologies-Electrical engineering [NICEJET], vol 1,no.1,March,2013,ISSN:0973-2993.
- Raam Meenakshi and Dr.Ranganath Muthu Prof. presented a paper entitled, 'Study and Analysis of Full Order Asynchronous Generator in MATLAB/ Simulink Environment', International Conference on Circuits, Power and Computing Technology, Noorul Islam University, March 21-22, 2013
- . **Dr.V.Rajini Prof., D.Vinodhini, V.Vasan Prabhu** published a paper entitled," Design and analysis of digital PWM controller for DC-DC converter", International Journal of Computer Applications (0975 8887), Volume 65– No.12, March 2013.
- **Dr.V.Rajini,Prof, Abitha memala.W**, presented a paper entitled," Induction Motor Fault Diagnosis Using Labview" International Conference on Circuits, Power and Computing Technologies [ICCPCT-2013] at Noorul Islam University, Nagercoil.
- **Dr.V.Rajini and Subramoni,** published a paper entitled," Local Binary pattern approach for the classification of osteoarthritis in knee –Xray i mages", Asian Journal of scientific research, 2013. ISSN 1992-1451, DOI:10.3923/ajsr2013.



Its Time to get WaTer-WISE!

"When it rains there is water everywhere. But what do we do during the scorching summers? We often carry an umbrella and that's when this idea struck me," says Saihiel Bakshi, a thirteen year old.

This little genius worked on a concept according to which an umbrella could be used for harvesting rain-water. During the rains water hits the umbrella, goes down through the pipes and gets collected in the bottle.



- Subramoniam.M and Dr.V.Rajini presented a paper entitled," Statistical Feature Based Classification of Arthritis in Knee X-Ray Images Using Local Binary Pattern", International Conference on Circuits, Power and Computing Technologies [ICCPCT-2013] at Noorul Islam University, Nagercoil.
- **Dr.V.Rajini and M.Jayakumar** presented a paper entitled, ,"Investigation of Photovoltaic Water Pumping System", in the International Conference on Circuits, Power and Computing Technologies [ICCPCT-2013] at Noorul Islam University, Nagercoil.
- **Dr.V.Rajini and M.Jayakumar** presented a paper entitled, ,"Investigation of Photovoltaic Water Pumping System", in the International Conference on Circuits, Power and Computing Technologies [ICCPCT-2013] at Noorul Islam University, Nagercoil.

- **U.Shajith Ali,** presented a paper entitled, "Bipolar Multicarrier PWM technique for Cascaded Quasi Zsource Multilevel Inverter", IEEE International Conference on Circuit, Power and Computing Technologies (ICCPCT 2013) at Noorul Islam Centre for Higher Education, Kumarakoil, Thuckalay, Tamilnadu, India, Mar 21st 22nd, March 2013 and awarded as a best paper presentation.
- **U.Shajith Ali**, presented a paper entitled, "A Novel carrier based PWM technique for Quasi Z-source Inverter with Improved Voltage gain", IEEE International Conference on Circuit, Power and Computing Technologies (ICCPCT 2013) at Noorul Islam Centre for Higher Education, Kumarakoil, Thuckalay, Tamilnadu, India.
- **S. Malathy, Dr. R. Ramaprabha** and **Dr. B. L. Mathur**, "AsymmetricalMultilevel Inverters for Partially Shaded PV Systems", presented in IEEE International Conference on Circuit, Power and Computing Technologies (ICCPCT 2013) at Noorul Islam Centre for Higher Education, Kumarakoil, Thuckalay, Tamilnadu, India, Mar 21st 22nd, March 2013 and awarded as a best paper presentation.
- M. Joly, Dr. R. Ramaprabha and Dr. B. L. Mathur, "Three Port Bidirectional Converter with PWM for Renewable Energy Sources" IEEE International Conference on Smart Structures and Systems (ISSS-2013), presented at Saveetha Engineering College, Chennai, Tamilnadu, India
- **U.Shajith Ali**, presented a paper entitled, "Quasi Z-source Inverter with improved voltage gain using Sine carrier based PWM with shoot-thorugh integration technique", IEEE International Conference on Research and Development Prospects on Engineering and Technology (ICRDPET-2013), presented at E.G.S. Pillai engineering College, Nagapattinam, Tamilnadu, India on 29/3/13.
- S. Malathy, Dr. R. Ramaprabha and Dr. B. L. Mathur, "Cascaded Impedance Source Inverter for Photovoltaic Applications" IEEE International Conference on Research and Development Prospects on Engineering and Technology (ICRDPET-2013), presented at E.G.S. Pillai engineering College, Nagapattinam, Tamilnadu, India on 29/3/13.
- **Dr.R.Seyezhai and M.Sudhakaran** presented a paper entitled, "Implementation of Carrier Overlapping PWM Technique for a Three-Phase Asymmetric cascaded MLI", IEEE International Conference on Research and Development Prospects on Engineering and Technology (ICRDPET-2013), presented at E.G.S. Pillai engineering College, Nagapattinam, Tamilnadu, India on 29/3/13.

Academic achievements......

- **Dr.V.Kamaraj, Prof. and Head** conducted the Ph.D. Viva-voce examination of the scholar Ms.A.K.Parvathy for the title "Analysis and Adaptation of Quadratic Linearization to the Control of Permanent Magnet Synchronous Motor" on 4/1/2013.
- **Dr.V.Kamaraj, Prof. and Head** conducted the Ph.D. Viva-voce examination of the scholar Ms.R.Kalaivani for the title "Optimal SVC Setting for Voltage Stability Enhancement using a few Biologically inspired Optimization Techniques."
- **Dr.V.Kamaraj, Prof. and Head** conducted the Ph.D. Viva-voce examination of the scholar Mr.Kamalakannan on the title " Design and Implementation of Sensorless Control of SRM Drive".
- **DR.B.L.Mathur** conducted the Ph.D. Viva-Voce examination for the scholar Mr.Vardharajan on the title "Enhancement Of Brush Less DC Drive System ".

