Dear Members,

As I reported in my message in the March issue, the IEEE membership strength in India is 51,831 which forms about 50% of the IEEE Region 10 membership strength and about 12% of the world IEEE membership.

Recognizing this potential, India has been identified as a high priority country for membership growth by MGA. The past R10 Director Mr. Lawrence Wong is taking initiatives to work on “Developing an MGA Plan for India”.

During 2013, the IEEE Strategic Direction and Environmental Assessment (SD&EA) committee will lead the development of a clear plan for India as it relates to membership. For this purpose, it was decided to form a working group to assist the IEEE Strategic Direction and Environmental Assessment (SD&EA) committee. From our end three volunteers including Mr. Anthony Lobo, Vice Chair, and Membership Dev Chair for Bombay Section, Mr. T.S. Rangarajan, Chair, Madras Section and Mr. Hitesh Mehta, Chair, Bangalore Section have been nominated as the volunteer members from India to form a TFT of IEEE SD&EA (Strategic Direction and Environmental Assessment) Committee.

We all understand and realize that number alone will not give credit to us. The SWOT analysis planned to be carried out will give the true status of IEEE community in India. As per the vision statement, IEEE will be essential to the global technical community and to technical professionals everywhere, and be universally recognized for the contributions of technology and of technical professionals in improving global conditions. IEEE’s core purpose is to foster technological innovation and excellence for the benefit of humanity. This can be achieved only through dedicated activities by the Sections, Chapters, Societies and Affinity Groups.

Fortunately, we have 10 Sections in India Council, and more than 10 Societies and Chapters in most of the Sections. We also have Vice Chairs in India Council to coordinate the activities like, Student Activities, Professional Activities, Technical Activities, Educational Activities, Membership Development Activities, Humanitarian Technology Activities and Industry Relations Activities. But, I have a concern whether the IC Vice Chairs, Section Chairs, Society and Chapter Chairs really plan their activities to achieve the objectives and goals of IEEE in a coordinated manner? In my opinion the Vice Chairs of India Council are the right agencies to set the right path and guidelines to the Sections, Societies and Chapters in India for the effective coordination of the activities to achieve the set goals of IEEE. My appeal to all the IEEE members is that we should pool our resources to show case our strength to the IEEE Strategic Direction and Environmental Assessment (SD&EA) committee so that our strength is truly assessed. My special request to the Vice Chairs of India Council is to take the lead to guide and help the Sections in this process.

Recently, IEEE Region 10 has made a few announcements for awards and project supports. Project Proposal for 2013 IEEE Region 10 Humanitarian Technology Activities has been called for to form a Special Interest Group on Humanitarian Technology (SIGHT) in the Sections and to take up Humanitarian Technology activities. For additional details and to register online, visit http://ieeesight.net. Region 10 will provide 75% of the cost of the project subject to a maximum of $750 in each case. It is expected that the remaining 25% of the cost of the project be borne by the respective Sections. Such project reports are to be submitted by 15 Dec 2013. The Sections can take benefit of this offer.

R10 EA committee invites nominations from individuals and Sections for consideration for R10 Educational Activities Award in the following categories: R10 Meritorious Achievement in Accreditation Activities; R10 Meritorious Achievement in Continuing Education; R10 Pre-University Education; R10 Major Educational Innovation; R10 Standards Education; R10 Section Professional Development; and R10 Society/Council Professional Development. The corresponding nomination and reference form (EAB form) can be downloaded from IEEE EAB web site (http://www.ieee.org/eab-awards). Deadline for nominations is April 30, 2013 (Extended Deadline). The eligible individuals and Sections can avail this opportunity.

I would like to end my message by thanking all of you for your support to the IEEE initiatives and activities and looking forward to your continued support and inputs.

With kind regards
M. Ponnavaikko
ponnav@gmail.com
Message from Editor

H.R. Mohan
hrmohan.ieee@gmail.com
Blog: http://infoforuse.blogspot.com

It is great to know, from the Chairman’s message, about developments relating to the “MGA Plan for India” and the IEEE Strategic Direction and Environmental Assessment (SD&EA) committee and the volunteers from India Council.

In this issue, an eminent educationalist Dr. Ilango, former VC of Bharathiar University and a member of EAEC, NBA, has written an in-depth article on “Accreditation of Educational Institutions and Programs in India” which is not only informational but also deals with the current status, problems and provides guidelines to bring out employable graduates from our academic system. In the context of globalization, it becomes essential that our systems undergo the needed change.

For the column, “News from Sections”, the response from various Sections has not been so good to our expectations. Only Kerala Section has provided the details on some of their activities apart from Madras Section. We are sure that The IEEE OUs are quite active across the country and many events are happening. The newsletter is the best medium to share and let others know about your Sections. Once again, we request the OUs (Sections, Student Branches and Society Chapters and Affinity Groups) to send the matter for publication in the newsletter as per the standard guidelines available at http://goo.gl/dzSIJ

We draw the attention of our readers to the forthcoming events list, published in this issue which is quite impressive with a wide range of workshops, seminars, FDPs, national and international conferences, to derive maximum benefit by contributing papers and sharing their research findings and update their knowledge by registering as delegates.

We note that Hyderabad Section is organizing a programme on “Conference Organizers Workshop (COW)” on 18” May 2013, which will provide networking opportunity with the experienced Conference Organizers and will facilitate the attendees to walk away with IEEE conference business framework and know where to go to get answers related to IEEE Conferences. It is a must for the representatives from various OUs to attend this COW programme. More details at https://meetings.vtools.ieee.org/meeting_view/list_meeting/17721

One of our old student member -- Sukhanya Rajan, currently pursuing MBA course at UC Davis, US, for the benefit of our student members has shared with us the details of Mark Twain Awards for Travel support which extends awards between $500 - $2,500 throughout the year. To apply, one needs to create a username and password at www.letterbanc.com and then copy this link into browser at: http://www.letterbanc.com/submissions

While we are getting appreciation for the items published in the column “Information Resources”, we request our readers to share interesting information they come across and also provide feedback, by emailing them to ieeeindiainfo@gmail.com

IEEE INDICON 2013

IEEE INDICON 2013 organized by IEEE Bombay Section will be held at Victor Menezes Convention Centre, Indian Institute of Technology Bombay from December 13-15, 2013.

