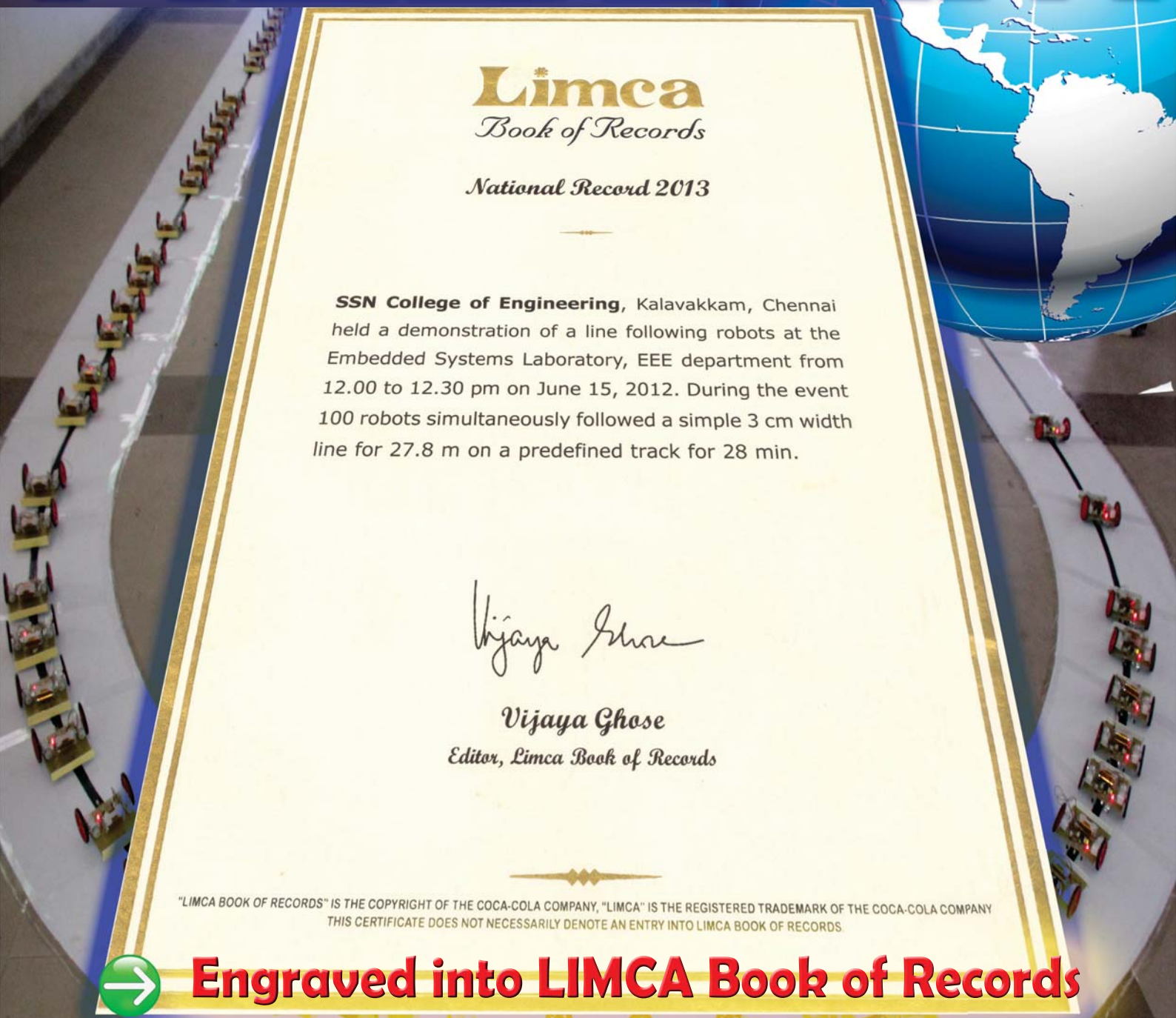
JULY 2012 • ISSUE 02

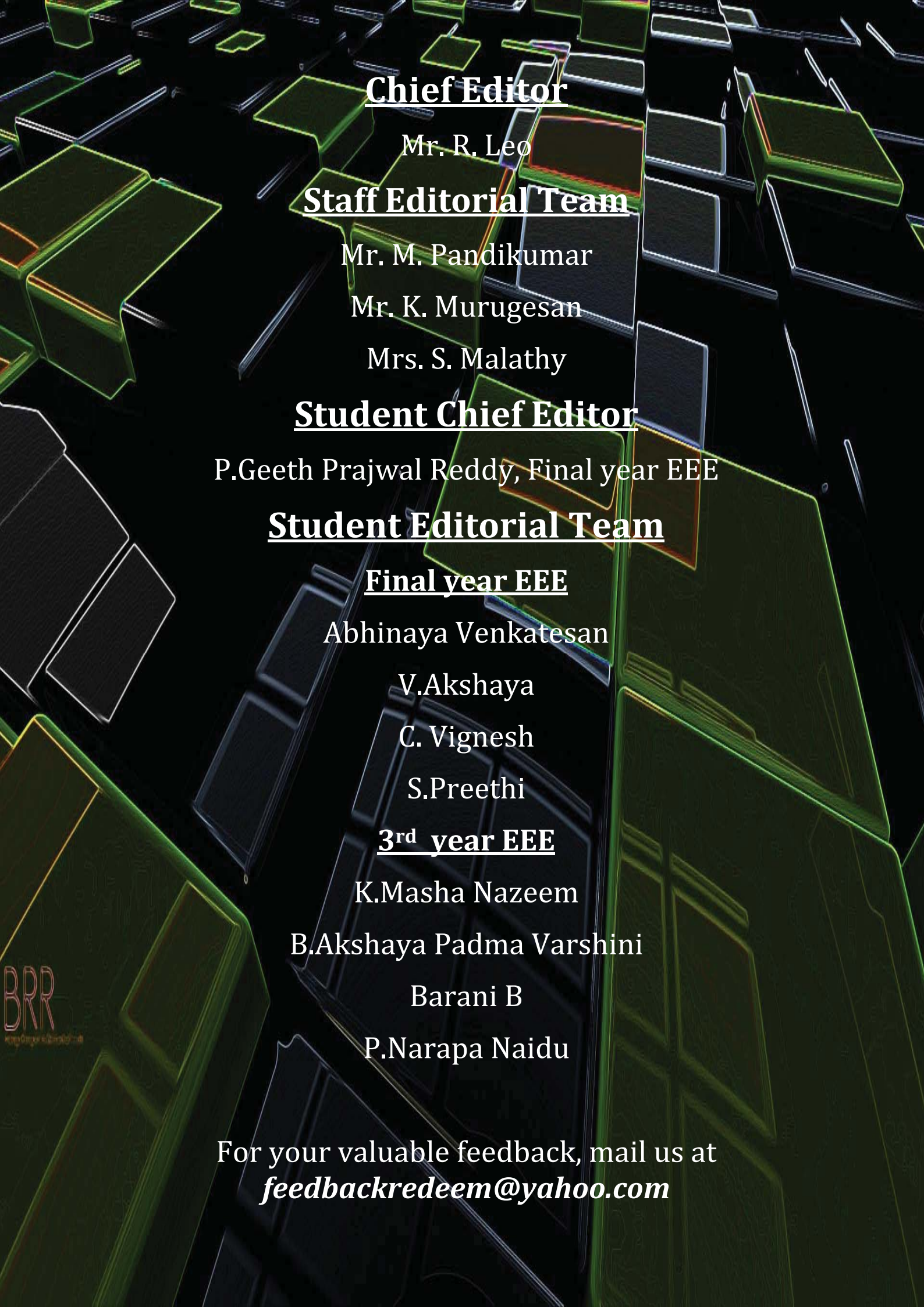
REDEEM



- Engraved into LIMCA Book of Records
- Dr. B. L. Mathur's interview
- Workshop on Solar Photovoltaic Systems

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

QUARTERLY NEWSLETTER



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REDEEM

Preface

Chief Editor

Intelligence is about problem solving, smartness and execution and is built by gaining information, knowledge from external agencies, from schools and universities, teachers and textbooks. The intellect is about thinking, philosophy and ideology and is developed through your individual effort by exercising the faculty of questioning, thinking and reasoning. Not accepting anything that does not admit logic or reason. And that any amount of intelligence gained cannot build your intellect. All the knowledge you acquire is of no use to you without an intellect. Still there are many who are circumscribed with only knowledge without intelligence and intellectualism.

You need a powerful intellect to put the knowledge, intelligence gained, to practical use in life. That explains why among millions of doctors graduating from medical schools only a few have discovered life-saving drugs and surgeries, finding cures and remedies. So too, millions of engineers have passed out of engineering colleges but only few design something new. It is their intellect that renders their performance outstanding. Besides hindering success and progress, intelligence without intellect could destroy peace and happiness in the world. Not realizing the importance of the intellect in life people makes no attempt to develop their own. Instead, they merely indulge in acquiring intelligence through surface reading of others' periodicals and publications. Academic excellence is not just enough you need human excellence also. True education has to enhance the boundaries of perception and offer some amount of structured thinking and professional integrity. For generations human beings have turned into intelligent robots and are traversing through life without awareness, much less enquiring into the meaning and purpose of life. Education has lost its meaning and purpose
The world today is in a state of chaos due to the perversion in human development – all intelligence and no intellect. That explains why even highly educated businesspersons, professionals and scholars become alcoholics, are short tempered and succumb to worry and anxiety. It is the mind that constantly harbors worry of the past and anxiety for the future. When the intellect remains undeveloped and weak, it is unable to control the vagaries of the mind. The frail intelligence looks on helplessly as the mind devastates the person. In such a condition the business, profession and even family relationship run into shambles. On the contrary those having developed a powerful intellect, with or without academic distinction, can hold the mind under perfect control and direct action to spell

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Contents

"Life is like riding a bicycle. To keep your balance, you must keep moving." - Albert Einstein

From the HOD's Desk...