- Ms. S. Malathy and Dr. R. Ramaprabha have submitted a project proposal titled, "Design and Development of Efficient Water Pumping System under all Illumination Conditions" to Department of Science and Technology under Fast Track Proposals for Young Scientists scheme for Rs. 13.95 laks on 26.03.2013
- **Ms. S. Malathy and Dr. R. Ramaprabha** appointed as a reviewer for *TI India Analog Design Contest & Seventh International Power Engineering and Optimization Conference PEOCO 2013* which will be held in Malaysia.
- The Department of EEE conducted a one-day workshop (22/3/13) on , "Control of Power Converters with FPGA using MATLAB/ Xilinx Interface", with the following members as Convener : **Dr.Ranganath Muthu** and **Dr.V.Kamaraj**
- Co-ordinators: **Dr.M.Balaji**, **Mr.M.Senthilkumaran** and **M.Pandikumar**.
- K.Murugesan,M.Pandikumar,Dr.M.Balaji,Mr.M.Senthilkumar an, delivered a Lecture on , "VHDL Programming" in the workshop on ,"Control of Power Converters with FPGA using MATLAB/ Xilinx Interface and handled tutorial sessions.
- **DR.B.L.Mathur** conducted the Ph.D. Viva-Voce examination for the scholar Ms.MrunalDeshPande at SSNCE during February.
- **Ms.MrunalDeshPande**, defended her Ph.D. thesis for the vivavoce exam held at SSNCE on 28/1/13.
- **DR.R.Seyezhai,ASSP/EEE** has been nominated as review board member for the International Journal of Engineering research & Technology indexed by google scholar, DOAJ & IC.



Dr. Mrunal DeshPande receiving her Ph.D Degree at Anna University.

RHAPSODY



Dr. V.Kamaraj, Professor in the Department of Electrical and Electronics Engineering has 21 years of teaching and research experience.

He has received his B.Tech (EEE) degree first class from Calicut University, M.E. in Power Electronics and Ph.D in Networks from Anna University. During his Ph.D he has proved "Biorci's Conjecture" a classical mutiport network synthesis problem.

He has published over research publications 15 in refereed International and National Journals and 30 papers in Conferences.

He served in Sri Venkateswara College of Engineering from 1989 to 2006 and was elevated from Associate Lecture to various positions. During his stay at SVCE he developed voltage controller for Induction Generator which was first of its kind.

After joining SSN College of Engineering in 2006 as a Professor in the Department of EEE and was appointed as HOD since Nov, 2011. He was instrumental in getting MODROB project and Seminar grant from AICTE. He was the Organizing Secretary for the 1st International Conference on Electrical Energy Systems (ICEES-2011) and fulfilled all his commitments. 7 research scholars have completed their Ph.D under his guidance and he is currently guiding 5 more research scholars.

He is the Chairman SSN-ISTE Chapter and responsible for conducting ISTE Monthly Seminars delivered by eminent personalities in various fields. He has received best paper award for the paper he presented in the 13th ISTE annual convention (Tamilnadu & Podicherry Section).

- **Dr.RanganathMuthu**, has been nominated as the chairman for the Technical Session in the National Conference on 'Emerging Technologies in Electrical & Electronics Engineering [NCETEEE'13] to be held on March 15th 2013, at University College of Engineering, Panruti .
- **Dr.RanganathMuthu**, attended the Two Days Workshop on Power Converters and Power Quality Issues on Wind Energy Conversion System at Sri Venkateswara College of Engineering, Chennai during 21st and 22nd February.
- **Ms. M. Venmathi**, (**Dr. R. Ramaprabha, Asso.Prof. as Scientist Mentor)** submitted a project proposal titled, "Design and development of three Port Bidirectional Converter for interfacing Photovoltaic system for hybrid Electric Vehicle" to Department of Science and Technology.



Interview with Dr.Ashwin Kumar Sahoo.

His achievements speak more than his words. He is silent, modest, soft-spoken and a great human being. He has been the coordinator for the IEEE Student branch of our college from its inception and took the branch to great heights when he organized the international IEEE R10 Student Congress in 2008 with participants from 17 countries. SSN has seen only one such truly international event so far. He received his Masters and Ph.D degrees from Anna university and has nearly two decades of teaching and research experience. He has a vast experience in organizing workshops, seminars, FDPs and conferences. He never misses the local temple visit and the delicious lunch for the staff members every time he conducts a workshop. He is instrumental in getting sponsors from IEEE to various technical events in SSN. He opened his heart out in response to a few questions we posed. Here are the excerpts from a one- on- one interview with him.

How did you get interested in your field of expertise? What was your motivation? why did you choose Power systems and FACTS?

When I graduated, Electrical Engineering meant Power Generation, Transmission & Distribution and a job in State Electricity Board or core sector job. This may have been due to lack of proper carrier guidance. Or one had to go for higher studies. During the year 1994-95, Power Systems Division at CEG, Anna University was well known because of its faculty, where I got a chance to pursue my M.E. degree with specialization in Power Systems. During my Ph.D. course work, I again got a chance to study further with special interest in the area of FACTS (Flexible Alternating Current Transmission) in the same department. Of course Power System is still evolving and my sincere thanks to all the Professors who have taught me the subjects at CEG, Anna University.

Are you able to balance teaching and research? Does one get compromised for the other?

I prefer teaching over research, for the simple reason to produce quality graduate engineers with a strong foundation on subjects. But research is the way of life today. Do research & publish or perish.

I heard that you organized the first IEEE R10 International Student Congress here at SSN in the year 2008. What prompted you to do so?