INDICON is the most prestigious conference conceptualized by IEEE India Council in the field of Electrical Engineering, Electronics and Communication Engineering and Computer Science and Engineering, in general.

INDICON 2013, being organized in collaboration with IIT Bombay, is expected to attract delegates from academia and industry, coming from all over the country and abroad. The theme of the conference this year is “Impact of Engineering on Global Sustainability”. The conference will consist of very high quality technical sessions and tutorials.

We invite you to submit original technical papers for presentation at the conference as well as publication in the proceedings and in IEEE Xplore.

Topics within the scope of the conference will include, but are not limited to:

- Antennas, Microwaves, VLSI and Electronic Devices
- Communications and Computing
- Control, Energy and Power
- Technology to Bridge Rural and Urban Divide - Theme Based
- Communications and Control for a better Power Smart Grid - Theme Based

The paper submission deadline is June 15, 2013.

For more details and contact information, please visit http://www.indicon2013.org

Call for Nomination EA Award 2013

R10 EA committee invites you to submit nomination of individuals or sections for consideration of R10 Educational Activities Award in the following categories.

- R10 Meritorious Achievement in Accreditation Activities
- R10 Meritorious Achievement in Continuing Education
- R10 Pre-University Education
- R10 Major Educational Innovation
- R10 Standards Education
- R10 Section Professional Development
- R10 Society/Council Professional Development

The corresponding nomination and reference form (EAB form) can be downloaded from IEEE EAB web site (http://www.ieee.org/eab-awards). The selected nominee will be given R10 EA Award (certificate) and will be invited to R10 Meet to receive an award on self-support. The selected nominee will be endorsed by Region 10 to be considered for EAB Award.

The nomination must be endorsed and submitted by Section Educational Activities Chair with a copy to Section Chair. Section chair can endorse and submit proposal if the Section does not have Educational Activities chair.

Deadline of nomination submission is April 21, 2013 to my e-mail: Supavadee.A@chula.ac.th
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Website : www.rowsons.com
Accreditation is the formal recognition of an educational institution or a degree program by an external independent authorized agency, based on well-defined and documented criteria and standards. There are two accrediting agencies in India:

1. **NAAC** (National Assessment and Accreditation Council, Bangalore)

   The NAAC was established as an autonomous body by the UGC (University Grants Commission) in 1994. The NBA was established by the AICTE (All India Council for Technical Education) in September 1994 and it became an independent body in 2010. Both NAAC and NBA come under the overall supervision of the Ministry of HRD, Government of India.

   According to the UGC Mandatory Assessment and Accreditation of Higher Educational Institutions Regulations - 2012, all higher educational institutions, including Universities, Deemed-to-be Universities, Autonomous and Non-Autonomous Colleges, which have completed six years of existence (or have 2 batches passed out), should apply for accreditation within six months.

   There are plans to provide additional funds for highly accredited institutions. This is a move to accord recognition to the quality and excellence of education imparted to students and to enable students and parents to make an informed choice.

   The NAAC at present gives accreditation for institutions as a whole. It is applicable for Universities, Arts and Science Colleges as well as for Engineering Colleges. It is not given for individual degree programs; the rating is for an Institution / University as a whole.

   This method is likely to mislead a student in choosing a degree program. For, in any Institution or University, there will be some departments doing excellently well, with others being average/mediocre/poor! A student may be carried away by the high overall rating of an Institution or a University as a whole and may end up in a poor department of a great Institution / University!

   Many an academician expects the NAAC to fall in line with the NBA and offer only program-wise accreditation.

   The NBA works on a Two TIER accreditation, for Diploma, UG and PG Engineering Programs; TIER-I is meant for Autonomous Colleges and Universities and TIER-II is meant for Non-Autonomous Colleges; both TIER-I and TIER-II have the same nine criteria and the same total 1000 points, but have different weights or points for different criteria, as given in the Table below:

<table>
<thead>
<tr>
<th>Accreditation Criterion</th>
<th>TIER-I</th>
<th>TIER-II</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Vision, Mission and PEOs</td>
<td>100</td>
<td>75</td>
</tr>
<tr>
<td>2. Program Outcomes</td>
<td>225</td>
<td>150</td>
</tr>
<tr>
<td>3. Program Curriculum</td>
<td>125</td>
<td>125</td>
</tr>
<tr>
<td>4. Students’ Performance</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>5. Faculty Contributions</td>
<td>175</td>
<td>175</td>
</tr>
<tr>
<td>6. Facilities &amp; Tech. Support</td>
<td>75</td>
<td>125</td>
</tr>
<tr>
<td>7. Acad. Support Units &amp; T/L Process</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>8. Governance, Institutional Support &amp; Financial Resources</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>9. Continuous Improvement</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1000</strong></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>

Note: PEOs: Program Educational Objectives

T/L Process: Teaching & Learning Process

In TIER-I, outcome based parameters have more points and in TIER-II, output based parameters have more points. Under TIER-I, if a program scores 750 or above out of 1000 points, with a minimum of 60% in each of the nine criteria, it is given a full accreditation for 5 years. If the score lies between 600 and 750 (without any minimum requirement), then provisional accreditation is granted for 2 years.

In TIER-II, if a program scores 750 or more out of 1000 points, with minimum 60% in six mandatory criteria (1 and 4 to 8), it is awarded a full 5 year accreditation. If it scores between 600 and 750 points, with minimum 60% in each of the six mandatory criteria (1 and 4 to 8), the program is accredited for 2 years.

The present accreditation by NBA is more outcome based than output based. A dozen Graduate Attributes are defined by the NBA, in line with ABET [Accreditation Board for Engineering and Technology, USA], as expected outcomes from the graduates turned out by the program, namely:

**Graduate Attributes**

1. Engineering Knowledge (Application of Maths, Science and Engineering Fundamentals to Complex Engineering Problems)
2. Problem Analysis
3. Design and Development
In the present higher education scenario, it is hard to find these attributes in most of the engineering graduates. So, if programs of an institution are to be fully accredited and their graduates globally accepted, the institution should strive very hard to impart these G.A.s (Graduate Attributes). A rigorous training is required, beginning from the very first year; periodical training for faculty also is needed in subjects and in skills.