Dr.V.Kamaraj

It gives me immense pleasure to release the second edition of the EEE News letter redeem 2012.I am proud to quote that EEE Department has entered into history by creating Limca book of records for running maximum number (100) of line tracing robots simultaneously on the given arena. This not possible without the hard, sincere and dedicated work of our students. . I congratulate each and everyone involved in creating this record. This issue also highlights solar photovoltaic system workshop and other notable academic and co curricular activities of staff and students.

Dr.V.Kamaraj has been appointed as a member of the syllabus Sub-committee for framing the cirricule and syllabi (Regulation 2012) for UG Courses offered to affiliated colleges of Anna University under the faculty of Electrical Engineering. In this connection, he attended the first meeting at the College of Engineering, Guindy Campus.

Preface (Cont. from pg. 1)

success and peace in life. If you sit and observe, you see how restless your mind is .If you try to calm it, you only makes it worse, but over time it does calm, and when it does, there is room to hear more subtle things, that's when your intuition starts to blossom and you start to see things more clearly and be in the present more. Your mind just slows down and you see a tremendous expanse in the moment. You could see so much more than you could see before. It is a discipline and you have to practice it to get some clarity.

The educational systems the world over must be held responsible for the debacle of the intellect. It is their primary responsibility to strike an equable balance between acquiring intelligence and developing the intellect. Only by maintaining this essential equation can governments be run, businesses conducted, professions practiced and families live in peace and prosperity.

"Education is progressive discovery of ignorance"

Value Addition

Dr. S.Siva Subramani Joined the EEE department on 25th May 2012 as an Associate Professor. He has completed his Ph.D. at IIT madras and has 7 years of experience in teaching and research. His area of Research is Power Systems.

"The fear of death follows from the fear of life. A man who lives fully is prepared to die at any time." – Mark Twain

Harness the Sun

Department of EEE conducted three days National Level Workshop on "***SOLAR PHOTOVOLTAIC SYSTEMS***" during May 3- May 5, 2012.

Convener: Dr. V. Kamaraj
Coordinator: Dr. R. Ramaprabha

Around 45 members (faculty & PG students from various institutions over Tamilnadu) attended the workshop. Lectures on Modeling of Solar PV, Maximum Power Point Tracking, Solar Powered Water Pumping Systems, Power Converters, Multilevel Inverters, Z-source Inverters, Soft computing optimization techniques, Application of Neural Network & Fuzzy Controller and Grid Connected Systems were delivered. Practical hands-on session on Solar Characteristics, Boost Converters and Multi level Inverters were handled. The following subject expertise has handled the sessions:

Lecture sessions:
Dr. B. L. Mathur, Dr. R. Ramaprabha, Dr. V. Rajini, Dr. R. Seyezhai, Dr. M. Balaji, Mr. U. Shajith Ali, Ms. J. Anitha Roseline, Ms. S. Malathy

Tutorial sessions:
Mr. N. Pandiarajan, Mr. M. Balaji, Ms. R. Deepalaxmi, Ms. Latha Dinesh,
Ms. J. Anitha Roseline, Ms. S. Malathy, Ms. Ram Meenakshi (Research scholar-EEE), Ms. M. Harini (II PG),

Practical sessions:
Dr. R. Ramaprabha, Dr. V. Rajini, Dr. R. Seyezhai, Mr. U. Shajith Ali, Ms. S. Krishnaveni, Ms. S. Hemalatha (Research scholar-ECE), Mr. G. Sowrirajan, Mr. C. N. Vinothkumar (II PG)

As a part of practical session, a visit to SSN Research center (SSNRC) has been arranged. Mr. B.Rajendran, Senior Consultant, SSNRC and Dr. Sekhar Bhattacharya, Senior Research Scientist, SSNRC have delivered sessions on "Solar Thermal, Thin film & Facilities at SSNRC" followed by "Visit to SSNRC" taken care by Dr. Sekhar Bhattacharya, Mr. Y Rajasekhar, Research Scientist, SSNRC and Mr. C. Balaji, Research Scientist, SSNRC.

There was a panel discussion on "***Current Issues, Research Openings and discussions"*** *by* Dr. B. L. Mathur, Dr. R. Ramaprabha, Dr. V. Rajini & Mr. N. Pandiarajan.

"Sometimes people are beautiful. Not in looks. Not in what they say.
Just in what they are." - Markus Zusak

Faculty achievements

Ph.D. Receipeints

- Mr.M.Balaji, AP defended his Ph.D. thesis titled, "Multi-Objective Design Optimization of Switched Reluctance Machine" under the guidance of Dr.V.Kamaraj and completed Ph.D. viva-voce examination.
- Mr.M. Prabhakar, defended his Ph.D. thesis titled, "Study of Non-Isolated resonant DC-DC Converter Topologies" under the guidance of Dr.V.Kamaraj and completed Ph.D. viva-voce examination.
- Mr.N.Lenin, defended his Ph.D. thesis titled, "Analysis and design of switched reluctance Motor" under the guidance of Dr.R.Arumugam and completed Ph.D. viva-voce examination.