Yes, it is history now. Actually many of our staff members were involved including our principal Dr. S. Salivahanan. I was just playing a major role as the Organizing Secretary, and more than 300 delegates from 17 different countries had participated, including IEEE president from the USA. This was the first such international congress that had been organized in India for students. We even organized the All India Student Congress in the year 2006.

How do you find the mindset of the students of this generation?

The students of this generation are open-minded, frank and really honest.

Is there ample scope for research in India? Research is opening up in the mindset of young Indians

The wind can turn a tree into a bleached and tortured sculpture.

and more in SSN campus, I would say. But we can work in limited areas only.

Are you currently working on any project? If so can you enlighten us about it?

Currently we are working in the areas of Impact & challenges of large scale integration of wind energy in the electrical grid system. Currently three final year students are working on the same.

Is there any message you would like to convey to the final years?

Unless it is really needed financially for the family, I would advise the young graduates of SSN to go for higher studies, preferably a Masters Degree in an IIT or the IISc. Then go for a Ph.D. abroad; or a Management Degree from an IIM. Those students who enjoy the administrative job and want to serve the society should take the civil service exam (IAS) seriously, the best career option.

What are your hobbies? What relaxes you after an entire day's hard work?

I usually read the newspaper at the end of the day, since there's hardly any time in the morning. Sometimes I play with my Son or help my wife in cooking in the evening and watch TV. This relaxes me.

What are your contributions to SSN?

I have been working here since 1999, it has been a long journey. I have helped a lot in the setting up of labs, especially the simulation lab, PCB lab, control and measurement lab. I have organized many workshops, seminars, lectures, Student Congress and SPAC under the IEEE Student branch banner for the last 13 years. I was instrumental in organizing the first ever System Simulation workshop in the year 2003 and the first ever national conference in the year 2006 in the department. In the recent years, I organized two different FDPs in the areas of FACTS and HVDC transmission, each of one week duration. The most recent event is the National Conference on Power Systems, Power Electronics & Drives (PSPED – 2013) on 1-2, March 2013.

~ Editorial Team@EEE

We congratulate the following students of Batch 2008-2012 for having secured University Ranks!!!

Name of the students	Position in university
	rank list
Logeshwaran V D	13
Vivek M Hariharan	15
Radha Sree K	16
Rohan Sridhar Raghavan	17
Dhasna M	19
Swathi M	20
Anitha R	24
Brindha M V	24
Mahalakshmi S	29
Sowmitha K	33
Karthik V	37
Rakshana B	38
Pavitra S	42
Deepak Bharadwaj S	43
Mohaideen Samsudeen K M	43
Rohit G	43
Sujitha V	43
Aishwarya V	44
Kanagapriya T	46
Savitha B	46
Srivatsan N S	46
Saraswathi S	49

Ponmalar.S of Batch 2010-2012 of M.E, PED, has secured **11**th **position** in the university rank list.

Apríl 2013, Issue-05

Jagrítí Yatra

"On 24th December 2012, I started a new journey of my life -Jagriti Yatra. A 15 day train journey through 8000 kilometers of India, covering 12 destinations, 15 role models and 4 panel discussions, it was going to be a transformational journey for around 400 yatris and 50 facilitators, who not only wished to create a change in India, but had the passion and the belief to do so."

The Yatra aims at building the Nation through Enterprise led Development in 7 sectors, viz. agriculture, healthcare, education, tourism, manufacturing, energy and water. These are the sectors in which India needs Innovation and Enterprise through Financial Services, Technology or Public Private Partnership.

A special train was booked for the Yatra through Indian Railways, in which bogies were allotted in the following way, Pantry car, : Boys bathroom, 5 sleeper bogies for boys, 2 AC bogies for organizers, resource people etc, 2 AC Chair car for discussions, 3 Girls bogies and the Girls bathroom. A bogie had been very innovatively converted into a shower room with hot water supply.

This year there were around 4000 complete applications, out of which 400 aspiring social entrepreneurs from 20-25 years of

A Journey of Life-time

age were selected, and most of them were provided with full or half sponsorship. Apart from this, there were around 50 facilitators, of the age group 25-30, to manage and coordinate the Yatris. This set of Yatris were a very diverse one, rep-



resenting 24 states of India, hailing from rural/urban/semi urban backgrounds, coming from various professions. The Yatra also saw international participation in the form of 35 people from 12 different countries like the UK, France, Argentina, Australia etc. While 60% of the Yatris were male, 40 % were female. The Yatris were divided into cohorts of 6 yatris and 1 facilitator. 2 male and 1 Female cohort formed a group of 21 yatris, which

K.Masha Nazeem	
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The Yatra started from Mumbai then went to Hubli, Bangalore, Madurai, Chennai, Vishakhapatnam, Berhampur, Patna, Deoria, Delhi, Tilonia and finally ended at Ahmedabad. At each destination we met one or more role models, who had done some innovation at grass roots level and contributed in developing our nation. These included the Ramon Magsasay Award Winner Harish Hande from Selco, Toe Hold Artisans, Kiran Mazumdar Shaw from Biocon, Aravind Eye Care at Madurai, R Elango from Chennai, Naandi Foundation at Vizag, Joe Madiath from Gram Vikas, Nidaan at Patna, Anshu Gupta from Goonj, Bunker Roy from Barefoot College, Tilonia and Sewa Foundation at Ahmedabad.

We visited these organizations, learned from their inspiring stories, understood the working of their organization and met the people whose lives have been transformed. We saw the social impacts and learned from them. Later we discussed suggestions and ideas among ourselves during our trainjourney.

Apart from the role model visits, 4 panel discussions were also held on topics ranging from agriculture to education. But the most amazing part of this Yatra was getting to know a lot of people from numerous backgrounds. There were group activities like lifeline sharing, dream tree exercise etc, which helped one to realize the hidden potential one carries. You get to express

yourself to a group of unknown people. This experience cannot be imagined elsewhere.