Accredited programs/institutions will become attractive to prospective employers and students as well. Accreditation is rewarded with enhancement of tuition fees; for example, it is an increase from Rs. 40,000/=$ to Rs. 45,000/=$ per student per annum in Tamil Nadu. The institution becomes eligible for receiving research grants, Autonomy and for becoming a Deemed-to-be University, provided certain other conditions are also satisfied. The institution moves towards building a Brand Name; facilitates mobility of its students to migrate to other countries for higher studies and/or for jobs.

Many institutions are as yet, unable to secure a full 5 year accreditation. Hardly 5% of the visited institutions qualify for a full 5 year accreditation. The spirit of accreditation by NBA is to bring up and keep up the quality and relevance of technical education in India on par with advanced countries of the world, using criteria and attributes on par with ABET, USA. The NBA is striving hard to make INDIA a full signatory to Washington Accord.

Washington Accord (WA) is an agreement signed among six countries -- Australia, Canada, Ireland, New Zealand, UK and USA -- to mutually recognize and accept the qualifications accredited by signatories. The Washington Accord now has 15 full signatories, namely: Australia, Canada, Taipei, Hong Kong, China, Ireland, Japan, Korea, Malaysia, New Zealand, Singapore, South Africa, Turkey, UK and USA. Six countries remain as provisional signatories, namely: Bangladesh, Germany, INDIA, Pakistan, Russia and Sri Lanka!

WA is applicable only for UG engineering programs. If India is to reap the benefits of its large potentially talented human resource, it must work hard to become a full signatory of the WA, by raising the quality of instruction and training. Then only our engineering graduates will be on demand locally as well as globally.

We have a long way to go. We remain a provisional signatory to WA since 2007. The turning out of poor quality engineering graduates can be attributed to a poor primary education, followed by a poor secondary education up to the XII Standard. The teaching of languages and mathematics has been neglected for many years. There is compulsory passing of students up to VIII Standard in all Schools, enforced by a Government Order! Critical and original thinking, application of knowledge to new problems, project work, teamwork and soft skills are not being encouraged at all in Schools. Also, there is no value education in schools. It is necessary to have value education from primary school itself, to catch them young. Value education can help bring up denizens with patriotism, humanism, environmental awareness, character and integrity.

Most teachers in schools are not rigorously trained in pedagogy and in communication skills. The valuation is extremely liberal, maintaining nearly 85% pass in Plus Two level, year after year, in spite of rapidly falling standards. Unless these problems are adequately addressed, a candidate entering an engineering college is severely handicapped in the pursuit of an engineering degree program, especially due to lack of communication and analytical skills.

As we aspire to reach ABET standards, the task of the faculty in engineering institutions becomes a serious challenge, with the kind of input we get from schools. To bring up graduates with the attributes stipulated by the NBA and ABET is a challenge. According to a NASSCOM report, less than 25% of our engineering graduates are really employable; even this percentage is now falling! The institutions churn out engineering graduates and the industries reject most of them! Such a scenario is continuing.

Alfred Lord Tennyson wrote:

"Once in a golden hour,
I cast to earth a seed;
Up there came a flower,
The people said a weed!

From 'The Flower' by Tennyson.

Institutions must produce flowers and not weeds!

Appointment of well qualified and trained faculty, with a flair for teaching as a career, regular training of students from the first year of an engineering program and periodical training of all faculty, setting questions that encourage an inquisitive, innovative mind, strict evaluation of answer books in internal and in final exams, good relevant project works, serious practical classes with useful experiments clubbed with overall academic and administrative discipline, will help us bring out employable (flowers), rather than unemployable (weeds) graduates! Let all the faculty and students work hard to make the dream of Washington Accord come true!
Prof. S. Sadagopan  
Director  
IIIT-Bangalore  
s.sadagopan@gmail.com

General
- NASSCOM projects $300 billion as the Indian IT business by 2020 (compared to $100 billion in 2012)
- AirAsia is closer to launching the new Airline in India (with Tatas)
- Seven million devotees take bath in Sangam during the last date of Maha Kumbh on March 10
- Bank of Baroda starts 100th overseas bank on March 27
- India wins cricket match series against Australia
- Karnataka goes to poll on May 5 (announced on March 20); Congress wins in ULB Elections in Karnataka on March 11
- After 20 years the Supreme Court delivered its justice on 1993 Bombay blast case on March 21; noted cine actor Sanjay Dutt goes to jail
- There is negative news about India all over; Indian economy in distress with current account deficit at 6.7% (double the figure of 1991); car sales lowest in 12 years; CAG finds irregularity in farm loan waiver; with DMK withdrawing support to UPA on Mar 21, there is political uncertainty; Italian marines issue causes embarrassment to government on March 12; Wharton invites Gujarat CM Modi and then withdraws invitation on March 4 causing embarrassment.

Globally
- EU (European Union) fines Microsoft $731 million for failing to offer browser choice to end users
- BRICS (Brazil, Russia, India, China, South Africa) announce a Bank with $100 billion to start with, on March 27

Technology
- Buffalo Grid in UK announces a solar-power based charging that lets users send SMS to charge their mobile phone; this technology holds much promise for Asia and Africa
- NIXI launched India's National Internet Registry on March 7
- Floppy disk is dead in India finally; the last FDD manufactured by Amkette in India from Udaipur plant rolled out on January 31

Products
- Microsoft launches Office 365 (at Rs. 420 per month) in India on March 4
- Sony unveils Xperia Z smartphone (at Rs. 39,000) in India on March 6
- HP unveils enterprise Tablet ElitePad Windows 8 PC (at Rs. 43,000) in India on March 7
- Samsung launched Galaxy IV in New York on March 14
- Nokia launches Lumia 520, an affordable Windows 8 phone (at Rs. 10,000) on March 20
- HP introduces connected music in India
- Mahindra launches a 4-wheeler e20 electric car on March 20 (with running cost of Rs 0.5 per km)

Markets
- TCS brand is values at $5 billion in March 2013; TCS is also the largest contributor for Tata Brand valued at $18.23 billion and 39th in the global brand (according to UK-based BrandZ)
- Apple buys indoor WiFi firm WiFiSlam on March 25
- Yahoo buys Summly on March 26 that quickly summarizes news stories; interestingly its founder is a 17-year old!