Papers and Journels

- Dr.Ranganath Muthu, Professor published a paper entitled, 'Implementation of DSP based cost effective Inverter fed Induction Motor drive with ViSIM ", in the Journal of Electrical Engineering, Vol.63, No: 2, 2012, pp.115-119. (Impact factor: 0.87).
- V.Vasan Prabhu (Lecturer, AIHT, Chennai) and Dr. V.Rajini (Professor), published a paper entitled," Design of GT-FLC Speed Controller and Position Sensorless Control using ANN for 8/6 SRM", in the International Journal of Electrical Engineering. ISSN 0974-2158 Volume 5, Number 4 (2012), pp. 475-488 (Annexure I Journal).
- S.Malathy (A.P.) and Dr. R. Ramaprabha (Asso.Prof.) presented a paper entitled, "Trapezoidal Inverted Sine PWM Techniques for Fundamental Fortification in Cascaded Multilevel Inverter" at the *International Conference in MAGNA on Emerging Engineering Trends (ICMEET2K2)* at MAGNA College of Engineering, Tiruvallur, Chennai.
- Dr.Ranganath Muthu, Professor chaired a session on, "Soft computing to Power Engineering", in the National Conference on, Computational Intelligence in Power apparatus and Systems"-CIPS 2012, at SRM University, Chennai.
- Dr.R.Seyezhai (Asso.Prof) and T.Saravanan (Senior Lecturer, Rajalakshmi Engineering College) presented a paper entitled, "Design and Simulation of Split Capacitor Type Elementary Additional Series Positive Output Super Lift Converter', at the International Conference on Computation of Power, Energy, Information and Communication (ICCPEIC-2012) held at Adthiparasakthi Engineering College.
- Dr.R.Seyezhai, (Asso.Prof.) published a paper entitled,

Rhapsody

Dr. Ranganath Muthu has recently been elevated as a senior member of IEEE and ISA. A Professor in the Department of Electrical & Electronics Engineering, He has more than 21 years of teaching and industrial experience in the field of Instrumentation, Control and Power Electronics. His had previously worked at University of Bahrain, Madras Institute of Technology, Anna University and Rourkela Steel Plant.

He received the B. Tech. Degree in Electrical Engineering from Institute of Technology, Banaras Hindu University, and M.E. & Ph.D. Degrees in Instrumentation Engineering from Madras Institute of Technology, Anna University.

He has published 5 papers in International Journals and 41 papers in proceedings of International/ National Conferences. He has organized four international conferences, three national conferences in addition to many short-term courses.

His areas of interest and research include intelligent control, fuzzy systems, neural networks, genetic algorithms, advanced control, adaptive control, renewable energy and power electronics.
He is an active member of ISTE, ISOI and CSI and a Fellow of Institution of Engineers (India).

"If you don't know where you are going, any road will get you there." – Lewis Caroll

- "A comparative study of Asymmetric and Symmetric cascaded multilevel inverter employing variable frequency carrier based PWM" International Journal of Emerging Technology and Advanced Engineering, Vol.2, issue3, March 2012, pp.230 -237. ISSN: 2250-2459).
- N. Pandiarajan (Asso.Prof)**,** Dr. R. Ramaprabha (Asso.Prof) and Dr. Ranganath Muthu (Professor) published a paper entitled, "Application of Circuit Model for Photovoltaic Energy Conversion System", in the International Journal of Photo energy, Special Issue on Recent Developments in Solar Energy Harvesting and Photo catalysis (ISSN: 2229-712X), Volume 2012, Article ID 410401, pp 1-14, 14 pages, doi: 10.1155/2012/410401 ***SJR Impact factor 1.345.***
- Mr.U.Shajith Ali (AP) served as reviewer for the 2012 IEEE Applied Power Electronics Colloquium (IAPEC 2012), Kuala Lumpur, Malaysia.
- Mrunal Deshpande (AP) served as reviewer for IEEE Conference on Control systems & Industrial Informatics to be held at Indonesia in the month of September 2012.
- S. Malathy (A.P) and Dr. R. Ramaprabha (Asso.Prof.) published a paper entitled "Trapezoidal Inverted Sine PWM Techniques for Fundamental Fortification in PV Fed Multilevel Inverters" in International Journal of Emerging Technology and Advanced Engineering (ISSN 2250-2459), Volume 2, Issue 4, April 2012.

"Life isn't about finding yourself. Life is about creating yourself." – George Bernard Shaw