It is a journey to find out, who we really are and what really matters the most in our life. To sum it up - "Jagriti Yatra is a journey, which cannot be experienced through photos or articles or videos, but one must board this train to truly feel it." So go ahead and apply for Jagriti Yatra 2013!!!



REDEEM Linquistic



Apríl 2013, Issue-05 Splendor

Forbídden Love: Earth ~ Sky

She couldn't have possibly said okay. As far as she knew, she couldn't think of anyone else other than him. No one had amazed her or understood her, the way he had. She liked him a lot and that was obvious. But she had a promise to keep. Everything that was hers, was not hers in true reality. She lived to make others live. No matter how much her heart yearned for him, her mind warned her of the ghastly consequences. She had never imagined a day like this would come, where her mind would be in a state of turmoil. She would have to let him go but with a promise that one day after many many long years, *if they were free from the clutches of their cruel destiny, she would be with him for eternity.*

The flowers bloomed everyday with a delightful freshness, the wind possessed a rejuvenating aroma, the water retained the flavor of nectar and the sand always had the subtleness of her heart. She had the elixir of life bestowed within her soul and sparkled with the life forms that grew on her every instant. From the moment Earth was created, she was a very special one, unique enough to make her desirable. He was crafted only to shield her from the wretched rays of the sun. He watched over her from a distance for never will the Earth and the Sky ever meet. *They were meant for each other but never to be together*. patient endurance and Sky continued to envelop her in every turn of the tale. She was aware that Sky existed only for her sake, to protect her, to admire her, to stay with her till doom's day. He was with her in each and every rotation and revolution of her life. The warmth that emanated from his presence became the very cause of her existence. This was the bitter reality Earth couldn't escape no matter how much she detested it. *Life sure was a living hell for her, pondering into endless space of the vast universe, lost in deep thoughts.*

The law of nature could never be violated, for it will only lead to destruction of every creature. Her emotions meant nothing in contrast to the faith that had been placed upon her. The nightingales sang the melody of their passion, and the wolves howled in the dark deep forests reflecting her pathetic situation. *Every living being understood that love after all meant sacrifice and selflessness.* It did not mean hearts and flowers and a happy ending, but the knowledge that another's well-being is more important than one's own.

Yet sometimes, there would be a faint contentment in their twisted tale, when they appear to meet at the end of the horizon. They were happy that their dreams at least existed in the simplicity of this illusion...

Nevertheless she still continued to fulfill her destiny with

The Lonesome Planet

Billion years ago, born from the big bang Voices of volcanoes, meteorites sang Song of the baby's wailings; with tears of rains Gifted with love, blossomed a damsel, from the remains

Her tenderness, nourishment nurtured the needy Generations imposed upon her; wishes, greedy! Convinced she was of their love - fallacious - satisfied Deluded by an unreal sense of hope, crucified

Taken advantage of, she was deceived Buckling under, ripped of wealth, all she received -Unjust manipulation - depleted of riches (Oh the torments) Even her gorgeous green garments!

Poisoned by vicious minds, abuses fill her life How easily on her they placed the knife! Soiled she looks, tears are coming back

To annihilate cities - will the ascending tides retract?

Little they appreciate for all they snatch from her Little time is left, so little, that they can't defer All that is pursuing, reminding them to show Care she deserves, you reap what you sow!

Delays aggravate the approaching adversity further Hopefully they stop injustice hurled at Mother Patient she has been, will she still be the same? Or if calamity strikes, who will take the blame?

> ~ Fathima Humaira.A (2nd year, EEE-A)

~ Iswariya.M (2nd year, EEE-A)

Paper Presentations by Students......

- Mounica Gaunta, Pallamreddy, Nirupa, Thimmadi Akshitha (IV Year) and Dr.R.Seyezhai, presented a paper entitled, "Design and Simulation Of PWM Fed Two-Phase Interleaved Boost Converter For Renewable Energy Source", in the International Conference on Electrical Electronics And Data Communication Engineering, held at Chennai on 27/1/13.
- B. S. Dhivya, V. Krishnan and Dr. R.Ramaprabha, "Neural Network Controller for Boost Converter", presented in IEEE International Conference on Circuit, Power and Computing Technologies (ICCPCT 2013) at Noorul Islam Centre for Higher Education, Kumarakoil, Thuckalay, Tamilnadu, India, march 2013
- Abhinaya Venkatesan, Aiswarya Mohan ,Gayathri. K(IV Year) and Dr.R.Seyezhai, presented a paper entitled, "Comparative Study Of Active Power Factor Correction in AC-DC Converters", in the International Conference Electrical Electronics And Data Communication Engineering, held at Chennai. This paper received the best paper award on 27/1/13.
- **G. Ramya (M.E. II Year) and Dr. R. Ramaprabha**, presented a paper entitled, "Analysis of soft switching multi-phase boost Converter for photovoltaic system", in 2nd National Conference on Computer Intelligence in Electrical and Electronics Engineering (NCIEEE-2013) at Sathyabama University, Chennai on 21/2/13.
- **G. Shanmughapriya (M.E. II Year) and Dr. R. Ramaprabha**, presented a paper entitled, "Maximum Power Point Tracking for Solar Photovoltaic System using Switched Capacitor DC-DC Converter" in 2nd National Conference on Computer Intelligence in Electrical and Electronics Engineering (NCIEEE-2013) at Sathyabama University, Chennai during February.
- **R.Subhasree** and **Dr.V.Kamaraj** presented a paper entitled, "Analysis of Eddy current brake for Automotive Applications", in the National Conference on Power Systems, Power Electronics & Drives, March 1-2, 2013 at SSN College of Engineering, Chennai.
- G. Ramya (PG II Year) and Dr. R.Ramaprabha, "Comparative Analysis of Soft Switching Two-Phase Boost Converter for Photovoltaic System", presented in IEEE International Conference on Circuit, Power and Computing Technologies at Noorul Islam Centre for Higher Education, Kumarakoil, Thuckalay, Tamilnadu, India
- Meera (M.E.PED) and Dr.Ranganath Muthu presented a paper entitled, "Sliding Mode Control of DC-DC Converters", Second National Conference on 'Recent Trends in Power Engineering, Power Electronics and Control Systems', RMK College of Engineering and Technology, Chennai.
- **K.Suriyakrishnan (PG Student) and Dr. M.Balaji**, presented a paper titled "Design Optimization for Cogging Torque Minimization in Permanent Magnet Brushless DC Motor" at 2nd National Conference on Computational Intelligence in Electrical and Electronics Engineering organized by Sathyabama University, Chennai on 21/2/13.
- **J.Shanmugapriyen (PG Student) and Dr.M.Balaji**, presented a paper titled "Self Tuning Fuzzy Logic Control for Switched Reluctance Motor Drive" at 2nd National Conference on Computational Intelligence in Electrical and Electronics Engineering organized by Sathyabama University, Chennai on 21/2/13.
- A.K.Vaishnavi, A.Poorani, C.S.Meera, (Final Yr.EEE) and Dr. V.Rajini presented a paper entitled, "Over-Voltages of IGBT Based PWM Inverter Fed Induction Motor Drives", International Conference on Circuits, Power and Computing Technologies [ICCPCT-2013] at Noorul Islam University, Nagercoil.