Indian IT companies
- Indian IT companies increased their market share to 9.8% ($77 billion of the global $785 billion software outsourcing business in 2012-13) from 4.8% ($31 billion of the global $641 billion outsourcing business in 2006-07) as per Angel Broking
- TCS is the top employer in Europe; it bags Norway Post contract worth $43 m on March 26; wins Southern Water (UK-based utility company) project on March 25 to improve customer service
- Infosys opens delivery Center in Costa Rica in South America; gets 5-year global infrastructure management order from BMW on March 13; gets India Posts order in March 2013
- HCL Tech bags $100 million contract from Ford on March 27
- Ramco signs partnership with NEC on March 14 for its “ERP on the Cloud”

MNC IT companies in India
- VMware (the leader in virtualization) announced on March 25 its decision to set up a new $120 million R&D facility in Bangalore as part of its expansion plan
- Alstom (20 billion Euro French engineering major) announced on March 17 its decision to make its Bangalore engineering center into a global R&D center
- Groupon (Chicago-based marketplace company) announced its decision to start its R&D center in Chennai
- Xchanging (UK-based technology outsourcing company) that started its operations in Tier 3 town Shimoga in Karnataka continues to grow

Education & Research
- Abel Prize (the coveted prize that awards young mathematicians) for the year 2013 goes to Professor Pierre Deligne of the Princeton Institute of Advanced Study, New Jersey, USA for his seminal contributions to algebraic geometry
• On March 14, 1,36,699 students clear GATE exam (admission exam for all MTech programs in India) out of 12,00,728 registered and 9,84,855 appeared in 572 centers in 123 cities online and 992 centers across 183 cities in offline mode
• UP Government starts distributing the first set of laptops for college students (2.5 million in all) on Match 14
• BITS employs Connect 2.0 tele-presence across its multiple campuses in Pilani, Hyderabad, Goa and Dubai

People
• MIT’s India TR35 list is out in March; started in 2010, the renowned MIT TR35 (managed by MIT’s Technology Review Magazine) recognizes people under the age of 35 for seminal technical contributions; this year’s list has 20 outstanding individuals including Phanidra Sama of RedBus and Valerie Rozycki Wagoner of ZipDial
• Nick D Aloiso, the 17-year old and founder of “Summly” that was acquired by Yahoo is the latest multi-millionaire
• Chennai, India-born IIT Kharagpur alumnus Sundar Pichai is heading Android division from Google from March 14, after Andy Rubin who created Android (prior to Google acquisition) moved to another strategic role in Google
• President Obama appointed on March 25, Julia Pierson as the first ever woman to head United States Secret Service
• The new Pope takes over on March 14
• Xi Jinping takes over as the new Chinese President on March 14
• Google President Eric Schmidt, Sanjay Mehrotra, Co-Founder of SanDisk and World Bank President visit India
• Anji Reddy, founder of Dr. Reddy’s Labs died on March 15; Founder of SanDisk and World Bank President visit India
• UP Government starts distributing the first set of laptops for college students (2.5 million in all) on Match 14
• Public sector banks in India continue to grow their topline (there are concerns on bottom-line however); Dena Bank crosses 1.5 lakh crores; Oriental Bank of Commerce and UCO Bank crosses Rs 3 lakh crores, Indian Overseas Bank crosses Rs. 3.5 lakh crores, Central Bank crosses Rs 4 lakh crores, Canara Bank crosses Rs 6 lakh crores and Bank of Baroda crosses Rs. 8 lakh crores in 2012-13

Infrastructure
• Chennai new airport terminal thrown open to public on March 21
• Tatas commission coastal Gujarat power plant of 5x800 MW capacity on March 24
• Cairn India begins to pump natural gas from its Rajasthan field on March 24

Telecom
• Desi (local language) domain names set to take off in India after the launch of IRINN (Internet Registry for Internet Names and Numbers) on March 6

Interesting numbers
• Telecom subscriber base on January 31, 2013 stood at 893.15 million with 862.62 million mobile subscribers and 30.52 million wire-line subscribers (with net reduction of 2.10 million mobile subscribers and 0.27 million wire-line subscribers in January 2012) (TRAI Press Release No. 18/2013 dated March 15)
• India’s Foreign Exchange on March 29 at $ 292.6 billion (RBI)

• Indian Rupee stood at 54.3 against USD on March 31 (RBI)
• Sensex (India’s stock market index) on March 31 stood at 18,865.75 (Reuters)
• Gartner predictions for 2013 - overall IT spend $3.76 trillion; $665 billion on tablets, smartphones & PC’s; data Center $146 billion; enterprise software $297 billion, IT services $963 billion
• World Bank announces its decision to fund India’s infrastructure to the tune of $3-5 billion per year for the next four years

In Lighter Sense
MBA Exam Questions through the Ages

• 1960 - A logger sells a truckload of lumber for $100. His cost of production is 4/5 of the price. What is his profit?
• 1970 - A logger exchanges a set "L" of lumber for a set "M" of money. The cardinality of set "M" is 100. Each element is worth one dollar. Make 100 dots representing the elements of the set "M". The set "C", the cost of production, contains 20 fewer points than set "M". Represent the set "C" as a subset of set "M" and answer the following question: What is the cardinality of the set "P" for profits?
• 1980 - A logger sells a truckload of lumber for $100. Her cost of production is $80 and her profit is $20. Your assignment: Underline the number 20.
• 1990 - By cutting down beautiful forest trees, the logger makes $20. What do you think of this way of making a living? Topic for class participation after answering the question: How did the forest birds and squirrels feel as the logger cut down the trees? There are no wrong answers.
• 1995 - By laying off 40% of its loggers, a company improves its stock price from $80 to $100. How much capital gain per share does the CEO make by exercising his stock options at $80? Assume capital gains are no longer taxed, because this encourages investment.
• 2000 - A company out-sources all of its loggers. The firm saves on benefits, and when demand for its product is down, the logging work force can easily be cut back. The average logger employed by the company earned $50,000, had three weeks’ vacation, a nice retirement plan, and medical insurance. The contracted logger charges $50 an hour. Was outsourcing a good move?
• 2004 - Explain how the relationship between the ethical responsibility of the logging businesses and that of their individual and collective members ultimately rides on theories of moral agency. Under what circumstances could lumbering wood be regarded as corporate social responsible behavior?
News from Sections