- Dr.R.Arumugam, Professor conducted the Ph.D. viva-voce examination for the research scholar Mr.N.C.Lenin at SSNCE.
- Dr.R.Seyezhai (Asso.Prof) & Ms.Mrunal Deshpande (A.P.) attended the one day seminar on, "Industry Institute Interaction on Strategies of power distribution & Quality measurements", at VIT, Chennai.
- Dr.Ranganath Muthu, Professor attended the one day seminar on, 'Exploring Research Areas in harnessing Wind energy", at VIT University, Chennai.
- S.Malathy and Dr. R. Ramaprabha, "Trapezoidal PWM Schemes for Multilevel Inverter", 2nd International Conference on Advances in Engineering and Technology (ICAET2012), March 28 & 29,2012.
- V.Vasan Prabhu (Lecturer, AIHT, Chennai) and Dr.V.Rajini (Prof.) presented a paper entitled, " Mathematical Modeling and Study of Chaos in Dual Mode operation of 8/6 Switched Reluctance machine ", 2nd International conference on Advances in Engineering and Technology (ICAET 2012), Nagapattinam. **This paper received the Best Paper Award.**
- Dr.R.Rengaraj, Asso.Prof & Mr.N.B.Muthuselvan, AP attended the workshop on, "Advanced power system protection', conducted by Appadurai Chair for power systems Anna University, Chennai hosted by Bhajrang Engineering college.
- Dr. B. L. Mathur, Professor delivered a Lecture on, "MATLAB Simulation of a Solar Photovoltaic Array and its Applications " in the, three days National Level Workshop on "Solar Photovoltaic Systems", conducted by EEE Department at SSNCE
- Dr.Ranganath Muthu, Prof. attended the ISTE STTP on, "Modeling and Simulation of wind turbine generators for power system studies", at SriLakshmi Ammal Engineering college, Chennai.
- Nagavel, V.Vasan Prabhu & V.Rajini published a paper entitled, " Design of non-isolated bidirectional converters with fast changing schemes for plug in hybrid vehicles', International Journal of Scientific & Engineering research, Vol.3, Issue 5, May 2012, ISSN: 2229-5518.
- Jyoti Koujalagi, B.Umamaheswari and Dr.R.Arumugam published a paper entitled, " Exploring the behavior of Switched reluctance Generator under normal and field weakening mode of

Faculty achievements

operation',International Journal of Electrical & Electronics Engineering, Vol.5, No: 3, 2012, pp.317-328.

- Dr.Ranganath Muthu, Prof. attended the seminar on, " Optimization in Engineering and Management Research", at Anna University, Chennai.
- V.Prakash, S.Prabhu, V.Chandrasekar, R.Arumugam & M.Arumugam published a paper entitled, " Vibration reduction of Switched Reluctance Hub motor', in the International Conference on computing and Control engineering, ICCCE2012, CIIT-Coimbatore, April 2012.
- R.Seyezhai (ASP) and Inba rexy (AP/ Loyola College of Engineering) published a paper entitled, "Design and Simulation of Active Triple Port Full-Bridge DC-DC Converter for Renewable Energy Source", CiiT International Journals, March-June 2012.
- Mural Deshpande, AP reviewed paper titled 'Integral Pseudo Sliding Mode Control for Nonlinear Systems' for the international journal COMPEL.
- M.Balaji and V.Kamaraj, "Evolutionary Computation Based Multi-Objective Pole Shape Optimization of Switched Reluctance Machine", International Journal of Electrical Power and Energy Systems (Elsevier) ,vol.43,no.1,2012,63-69.
- M.Balaji and V.Kamaraj " Optimum design of switched reluctance machine using adaptive particle swarm optimization", ARPN Journal of Engineering and Applied Sciences, Vol. 7, no. 6, 2012,666-671.
- Dr.V.Kamaraj, Prof. & Head conducted the Ph.D. Viva-voce examination for the research scholar Mr.M.Balaji (AP/EEE) at SSNCE.
- Dr.M.Balaji has been promoted as Associate Professor (Grade 1) with effect from 1st July.
- Dr.Ranganath Muthu attended the seminar on, "Research Paper publications in Journal", organized by IET Chennai Network.

Words of Wisdom

- From Dr.B.L.Mathur

Dr.B.L.Mathur is in the truest sense the "Grand Old Man" of the Electrical and Electronics Department of SSN College of Engineering. With an astoundingly vast teaching and research experience spanning a period of 50 years, to his credit, he's still going great guns in doing what he does best. He received his B.E (Electrical Engineering) degree from Rajasthan University, M.Tech. In Power Systems from the Indian Institute of Technology Bombay and Ph.D. from the Indian Institute of Science, Bangalore. He opened his heart out in response to a few questions we posed. His mammoth experience and passion towards teaching, shone through in every word he uttered. Here are the excerpts from the one-on-one:

In all these years of teaching, what do you think have been your prime contributions to the engineering community?

I have been teaching for the past 50 years. I served for a period of 19 years at Jodhpur University, 18 years at an engineering college in Kota and have been associated with SSNCE for the past 11 years. I developed a number of aids to enrich the teaching process during my tenure at Jodhpur University. While pursuing my PhD at IISC, Bangalore I worked on a number of relay circuits for the protection of power systems. One of the products developed was even purchased by an industry in Bangalore. My PhD. thesis was adjudged the best thesis of the year 1979 and was awarded a Gold Medal by IISC, Bangalore. During my stint at Kota Engineering College, I was instrumental in developing the infrastructural facilities and the laboratories of the college from scratch. Also, when I first became a part of SSN, only the Machines Lab was set up in the Electrical Department. I played a major role in the development of the other laboratories of the Department. However, in my opinion, my biggest contribution has been in terms of the students I have been able to produce over these years. I've tried my best to inculcate sound

moral values in the students and have given this the foremost importance. Securing good grades has always remained secondary...

You have an astonishing track record of producing a huge number of PhD scholars under your guidance. What is the secret behind successfully guiding such research scholars?