- M.Monica Sree (ME, PED) and Dr.A.N.Arvindan presented a paper entitled, "Power Quality Analysis of PWM Cycloconverter operation in the Matrix Converter Topology", in the National Conference on Innovations in Engineering and Technology, IET 2013, sponsored by DRDO organized by Anna University Regional Centre, Madurai.
- **K.Suriyakrishnan(PG Student)** and **M.Balaji** presented a paper titled "Design Optimization for Cogging Torque Minimization in Permanent Magnet Brushless DC Motor" at 2013 IEEE International Conference on Research and Development Prospectus in Engineering and Technology organized by E.G.S.Pillay EngineeringCollege,Nagapattinam.
- **S.Meena** presented a paper on topic "Nanosensors and pressure sensors based on burgular alarms" at the International Conference on nanoelectronics and nano devices (ICNEND '13) at Saveetha University on January 21,22.
- **G. Shanmughapriya (PG II Year)** and **Dr. R. Ramaprabha**, "Solar Photovoltaic System Fed Switched Capacitor DC-DC Converter" IEEE International Conference on Smart Structures and Systems (ISSS-2013), presented at Saveetha Engineering College, Chennai, Tamilnadu, India.

Robotics and ERF Activities.....

The following students of third year participated in Traffic Rush robotics event held at NIT, Trichy as a part of its techfest (Pragyan'13) and won **First** prize: -

- 1. Aparajith.S
- 2. Badrinarayanan.S
- 3. Abilash.R

Kamal Prakash of third year did consultancy work to Knet Solutions in the field of GSM.

Reasearch Activities......

The following students of final year received cash award for publishing papers in the international journals:

- 1. Banu Chandar.M
- 2. Adwaith.M
- 3. Mervin.J.B
- 4. Vijayenthiran.S
- 5. Sai Praveen.D
- 6. Tathagata Mitra

Shobana G and SornaDeepika.P of Final year received internal fund (an amount of 15,000 rupees) for the project titled "Global Maximum Power Point Tracking of Photovoltaic Array"



Symposium Events......

Vigneshwaran of III year has won first place in On-day photo contest held at Easwari EngineeringCollege.

The team of **Akshaya Padma Varshini B, Barani.B, Manasa T** of III year participated in IIT-M Techfest in the Event named Shaastra Circuit Design Contest (SCDC) and secured **second** place.

- Abenav .S and RathonSriram.S of II year EEE have won the First prize in an event "BUG TO BAG " held at "WAVES 2013 " (Inter College Technical Symposium organised by CEG).
- Balajinagaraj. K and Anbarasan. R of II year EEE participated in Robotics and Automotive vehicle design workshop held at IIT madras.

Balajinagaraj. K and **Dinesh kumar**. **S** of second year EEE have Won the **second** prize in an event "GOOGLE GURU " held at " WAVES 2013 " (Inter College Technical Symposium organised by **CEG**).

- SandhyaSriraman and Nithya Subramanian of second year EEE participated in Energy Scavenging workshop held at Anna University.
- **Lavanya.M** of III year participated in Personal branding and networking workshop at Anna University for Kurukshetra 2k13.

Pushkar.T participarted in the dance competition and won several prizes.

3rd place in LIBA, 2nd place in MSSW, 2nd place in MNM JAIN, 3rd place in Vel's University, 1st place in MIT, Chennai ,2nd place in Loyola college.

- **P.R.Shreenivass** participated in the short film contest in IIT-Sarang and won first place in both the competitions. The short film is named "Uranga Oondrugal" and did the editing as well as co-scripting.
- Srinidhi.R, B.Rajeswari presented a paper on "Wireless Energy Transfer using Resonant Inductive Coupling" in Anna University Techno-Management Fest, Kurukshetra-2k13 and was among the top 3 in the papers presented under Electrical Engineering Department.
- Pooja.M, Smruthi.K presented a paper on "Electricity from speed breakers" in Eswari College of Engineering, Ramapuram and won 1st prize.



NSS and YRC Activities......

SSN-NSS participated in the IIT-BOMBAY TECHFEST 2013 in the event named GREEN CAMPUS and was placed 8th. The team consisted of **R.Manivasagan**, **R.Kotteswaran**, **R.Ashok Raj**, **N.Keerthana**, **E.Goutham** of III year.