Kerala Section

IEEE Industry Applications Society, SBC, Amrita Vishwa Vidyapeetham, Kollam

The Industry Applications Society (IAS) Student Branch Chapter of Amrita Vishwa Vidyapeetham, Kollam, was formed on 9th Nov 2012. Ever since the formation, the chapter is active and conducts various activities that bridge the gap between theory and practice. Currently, the chapter has 19 student members with Mr. Murali Krishnan K as Chairman and Ms. Aryamol Sudhakaran as Vice Chair. The patron of the chapter is Dr. P.S. Chandramohanan Nair, SMIEEE, Chair, Professional Activities Committee, Kerala Section.

Within this short period of four months, the SBC could manage to organize a number of invited talks that include:

- “Integrated Energy Management Methodology” by Mr. Jayakumar Nair, Principal consultant of Sustenergy Foundation.
- “Safe Switching for Operation and Maintenance” by Mr. Erling Hesla, LSMIEEE, Power System Consultant Seattle, USA.
- “The Electric Car and the Renewable Energy Sources - Hype or Solution?” by Dr. Peter Magyar, Fellow IEEE, IEEE IAS Chapters and Membership Development Chair.

A membership drive with a briefing on the benefits of IEEE IAS and the advantages of joining the chapter, was conducted on 8th Feb 2013 for Pre-final year B.Tech students.

In association with Dept. of EEE a workshop on “Introduction to Microprocessor Programming” was conducted on 9th March 2013. The workshop, which attracted 38 students, covered 8085 programming and instruction sets and had laboratory sessions. Mr. V. Srikanth, Asst. Prof./EEE was the trainer. Dr. P. Kandasabapathy, Vice Chairman, Dept. of EEE distributed the certificates to the participants.

An industrial visit to Moozhuyiar Power Station situated in Pathamamthitta, the second largest hydroelectric generating station in Kerala and with an installed capacity of 300 MW having 6*50 MW generators was organized on 23rd March 2013. A group of 38 students and 6 faculties participated in the visit.

The Facebook page of “Industry Application Society SB Chapter AVV” was also recently launched. The chapter is also maintaining its website at http://ias.amrita.ac.in

These activities clearly indicate the enthusiasm of the IAS members of this budding chapter.

Madras Section

Sri Muthukumaran Institute of Technology, Chennai: National Conference on Advanced Computing Technologies & Applications

A one day National Conference on Advanced Computing Technologies & Applications (NCACTA) on Friday the 8th Mar 2013. A the inaugural, the chief guest Mr. H.R. Mohan, Chairman, IEEE Computer Society and the Associate Vice President (Systems), The Hindu traced the developments in the area of Information and Communication Technology and highlighted the current trends which include Social, Mobile, Analytics and Cloud (SMAC). He added that with the agility and innovation are the major forces in retaining our lead role in the global scene. One of the distinguished keynote lectures was delivered by Dr. Nalli Kuppuswami Chetti, Chairman, Nalli Business House who explained the importance of education to the women to empower them. Dr. Rekha Shetty, Managing Director, Farstar Distribution Network Ltd., in her address touched upon the significance of International Women's Day and the contributions of women in development. She also stressed the need for innovative approaches to excel in all our activities.

Chief guest and special guests were honored by Managing Trustee Thiru A.N. Radhakrishnan, Chairperson Tmt Gomathi Radhakrishnan, Director Dr. A. Kalyani and Principal Dr. G. Sankaranarayanan.

The conference attracted over 180 contributed papers of which about 90 were shortlisted for inclusion in the conf. proceedings and presentations in four parallel tracks covering various aspects of ICT such as Artificial Intelligence, Bio Metrics, Computing Methods, Data Mining, Image Processing, Network Security, Natural Language Processing, Software Engineering, and Wireless Networks. About 200 participants comprising of faculty, students and industry professionals attended the conf. and benefited.
Kongu Engineering College, Erode: AVANZARE'13

AVANZARE’13, a two-day national level technical symposium was organized on 13th and 14th Feb 2013. After the welcome address by Prof. K. Narayanan, SB coordinator, Prof. S. Kuppuswami, SB Counselor and Principal, in his presidential address, extolled SB on receiving various awards from IEEE Madras Section. Mr. N. Gokulsankar, Chairman, SB summarized the agenda of the symposium. Mr. Tata Sudhakar, Senior Scientist, National Institute of Ocean Technology, Chennai inaugurated the symposium and in his address, explained about the on-going projects at NIOT such as deep-sea mining, gas hydrates, submersibles, ocean observation systems and coastal buoy deployment. The various events conducted include: Paper Presentation, Techno Exhibit, Idea Presentation, Visual Hunt, Dexterous Designer, Line Follower, Snap Shot, Quiz Whiz, Best Manager. Prizes were presented by Mr. S. Balamurugan, DEAN, Science of Communication and Computer Sciences to the winners.

On the second day of the symposium, a workshop on LABVIEW was conducted by Mr. G. Sriram, Application Engineer, National Instruments. At the valedictory, Mr. G. Sriram highlighted the role of an engineer in the society. Then, the certificates were distributed to the participants.

KCG College of Technology, Chennai: Workshop on MATLAB and Simulink

The IEEE SB conducted the workshop on MATLAB and Simulink during 15-16, Feb 2013 in collaboration with the IEEE Madras Student Network. The resource persons at the workshop were Dr. Vivek Rao and Mr. Venkatsubramaniyan Kuppusamy. The workshop was attended by enthusiastic students from Jeppiar Engineering College, Thangavelu Engineering College, Sri Muthukumaran Institute of Technology, AMET, Jeimathaji Engineering College and KCG College of Technology.