In my experience, I've discovered that best results can be achieved when the guide takes complete interest in the candidate's work and works alongside him. When it comes to research, the problem at hand is always very new. So the guide too should put in efforts to work through the problem. Irrespective of the results, the guide should keep the candidate motivated. Also, I've always emphasized on keeping the fundamentals strong. That way, the whole research process becomes much simpler. In fact, during my study at IIT, I worked only on thyratrons. Transistors were not available those days. But I learnt to work with them only while guiding the research scholars under me. Guiding these scholars has been a very enriching experience even for me.

What, in your opinion, are the primary differences you see between students of your generation and those of the current generation?

Honestly, I see no difference. There has always been a mix of good and bad students across generations. But one basic difference that I see is that, a lot of girl students have come forward to take up engineering, which is extremely refreshing. Otherwise, the quality of students has been just the same. But, during those days, students were much more dedicated and industrious because of the dearth of some basic amenities that you students now take for granted. There were no photocopy machines. So students used to spend long hours in the library reading up on journals and making notes of all that they read. On the contrary, these days, the amenities available to students have improved leaps and bounds. But most importantly, the social respect that engineers of my time enjoyed has reduced drastically because now, every Tom, Dick and Harry can aspire to become an engineer.

What are your views on the present trend of incorporating visual aids in teaching? Do you think they are a real value addition?

Personally, I am not in favor of the use of too many visual aids for classroom lectures. There are certain concepts that cannot be driven home effectively by merely projecting them on screens. In my experience, I have realized that deriving a formula manually using the blackboard makes the students more involved in the whole learning process and makes them understand the concepts better. This is again the case with complex diagrams and circuits. Only if the teacher makes an effort to draw them on the blackboard, the students will be able to reproduce them in the examinations. So I think the optimum usage of visual aids in the classroom will definitely enhance the teaching and learning processes.

Finally, is there any message you would like to convey to the students?

Yes, the students of today should give prime importance in strengthening their fundamental knowledge. They should expose themselves to more practical and hands-on training in the fields of their choice. They should cultivate interest for hardware implementation and testing of concepts that they learn in the classrooms. But, above all, they, as engineers should make their best efforts to be socially conscious and always try to uphold their moral integrity

Laurels of Students

Tele Presence

- Mr.K.Vijayakumar of final Year EEE B, represented SAARAL TAMIL MANDRAM, the Tamil literary club of our college, 4 times in various debates hosted by IMAYAM TV.
- He was also awarded the title of "Best Speaker" for his exemplary participation in the talk show conducted by Zee Tamil.

Sports

Rohit Damodaren of final year has been invited to play for Edmonton Cricket Club, London as an overseas Player for the 2012 cricket season

Internship

- M.Subhashree.R (M.E. Power Electronics and Drives) is undergoing an Internship for a project with stipend at Renault Nissan Technology, Mahindra World City.

Paper Presentations

- M.Harini (M.E. Power Electronics & Drives-II Year), under the guidance of Dr.R.Ramaprabha and Dr.B.L.Mathur, presented a paper entitled, "MATLAB Based Modelling of Grid Connected Hybrid Wind/Solar Photovoltaic System", at the International *Conference in MAGNA on Emerging Engineering Trends (ICMEET2K2)* at MAGNA College of Engineering, Tiruvallur, Chennai.
- Harini.K (II Year M.E., PED), under the guidance of Dr.V.Kamaraj, presented a paper entitled, "Common mode voltage elimination for an induction motor drive", in *International Conference in MAGNA on Emerging Engineering Trends (ICMEET2K2)* at MAGNA College of Engineering, Tiruvallur, Chennai.
- Fazil Ahamed, M. Indhupriya and A. Devika (EEE Passed out), under the guidance of Dr.R. Ramaprabha, presented a paper entitled "Asymmetric Multilevel Inverter to Address Partially Shaded Photovoltaic Modules", at the *International Conference in MAGNA on Emerging Engineering Trends (ICMEET2K2)* at MAGNA College of Engineering, Tiruvallur, Chennai.
- Sahithi.G (II Year M.E.PED), under the guidance of Dr.V.Kamaraj, Prof.&HOD, presented a paper entitled, "Operation of Cascaded Multilevel Inverter in over modulation ", at the *International Conference in MAGNA on Emerging Engineering Trends (ICMEET2K2)* at MAGNA College of Engineering, Tiruvallur, Chennai.
- K.Sowmitha, V.Varshini and G.P.Dimf (EEE Passed out), under the guidance of Dr.R.Ramaprabha, presented a paper entitled, "Development of Low Cost Offline MPPT Technique for Solar Photovoltaic System", in *International Conference in MAGNA on Emerging Engineering Trends (ICMEET2K2)* at MAGNA College of Engineering, Tiruvallur, Chennai.
- Mounica Gaunta, Pallam Reddy Nirupa and, Thimmadi Akshitha (III Year B.E., EEE), under the guidance of Dr.R.Seyezhai (Asso.Prof), published a paper entitled, "Simple And Efficient Implementation Of Two-Phase Interleaved Boost Converter For Renewable Energy Source" in the International Journal of Emerging Technology and Advanced Engineering (ISSN 2250-2459), Volume 2, Issue 4, April 2012.
- R.Arunkumar (II Year M.E.PED), under the guidance of Dr.A.N.Arvindan (Professor), presented a

"An Expert is a person who has made all the mistakes that can be made in a narrow field" – Niels Bohr

paper entitled, " Implementation of HCC PWM Technique in Single-phase Half-bridge Bidirectionla Boost AC-DC Converter", in the National Conference on innovations in Engineering and Technology – IET 2012 held at Anna University of Technology, Madurai.