NSS has started a camp in Echaenkadu village for a span 7 days. It was started on 28th. **Sakthivel.M** of final year ,**R.Manivasagan**, **N.Keerthana** of III year are a part of the camp.

To find joy in work is to discover the fountain of youth - Pearl.S.Buck

Chitra.P of IV year, **Malathy** and **Karthigai Selvi** of III year, **Amirtha Varshini**, **Anna Rebecca**, **Bamini.R**, **Boomika.R** and **Abirami.A** of II year participated in the Village Camp organized by the YRC in Government Middle School, Siruthavur for 3 days.

Saaral Tamil Mandram.....

- RASU.M of II year has participated in a debate program to be telecasted by IMAYAM TV.
- **Vijayakumar K** of Final year EEE has lead the Tamil literary club "Saaral Tamil Mandram" as its Head, organised events in Instincts which became the best of all other Saaral events which ever happened.
- Other than Instincts this year **Vijayakumar K** has organised several events for SaaralTamil Mandram throughout the year.

The following students of EEE have volunteered events for **Saaral**Tamil Mandram:

- 1. Venkateshwaran R, III year
- 2. Naren M, III Year
- 3. Keerthana N, III Year
- 4. SakthiVigneshwar K, III Year
- 5. Rasu M, II Year
- 6. Balaji R, II Year





Instincts.....

The following students gave their contribution in different areas for the success of Instincts 2013:-

- 1. Vijayakumar.K, IV Year Head, SAARAL Tamil Mandram
- 2. Saravanan.M, IV year Student co-ordinator
- 3. Syed Riazudeen.S, II Year Joint Secretary
- 4. Mithun Rahul, IV year Food Committee
- 5. Preethi.S, IV year Magazine Editor
- 6. Krishnan.V, IV year Hospitality
- 7. Mahentheir.K.C , IV Year-Crowd Management
- 8. Kamal Prakash, III year Short Film



The artist is nothing without the gift, but the gift is nothing without work.

REDEEM

Internships and Inplant Training......

Siva Priya of II year has attended Embedded Systems Internship Program by Simple Labs conducted between 15th of December 2012 and 13th of January 2013.

Imthiaz Ahmed.A of III year has attended an internship program by Simple Labs with a stipend of Rs.6000. The following are the projects, in which he is working currently,

- 1. Single Phase AC voltage controller using Arduino
- 2. I2C communication interfacing RTC (Real Time Clock)
- 3. Reverse Engineering of Life ex bulb

Srinidhi.R of III year had underwent in-plant training in Ashok Leyland.

Sports Activities......



Manohar.K of III year (part of the ANNA UNIVERSITY Table Tennis Team) was the winner in the All India Inter-University Table Tennis Championship, organised by Jamia Millia Islamia University, New Delhi held between 24-27th of January.

P.D.Subhadhra of II year (part of the Anna university table tennis team) secured Third Place in All India Inter University Table Tennis Championship, organised by Jamia Millia Islamia University, New Delhi held between 24-27th of January.

- **R.S.MohanKrishnan** of III year represented Anna University Badminton team in Southzone Inter-University at Kakinada, Andhra Pradesh.
- Avinash.R of II year (part of the Anna University Tennis Team) was the runners-up in SouthZone Inter-University tournament conducted by Krishna University, Vijayawada between 17-21st ofJanuary.
- **Mohanakrishnan.R.S.** of third year won JETS state level inter collegiate badminton tournament organized at St.Joseph's College Of Engineering, Chennai.
- **Manohar.K** of third year won the table tennis tournament conducted by Manipal Institute of Technology from 20-22 of March 2013.

Lavanya.M of third year secured second place in Inter volleyball competition conducted in our college.

Rajalakshmi.A participated in TICS Women team Chess Championship 2013, Adhiyamaan College of Engineering Hosur and won Silver medal.

Perfection is achieved, not when there is nothing more to add, but when there is nothing left to take away.



Bell the CAT!

Very rarely do we come across someone who is dedicated, sincere and hard working and at the same time extremely fun loving and down to earth. Aishwarya Ramesh of IV year EEE is one such person. With a 95.2 percentile in the Common Admission Test (CAT) and a dream job offer from ThoughtWorks Technologies Private Ltd, she's a huge inspiration to students like me. Here are some excerpts from an interview where she talks about her motivation, preparation and advice to students who are aiming for CAT.

Why CAT? Why not GRE or GATE?

In short, to expand my horizons. I want to try out everything before I decide what to do with my life. I happened to work as an intern in a system integration industry in my second year. One important thing I learnt there was that every job requires some form of management or the other. And an MBA would give me the management exposure.

In which branch would you do your MBA?

Marketing. I love travelling. And once I've done an MBA in marketing, I'll get to travel a lot, it'll be so much fun and at the same time, I'll get paid really well.

When did you start your peparation for CAT?

During my 6th semester holidays. I'd study for around an hour everyday. But then after Thoughtworks, (August) I didn't really study for CAT. I was very happy with my job offer. I resumed my preparation only a couple of months before the test. I took several mock CAT exams and they really helped me understand my strengths and weaknesses.

What helped you tackle the test this successfully?

Most people get really tensed when they're writing CAT. They are under pressure to do well because if they mess up, they have to wait one whole year to retake the test. And when you put so much pressure on yourself, you'll panic. I, on the other hand, had another option- Thoughtworks. I didn't pin my hopes on CAT alone. I was really calm and cool when I went to the exam centre. While the other test-takers were frantically rocking their chairs in tension, I was playing with my pencil. So the key is to be calm and to not get tensed. This test is not the end of the world. There are many other opportunities. Even after tremendous hard work, if you don't do well, it means it's just not your day. It does not mean you're not good enough.

How about time management while taking the test?