On the first day Mr. Venkatsubramaniyan and Dr. Vivek Rao explained the concepts of MATLAB and followed it with a hands-on session in the afternoon. On the second day, they explained the concepts of Simulink and followed it with a hands-on session in the afternoon.

Report by: S. Gayathri, gayathri.2426@gmail.com

Knowledge Institute of Technology, Salem: National Level Technical Symposium

On 22nd Feb 2013, IEEE SB and the ECE organized “ELECTRIX 2K13”, 3rd National level Technical Symposium. During the inaugural function, the chief guest Mr. Sridhar Rajendran, General Manager-Human Resources in Simbus Technologies Pvt.Ltd., Bangalore addressed the participants from various colleges and KIOT students about career growth which was very helpful for their placements. Around sixty students have participated from various colleges.

After the inauguration, the students presented their papers in different areas like Image Processing, VLSI, Embedded System etc., parallel, spot events were conducted in technical and non-technical areas like Technical Quiz, Circuit Debugging, Google the world, and LAN Gaming. The winners of events were awarded with cash prizes.

Report by: M. Mathiarasi


The third International Conference on “Information, Communication and Embedded Systems organized by the Dept. of PG Studies in Engineering and supported by IEEE Madras Section was held on 21st & 22nd Feb 2013. At the inaugural, following the welcome address by Shri. P. Venkatesh Raja, Director, SAEC, Mr. Adam Kotkin, Vice Consulate General of USA, Chennai inaugurated and addressed the participants. Dr. Yi Pan, Georgia State University, Atlanta, USA, released the conference proceedings and addressed the participants highlighting the technological development happening around the globe including in India and the need for doing more research.

At the valedictory, Dr. S. Suyambazhahan, Principal, SAEC delivered keynote address. The participation certificates were presented by Chief Guest Dr. Yi Pan.

Report by: N. Mahendran, mahbeatr@gmail.com
Easwari Engineering College, Chennai: Workshop on Android

A workshop on designing android applications was held on 22nd and 23rd of Feb 2013. The event was the initiative of IIT-BHU in association with Proactive-InfoSoft. Mr. Raghu and Mr. Tanzeel of Proactive-InfoSoft were the conveners. The participants mainly comprised of students belonging to ECE Dept. and from other colleges.

The workshop had four sessions. The first session dealt with the basic introduction to Android and its features and dealt the know-how required to effectively design the application. The second session introduced the participants to the software and provided a chance to explore the various features covered in the first session by means of some simple programs.

The second day saw some rigorous coding and designing and the software was thoroughly explored by the students. Some apps like media player, SMS message app were developed. The final session was a competition in which the participants were asked to design an app for email sign in confirmation. The winners of the competition will have the opportunity to go to IIT-BHU and participate in the next level of the contest.

Report by: Dheeptha. M, dheeptha.m@gmail.com
Jayaram College of Engineering and Technology, Trichy: Workshop on “Security Assessment and Enhancement using FACTS devices”

The SB organized a one day workshop on “Security Assessment and Enhancement using FACTS devices” on 22nd Feb, 2013. The chief guest and resource person was Dr. S. Sutha, HOD/EEE, Anna University, Panruti Campus. Her areas of interest are Power System Security Assessment, Power System Enhancement Technique and Power System Optimization. In her presentation, she explained the Neural Schema of Power System and based on the FACTS devices she also explained the power system assessment and power system enhancement techniques and provided a detailed explanation about wavelet transform of neural networks, PSO optimization. In the afternoon session Algorithms with coding also had been executed in Matlab.

Around 13 Colleges and Jayaram Group of Institutions had participated in the workshop and acquired knowledge. Over 160 UG and PG students, faculty members, 91 participants of other colleges and 73 participants in our group of institutions had utilized the workshop. At the valedictory function, certificates were issued to the participants. The workshop was coordinated by the SB coordinator by M. Bhoopathi AP/EEE.

Jeppiaar Engineering College, Chennai: Technical Tour to Infosys, Mysore

The IEEE Madras Student Network organized a one day Technical Tour to Infosys Limited, Mysore Campus on 23rd Feb 2013, in order to expose the student members to the current trends in the IT industry. The technical tour agenda comprised of attending the nation-wide program, Spark organized by Infosys and a tour throughout the Infosys, Mysore Campus. There were 45 students from various engineering colleges of Chennai hub including Jeppiaar Engineering College, Sri Muthukumaran Institute of Technology, AMS College of Engineering, KCG College of Technology, Sathyabama University, RMD College of Engineering, Sree Sastha Institute of Engineering and Technology, Thangavelu Engineering...
College, Asan Memorial College of Engineering and Technology.

The students attended the Spark Program till noon, which focused on the advances Information technology has made, Infosys' role in the growth of IT and how students can learn from it all. The Campus tour around the Infosys Mysore Campus visiting the Largest Corporate University, Multiplex, etc. made the students much excited. It was a fun filled yet an informative trip that boosted up the student members to gather with a larger community of technical world and get inspired.

Report by: Fathima Hathoon Nargis A, fathima93@ieee.org

Saveetha School of Engineering, Chennai: Inauguration of IEEE Robotics and Automation Society

The Dept of EEE organized the inauguration of IEEE Robotics and Automation Society chapter and an informative technical lecture 27th Feb 2013 by Mr. P. A. Manoharan, Chairman IEEE Robotics and Automation Society, Madras Section. In his technical presentation highlighted the robotics and its various applications.

Report by: V. Karthikeyan, vasu.karthi@gmail.com

Saveetha School of Engineering, Chennai: Inauguration of IEEE Power and Energy Society

The Dept of EEE organized the inauguration of IEEE Power and Energy Society chapter along with an informative technical lecture 4th Mar 2013 by Er. K. V. Rupchand Chairman, IEEE-Power and Energy Society Madras Section. After the formal inauguration of the PES chapter, Er. K. V. Rupchand, selected volunteers. In his presentation on “Future Technologies & PES”, he outlined the scope and benefits of IEEE PES Membership for students as well as a professional members. He highlighted the future technologies in power system then the important role of renewable energy sources in India and the role power and energy society in the development of new technologies.