- S.Ponmalar (II Year M.E.PED), under the guidance of Dr.A.N.Arvindan (Professor) presented a paper entitled, "Speed control of Single-phase Induction Motor using AC Chopper", ", in the National Conference on innovations in Engineering and Technology – IET 2012 held at Anna University of Technology, Madurai.
- A.K.Vaishnavi, C.S. Meera, A.Poorani (III Yr.), under the guidance of Dr.V.Rajini, presented a paper entitled,"An investigation of Overvoltage's of Inverter Fed Induction Motor Drives", National Conference on Recent trends in Electric Power Drives and Control (RTEPDC 2012) held at KCG College of Engineering on 24th March 2012.
- B.Soundharya, Raghavi, Malavikka Ramesh (III year EEE Student), under the guidance of Dr.V.Rajini presented a paper entitled, "Power Saving in Solar Powered Fan Drives", ", National Conference on Recent trends in Electric Power Drives and Control (RTEPDC 2012) held at KCG College of Engineering on 24th March 2012.
- *S. Ajay, S. Maneesha, G.Deepika and A. Arunkumar* (III EEE students) submitted for a Design Contest **– Organized by Texas Instruments India** titled, "Compact Maximum Power Point Tracking of Solar Photovoltaic System using Analog IC's" mentored by Dr. R. Ramaprabha**.**
- R.Tamilppavai (III ECE), *R.Aswini (III EEE), B.Pratyusha (III EEE), Venkateshwaran (III EEE) and T. Manasa (III EEE)* submitted for a Design Contest – **Organized by Texas Instruments India** titled "Smart Power Regeneration in Electric cars" mentored by Dr. M. Ramakrishnan (P/ECE), Dr.R.Ramaprabha and Dr. R. Seyezhai.
- J.Praveen, A.Prasith, I.Prithieve (EEE Passed out), under the guidance of R.Deepalaxmi, (AP), published a paper entitled, "Design of a Pulse Forming Network to Launch an Object Using Rail-gun" in the international Journal of Advanced Scientific Engineering and
- Technological Research (IJASETR), Issue- 3, Vol-3, June 2012, ISSN Number: 1839-7239.
- Fazil Ahamed. A, M.Indhupriya and A.Devika (EEE Passed out), under the guidance of Dr. R. Ramaprabha, published a paper entitled, "Asymmetric Multilevel Inverter to Address Partially Shaded Photovoltaic Modules", ABI International Journal of Modern Science & Engineering, Volume 1, Issue 1, pp 1-10, Jan-June 2012. (Online: ISSN: 2278-2850, Print: ISSN: 2278-2842).
- V.Adwaith, M.Banuchandar (IV Year EEE Students), under the guidance of M.Senthilkumaran (AP/EEE) and Dr.Ranganath Muthu (Prof./EEE) published a paper entitled, "Fuzzy logic methodologies methodologies for torque ripple frequency reduction in direct torque control of an Induction Motor", ARPN Journal of Engineering and Applied Science, 2012.

Into the Pages of History...

On 15th June 2012, ELECTRICAL RESEARCH FRATERNITY (ERF) based in the electrical department of the SSN College of engineering attempted to get into the LIMCA book of records. They achieved the feat of running 100 line-tracing robots simultaneously on a single arena. Line tracing is a phrase familiar among all the robotics enthusiasts where in, an autonomous vehicle, called a bot follows a black line of a pre decided thickness.

The event was witnessed by Dr.T.Ashokan, Associate professor, IIT madras, Dr.K.S.Jayakumar, Associate Professor, Mechanical Department, SSNCE and the faculty members and students of SSN. The previous record attempt was by IIT madras with 61 bots tracing

the track simultaneously during their technical fest SHAASTRA-2011.

To realize this goal of making 100 line tracers nearly 60 students participated in a workshop conducted by the ERF. This workshop, called the Logic-Bots is an annual- student organized workshop with a purpose of developing interest among students in the field of electronics and robotics. Here the students were taught on how to make a simple line following robot based on analog electronics.

"This can motivate students to take up robotics and design circuits to achieve the required task at a lower cost. It was successfully tested 2 months before the scheduled day of the event. This gave me a good confidence about the performance of the robot for the required task."- said Mervin Rodrigo and Tathagata Mitra - designers of logic-bot.

"The saddest aspect of life right now is that science gathers knowledge faster than society gathers wisdom." – Isaac Asimov

This years Logic-Bots event was assisted by Swastik Electronics. Along with the support from the alumni and the staff members of the electrical and electronics department, it achieved a great success this year. "Without their support this event could not have been possible", remarked Sai Praveen and Vijayenthiran, Logic-Bots event in-charges.