Go through all the questions and find out which are easily solvable and which are not. All questions in CAT are solvable. Given 5 hours, anyone can solve the paper. But the key is to solve as many questions correctly as possible in a time crunch of 1 hour. So, if you get stuck at some point, you should be ready to let go and proceed to the next question. Mock tests help a lot in time management. I was really distraught after my first mock test. Only after that did I realize that trying to solve all questions does not make sense. Identify which question to leave and which to attempt. CAT is more about choice of elimination than anything else...

> ~Supriya Vaidiyanathan (3rd year, EEE-B)

Review Robotics!!!

The society and technology is changing so fast that the impacts are not local but global. Robots have become reality and have been employed to simplify our day to day task. These simple bots have a lot of intricate designs in them which fascinate people. We have three very brilliant people –**Karthik Singaram, Ka-mal Prakash, Karthikeyyan** -with us who have brought their visions into reality.

"Once upon a time our dream was IIT-Bombay."

Qualifying from the Coimbatore zonals, they made their up to securing the place in Grid Master. The trio also participated in the International Robotics Challenge (IRC). They secured the 2nd place in the national level after 4 months of hard work. They final round posed a real difficulty as teams from various nations like Sri Lanka, Bangladesh, Egypt, France participated.

"The electrical design was perfect but we failed miserably in the mechanical part." Examples of real life problems were usually given as tasks for robots. The teams from other nations were backed up by their universities or various sponsors. "But the lack of a robotics team in SSN was a major factor", says Kamal. Hence workshops are being conducted by the ERF (Electrical Research Fraternity) and an awareness about robotics is created among the students of SSN.



RASPBERRY PI ... ARM's MOST FAVORITE...

Modern world already witnessed that man used technology to simplify and comfy his living. So what does he try next? He simplifies the technology. Traditional Microcontrollers/microprocessors were very limited in use, had a single time code write feature which could be programmed only by a high tech programmer. So now with the increased use of technology, researchers came up with an effective idea to interest kids and teens into the world of programming, well but not the nerdy way! We already have witnessed arduino powered Atmel's ATmega rule the world as always the better choice to any other conventional microcontrollers. Why? Because it's simple. *Coding is made easy, more innovative and projects pile up at the patent office.*

What exactly is Raspberry Pi? Why do we need Raspberry pi?

The answer to your first question is that the Raspberry Pi is a credit-card sized computer that plugs into your TV and a keyboard. It is a capable little PC which can be used for many of the things that your desktop PC does, like spread-sheets, word-processing and high-definition video. It runs on the ARM architecture. Its features were developed from the Atmel's ATmega 644 microcontroller. With a speed of 700MHz this processor is a more than a handful for programmers. Oh! I won't be using that "programmer" term

A standard microcontroller features a challenging task. Learning the programming stuff and the most dreaded language ever - The Assembly language- and Raspberry pi simplifies this task.

It was developed basically to target kids to learn Python effectively and effortlessly. The point is it runs an operating system! *Linux based OS like Fedora, Debian GNU OS(linux) can motor the device.*

It is proven that Android (4.0 Ice Cream Sandwich) is able to fuel this little devil.

Current research is going on for stable Android support. If you are now thinking about MS OS the answer is no.

Now that you got to know a wee of Raspberry Pi, let's put it under the magnifying glass!

This board has all the latest features that one might

dream of interfacing his/her processor to. It runs on Broadcom CPU/GPU. It has an SD card support (yes it contains the OS), keyboard support, GPIO (General Purpose I/O), ethernet, USB 2.0, HDMI out, GPU. The GPU is capable of BluRay quality playback. So far this is the first attempt for easy programming board which can be plugged into a HDMI TV.

The Views of a C programmer is entirely not much different from that of an ARM based system. As long as you stay with C source code, the only difference you may see is about endianness(ordering of bits in a 16 / 32bit memory) and performance. Most ARM proc-

essors can be both big-endian (MSB first) and little-endian

(LSB first) ; the choice is then made by the logic board and the operating system.

What are its cons?

Even though Raspberry Pi can perform different tasks, there are some limitations due to its hardware. Because of its processor, it

Do You Know????

A Microwave Oven is an example of an Inside Out Faraday Cage which confines the radio frequency energy inside. A Faraday cage is essential a mesh made of conducting material which blocks the penetration of EM interference. It is named after Michael Faraday who invented it in 1836 and is based on the fact that the charge enclosed by a conductor is zero. Its other applications include coaxial cables, MRI scan rooms, etc.

No wonder it saved the world from the nuclear bomb blast in the blockbuster "Viswaroopam"!!!

cannot run X86 operating systems (*if you were wondering why MS Windows was not working with it*). In addition, some applications which require high demands on CPU processing are off-limits. *Model B* (*latest model*) took 107ms to complete one calculation of the purely synthetic prime number test, a mid-range desktop INTEL Core 2 Duo E8400 took only 0.85ms. Users must not use normal computer standards to judge Raspberry Pi. It can work as a cheap personal computer, but cannot replace it...

> **~ Aparajith.S** (3rd year, EEE-A)

இயற்கையின் வேதனை!

ஐம்பெரும் பூதங்களாகிய காற்று, நீர், ஆகாயம், நிலம், நெருப்பு மனிதனின் கொடுமைகளை தாங்கிக்கொள்ள முடியாமல் இறைவனிடம் சென்று மனிதன் மேல் வழக்குதொடரச் செல்கின்றன. மனிதனைப்போல இயற்கைக்கும் பழி வாங்கும் எண்ணம் வந்தால் உலகம் என்ன ஆகும் என்பதை மையமாகக்கொண்டதே இக்கதையாகும்...

ஐவரின் புகார்கள்

நிலம் : "மனித பூமி சரிந்து விடாமல் நான் தாங்கிப் பிடிக்கிறேன், இப்போதோ வாழ்வதற்கு வீடு என்பது போய் வசுதிக்காக வீடு என்றாகி என் தலை மேல் அடுக்கு அடுக்காக வீடுகளை அடுக்கிக்கொண்டே போகிறார்கள். என்னால் இனியும் பாரம் தாங்க முடியாது" என ஆவேசித்தது நிலம்.