Report by: M. Venkateshkumar, venkatmme@gmail.com

Dhanalakshmi Srinivasan College of Engineering & Technology, Kancheepuram: National Workshop

The IEEE SB and the Dept. of EEE organized a one day national level workshop on “Soft Computing Techniques Applied to Electrical Engineering” on 6th March, 2013. The resource persons for this workshop were Dr. P. Sanjeevikumar, Associate Prof., VIT University, Chennai campus, Dr. V. Jamuna, Prof., Jerusalem College of Engineering, Chennai and Dr. R. Rengaraj, Associate Prof., SSN College of Engineering, Chennai.

The workshop covered the topics such as the conversational PI and PID controllers, importance of soft computing techniques, fuzzy logic controllers, neural network controllers with simple case studies and GA optimization techniques applied to design of above controllers.

The workshop was attended by 33 participants including faculty members and PG/Research scholars from various colleges. Dr. R. Ponraj, Principal distributed the certificates to the participants.

Report by: M. Venkateshkumar, venkatmme@gmail.com

Mahendra Engineering College, Mallasamudram: Technical Symposium and National Conference
A two day National Level Technical Symposium and 7th National Conference on Innovations in Computing Techniques (Innovfest - 2013 & NCICT - 2013), in association with IEEE was organized by the Dept. of CSE on 14th & 15th Mar 2013. It provided a forum for industry professionals and researchers to deliberate, explore and contribute their research to discuss the latest advancements & future directions in the emerging areas of Engineering & Technology.

Innovfest - 2013 was organized for the benefit of Under Graduate students to enhance their technical knowledge and provide innovative ideas. The Invited Guest Mr. Kalidass Subramani, Senior Specialist (People Soft Architecting), Wipro Technologies advised the students to find opportunity in each obstacle, which they face in their life. He also gave some valuable points to the participants to succeed in their life, which had motivated the young minds.

NCICT - 2103, was organized for the benefit of Post Graduate Students, Research Scholars and Faculty members. The Invited Guest, Padmashri. R.M. Vasagam, former Vice Chancellor of Anna University Chennai spoke about the recent computational model, which is becoming essential in storing and analyzing the data in the modern era, which has witnessed information revolution and explosion. He also shared about his working experience in Indian Space Program since early 60's and various visits to abroad Avionics centers.

About 300 technical and research papers contributed by the students, faculty members and research scholars from various colleges across the nation were presented in 20 different domains of Computer Science and Information Technology.

In the conference, 20 papers selected out of the 180 papers received from various engineering colleges all over India, were presented. In the valedictory function held in the evening, certificates were distributed to the participants by the Correspondent and the Principal.

Report by: Dr. P. Raviram, drpraviram@gmail.com

M. P. Nachimuthu M. Jaganathan Engineering College, Erode: National Conference

The Association of Electrical and Electronics Engineering and the IEEE SB jointly organized the 5th One Day National Conference on 31st Jan 2013. In his keynote address, the chief guest, Dr. A. Nagappan, Execom Member IEEE Madras Section and Chairman IEEE Aerospace and Electronics Society, spoke on the exploitation of non renewable sources which causes depletion of precious resources such as fossil fuel, coal etc. and about the researches to be routed in harnessing the renewable energy resources for sustaining the green environment. In addition, he explained the importance of renewable energy sources such as solar, wind, geothermal and tide etc.,

Report by: D. Sabapathi, esec74@yahoo.co.in

IEEE Women in Engineering, Madras Section: Workshop on “Women in Electro Magnetics”

The International Workshop on “Women in Electro Magnetics” WiEM’13, sponsored by IEEE-Antenna Propagation Society, IEEE Women in Engineering, and cosponsored by Council of Scientific and Industrial Research (CSIR), New Delhi, Agilent Technologies and Ni Logic Pvt Ltd Pune was held on 1st & 2nd March 2013 at Kumaraguru College of Technology, Coimbatore. With 205 (84 men and 121 women) registered participants consisting of researchers from academia and industry and enthusiastic students contributing to bring out a lively two day interaction, the program turned out to be a success beyond expectation.

Dr. Parveen Wahid, Professor, EECS Department, University of Central Florida, Orlando, USA and Dr. Magdalena Salazar Palma, President of IEEE-Antenna Propagation Society and Professor, Dept. of Signal Theory & Communication, Universidad Carlos III De Madrid, Spain, were the international speakers sponsored by IEEE Antenna Propagation Society.

The program consisted of keynote addresses on technology and applications by Academia and Industry on interdisciplinary topics like “Computational Approach on numerical solvers used in CADFEKO”, “Biomedical Applications of Electromagnetics” etc. Experts from Agilent Technologies, Amrita University, Thayaraja College of Engineering, PSG College of Technology and Ni Logic Pvt Ltd gave their best efforts to educate and entertain the delegates.

The poster presentation on “History of EM inventions” was a delight to the young student participants. The highlights of the event were, the video presentation on women role models (Dr. Bharati Bhat and Dr. Chatterjee) in Electromagnetics and the panel discussion on “After the Break” which was focused on the difficulties experienced by women returning to profession after taking a break for family or health reasons. It was moderated by Dr. Raghavan, NIT, Trichy and the panelists were: Dr. S. Raju, Thayaraja College of Engineering, Dr. Subharami, HOD/ECE, PSG College of Technology, Dr. N. R. Alamelu, Principal, Sri RamaKrishna Engineering College, Dr. Magdalena & Dr. Parveen Wahid.
The event has given the women students the confidence and interest to pursue research in the field of Electromagnetics which is a less women populated field. This is an achievement in itself since the field is considered tough and with the increased interest in computing and other automation related fields which are considered to be suitable for women the field of electromagnetics is facing the crisis of low interest.