Earlier in the day Dr. T. Asokan Associate professor, IIT madras emphasized the need for students to sustain interest in the field of robotics and lauded the students for taking the first step towards it. He introduced the students to wide range of application of robots in the field of automobiles, spot welding, underwater navigation and medicine.

A great applause erupted among those present when the 100th robot was placed on the track. Students and faculty members congratulated each other. The logic bot group attributed their success to the coordinated and dedicated efforts of the volunteers.

"This success would definitely encourage us to take up many challenging technical tasks in the future" said group of volunteers.

Upcoming Events

- **The inauguration of the Association of Electrical and Electronics Engineers (AEEE) is to take place on the 24th of July 2012**
- **Eupraxia, EEE dept. National level symposium is scheduled to take place on the 28th of August 2012**
- **National Level Workshop on "Renewable Energy Electrical Systems" is to be held on the 14th and 15th of September 2012.**

THE BACK-BENCHERS GUILD

By Manuprasad, EEE – A, Final Year

The constant struggle for intellectual superiority that is engineering might plunge you through deep wells of meaningless verbiage, enticing you on an ostensible roller-coaster ride in the most exciting amusing park ever. Which it is nothing but. While the presence of an engineering student in class might be as uncertain as the proverbial Schrödinger's cat, the sporadic appearances still guarantee a multitude of thoughts to be reflected upon. And when the thoughts are those of a back-bencher you have hit the jackpot. I trudge up to my back-bencher friends deciding to spend a day at the nadir to better understand the intricacies of the self-proclaimed genius minds. I pass many unoccupied seats in the middle which seemed to have been begging for occupancy ever since they had unwisely been planted there. Everyone knew there were only two places in the entire class that were ever going to be occupied- the first rows and the last rows, with the latter sharing the majority of the burden. The middle rows were as good as non-existent, except when an unfortunate back-bencher arrives to find his usual spots taken up due to the sudden excess in attendance owing to it being an end-of-semester-mad-rush-for-attendance-marks day and decides to find solace in solitude in the middle rows rather than occupy the detested first rows. And as for those who have questions about the detested part, try remembering the last time your first preference seats at the cinema were in the first row. Case rested.

I decide to place myself between the student (he was visibly offended at being called one) who seemed more interested in subjecting his mobile phone's keypad to constant pain than touching his pen and the one who seemed to be practicing meditation by having his eyes tightly shut and oblivious to all activity around him. Best seat in the house, at-least for the task which I had embarked upon.

The desk was filled with graffiti denser than Sheldon Cooper's blackboard equations and quite unintelligible to the untrained eye. As the professor droned on about the non-existent benefits of a non-existent theory, my meditating neighbor woke with a start. Excited that I was going to experience the first peek of back-benched-ness for the day, I watched him intently. His meditation seemed to have bestowed enlightenment upon him for he no longer resorted to meditation but rather decided to spend the rest of his time at class usefully- by gazing at the girl sitting in the first row who in turn decided to occupy herself usefully by fiddling with random locks of her hair and caressing them every few minutes as though she feared they might fall away into disarray any moment.

Just when I was starting to underestimate the intellectual ability of the back-benchers a discussion on planning the so-called 'Industrial Visit' broke out. In the events that ensued, my precarious assumption was quashed. A multitude of destinations were proposed, theories about why each destination was special in its own right were put forward, and a budget was put up after a series of mind-boggling calculations that would have made John Nash proud.

An interesting lunch hour followed, made interesting by the conspicuous absence of lunch because most of them considered that lunch was meant to be consumed during lectures so that the hour prescribed for it could be utilized for more productive tasks. Such as lurking at the canteen to find innocent first-years to be picked on. Or lying on your back in the sprawling lawn staring at the sky and waiting for it to come hurtling down and finish off the earth thereby relieving you of the

The recent introduction of bicycles for commutation seemed to have given rise to a wide spectrum of lunch activities including bicycle races.

The lunch hour seemed to extend into most of the next hour too as I laid my hands upon another precious piece of information only the back-benchers seemed to possess knowledge of- The library is paradise. Especially when the air-conditioning is working and you ought to be at a lecture elsewhere in a sultry classroom.

As I returned to class I found the strength to have gone down considerably. Most people deemed their presence in the morning session ought to guarantee them enough attendance for the rest of the day too, while others had concluded boosting their attendance would be a futile attempt when much more interesting activities beckoned from outside. To my unexplained relief, I found my neighbors faithfully doing what they had been doing all day.

As the day wore on a wide plethora of activities as diverse as Borneo's wildlife was spread out in front of me but constraint of space compels me to wrap up with the proceedings. Also most people around me mistook my constant jotting down as taking notes, which was supposedly banned around there. And the conscious fact that revealing of any more 'fun' activities might land me in trouble with both the teaching and student communities. I decided to oblige as my neighbors invited me for a serious game of tic-tac-toe.

Disclaimer: All characters and incidents in this article are purely fictitious. Especially if you happen to be a girl in the first row.