காற்று : "தாய்மையான சுவாசத்தை மனிதனுக்குத் தர வேண்டும் என்பதற்காக துளசி, வேம்பு,என மூலிகை தோட்டத்தைக் கடந்து வரும் என்னை வாகனங்களின் புகையால் அசுத்தப் படுத்தி விடுகிறார்கள். எனவே இனி நான் என்னை இவர்களுக்காகத் தூய்மை படுத்தி கொள்வதாக இல்லை " என விஷ வாயு பறக்க பொரிந்தது காற்று.

நீர் : "நான் இல்லாமல் மனிதனால் ஒரு நாள் கூட முழுமையாக வாழ்ந்து விட முடியாது ஆனால் அவன் என்னை எவ்வளவு இழிவாக உபயோகிக்கின்றான்? இவ்வளவு ஏன் உலகை உருவாக்கிய சர்வேஸ்வரன் எழுந்தருளியுள்ள புனிதமான கங்கையின் தீர்த்தத்தில் அஸ்தியை கரைத்து தீட்டு செய்கிறார்கள்.நான் ஒரு நாள் இந்த உலகிலேயே இல்லாமல் போனால் தான் மனிதனுக்கு என் அருமை தெரியும்" எனக் கொதித்தது நீர்.

ஆகாயம் : "நிலம், காற்று, நீராவது ஏதோ தொடும் தூரத்தில் இருப்பதால் தான் பாடு படுத்துகிறார்கள் என்றால் எட்டாத உயரத்தில் இருக்கும் என்னையும் மனிதன் விட்டு வைக்க இல்லை, இரவில் நட்சத்திரத்தோடும் பகலில் சூரியனோடும் எந்நேரமும் மின்னிக்கொண்டிருக்கும் என்னை *தொழிற்சாலைகளின் புகையால் கருகருக்க வைக்கிறார்கள்*" என்றது மேகம்.

அடுத்து இறைவன் நெருப்பை நோக்கி "உன் புகார் என்ன?" என்று வினவினார்.

நெருப்பு : "என்னிடம் புகார் எதுவும் இல்லை ஏனெனில் மனிதனால் என்னை மட்டும் தான் நெருங்க முடியவில்லை ஆனால் எனக்கு ஒரு கோரிக்கை இருக்கிறது" என்றது.

இறைவன்: "*என்ன கோரிக்கை?*" எனக்கேட்டார்.

நெருப்பு : "என் நண்பர்களை துன்பத்தில் ஆழ்த்திய மனிதனை நானே அழிக்க வேண்டும் என்றும் மேலும் தன் கோரிக்கை நிறைவேறும் நாள் வரும்போது இந்த பூமியை முற்றிலும் சூழ்ந்து சிதறு தேங்காயைப் போல சிதறடிக்க வேண்டும்" என அனல் பறக்கக் கூறியது.

இறைவனும் அவர்கள் மீதே நியாயம் இருப்பதால் அவர்கள் கோரிக்கைக்கு ஒப்புக்கொள்கிறார்.

அதன் பயனாகத் தான் இப்போது *நீர்-சுனாமியாகவும்,நிலம்-பூகம்பம்மாகவும்,காற்று-சூரவளியாகவும்,ஆகாயம்-அடை*

மழையாகவும் ഖിஸ്ഖന്ത്രപഥ எடுத்து மனித இனத்தை அழித்துக்கொண்டு வருகிறது. நெருப்பும் தன் சந்தர்ப்பம் எதிர் அடியில் பார்த்துக்கொண்டு பூமிக்கு கொதித்துக்கொண்டு இருக்கிறது. இப்பொழுதும் ஆனாலும் ஐவரும் தன் பொறுமையை காத்துக்கொண்டு இறுதியாக மனிதனிடம் <u>ஒன்றை</u> இரக்கம் கொண்டவர்களாக கேட்கிறார்கள், நிம்மதியாக விடுங்கள் "இனியாவது எங்களை இருக்க கடைசியாக உங்களுக்கு ஒரு முறை உயிர் பிச்சை தருகிறோம்" என்று...

~Madhumathi.M

(2nd year, EEE-A)

From the Alumní

 $cos(\frac{2\times\pi}{5}) \cdot cos(\frac{4\times\pi}{5}) + sin(\frac{2\times\pi}{5})$

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My Script Calculator (IOS and Android)

It is an application in which mathematical operations can be performed by one's handwriting. The level of research involved with the development this app is great that it recognizes almost everyone's handwriting in the way in which the numbers and math operations are written.

FEATURES

<u>SUPPORTED OPERATORS</u>

Basic operations: +, -, x, ÷, +/-, 1/x Misc. Operations: %, \int , x!, |x| Powers/Exponentials: e^x , x^y , x^2 Brackets: () Trigonometry: cos, sin, tan Inverse trigonometry: acos, asin, atan Logarithms: In , log Constants: π , e, Phi. Use your handwriting to write any arithmetic formula
Write and calculate mathematical expressions in an intuitive and natural way with no keyboard
Scratch-out gestures to easily delete symbols and numbers
Portrait and landscape operation
Redo and undo functions.

Show Me (IOS)

It is an essential app for the staffs and students. 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 once recorded is stored as a video in the "showme" website, which is same as that of "youtube" or "facebook" wherein one's notes can be uploaded using an account of free of cost and one can subscribe to various other user notes.

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FEATURES

- Voice-record
- Multiple brush colors
- Pause and erase
- Import pictures from your photo library, builtin camera, or web image search
- Unlimited lesson length
- Free to upload and share your recordings with friends
- Easy embedding for sharing anywhere
- Manage students with Groups

~ V.S.Nagarajan

(Alumni EEE)

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