**Solar Initiative: Solar Lamp Workshop**

IEEE SIGHT Madras Section has taken initiative to spread humanitarian technology among students by conducting a Solar Lamp Workshop on 15th March 2013 in SRM Easwari Engineering College. The Workshop was conducted in collaboration with IEEE Power and Energy Society and an NGO: The Solarillion Initiative.

The workshop was organized by Anand (Chairman), Antony Venus A.J (Vice Chairman), Arun Noel Victor (Secretary) along with Mukundan, Madhuri Narayanan, Salma Saiithoon A, Niveditha R, Mr. Vinith Vijayaraghavan, CEO Panchabhutha and Ramesh Rajesh, Co-founder Solarillion, rendered immense support to the event as the NGO partners.

There were 115 participants from 10 institutions across Tamil Nadu. The objective of the workshop is to take the knowledge on solar power to the students and kindle their interest towards developing renewable energy projects. Ramesh Rajesh, Solarillion Co-Founder explained the mission of their initiative as to reach a million people to get benefitted with SOLAR Energy. The workshop was held in four batches.

The program received an excellent feedback from all the participants. The co-ordinators of the program were Dr. N. Kumarappan, IEEE Madras Section Educational Activity Chair, Prof. D. Sabapathi, Associate Professor and Head of EEE department, M P Nachimuthu M Jaganathan Engineering College.

Report by Dr. N. Kumarappan, kumarappan_n@hotmail.com

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**Student Skill Development Programme on “Artificial Intelligence Methods in Engineering”**

The IEEE Madras Section in association with IEEE SB of M P Nachimuthu M Jaganathan Engineering College, Chennai, Erode organized a Student Skill Development Programme (SSDP) on “Artificial Intelligence Methods in Engineering” on 27th and 28th March 2013. This, third SSDP was attended by 52 students from various colleges and universities all over Tamil Nadu.

After a brief inaugural session in which Dr. N. Kumarappan, IEEE Madras Section Educational Activity Chair & Treasurer delivered the inaugural address, various technical lectures were delivered by the eminent resource persons such as Dr. N. Kumarappan, Professor of Electrical Engg., Annamalai University; Er. S. Anbazhagan, Asst. Professor of Electrical Engg., Annamalai University; Er. S. Saravanamuthukumaran, Asst. Professor of Electrical Engg., VRS Engineering College, Villupuram.

The topics covered in SSDP include Artificial Neural Network Introduction and BPN, Fuzzy Logic, Load Frequency Control - Simulation, Hybrid Intelligence Approach. The participants were also given hands-on training.

The program received an excellent feedback from all the participants. The co-ordinators of the program were Dr. N. Kumarappan, IEEE Madras Section Educational Activity Chair, Prof. D. Sabapathi, Associate Professor and Head of EEE department, M P Nachimuthu M Jaganathan Engineering College.

Report by Dr. N. Kumarappan, kumarappan_n@hotmail.com

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**REQUEST**

Dear India Council Members including all Execom Members of IC & Sections (past & present),

As a part of providing updated information on the History of India Council at our website, we are compiling the missing information.

I request the Section representatives to help me in this process by providing the information in order to compile & update our website.

As a first step, we wish to compile the year wise IC Execom members information to the extent possible as per the format of the current IC Execom available at [http://www.ewh.ieee.org/r10/india_council/execom.html](http://www.ewh.ieee.org/r10/india_council/execom.html)

We require, year wise, at the minimum, the details of Chair, Vice-Chair, Secretary/Treasurer & Past Chair with their email id, mobile no. and the current Section name.

Your help will be greatly appreciated.

Thanks & Regards

Rajendra K. Asthana

IC Chair (2005-2006)

E-mail: asthana@ieee.org

Mobile: +91-9873934748
Demonstrating Development Risk Reduction: Any product development involves risk and has the potential for unexpected problems at any time. This applies to simple product upgrades, but even more so to challenging new innovations. A phased approach to development is a well-known technique to help efficiently bring products to market by identifying the high-risk, most difficult challenges and solving those first, leaving the easier, more handle-turning labor-intensive and very necessary engineering until later. Read the full post at http://goo.gl/Bbn4P

New coal technology harnesses energy without burning: A new form of clean coal technology reached an important milestone recently, with the successful operation of a research-scale combustion system at Ohio State University. The technology is now ready for testing at a larger scale. For 203 continuous hours, the Ohio State combusion unit produced heat from coal while capturing 99% of the carbon dioxide produced in the reaction. Story at http://goo.gl/9IRLO

7 Innovative Solutions to CAPTCHA User Attention: Among the many solutions that Web workers have devised to improve security measures, as well as the user experience on their sites, is the CAPTCHA (or Completely Automated Public Turing test to tell Computers and Humans Apart), a solution that presents a challenge response test to users that ensures the “person” trying to access the site is actually a human, and not just an annoying spam bot. Unfortunately, while these solutions can be useful in theory, they are often more problematic when they're actually implemented. Not only can they be cumbersome, difficult to read and a generally problematic when they're actually implemented. Not only can they be cumbersome, difficult to read and a generally unwanted hassle for users, but they're not even foolproof, as bots can use optical character recognition (OCR) software to crack the CAPTCHA code. As a result, developers have had to get creative with their CAPTCHAs, resulting in an improved experience for many users. This post presents six of the more interesting, innovative and just plain useful CAPTCHA solutions available today. More at http://goo.gl/Fe7p1

Researchers achieve breakthrough in spin storage: An international team of researchers affiliated with Göttingen University has found a way to store vast amounts of data -- up to one petabyte (1,000 terabytes or one million gigabytes) -- per square inch. Using information stored in the spin of an electron, the scientists succeeded in storing the information in an organic molecule and reading it at a temperature close to room temperature. Story at http://goo.gl/qqSDj

A New Mindset in Product Design: 3D Printing: 3D Printing is changing the nature of the product design life cycle. The technology is accelerating product design by shortening the time-to-market and literally bringing products to market faster. Product designers are using 3D printing for applications like: creation of concept models; functional prototypes; factory tooling; and limited run finished goods. In this white paper at http://goo.gl/qvylG you will learn about streamlining product development processes and curbing product design costs.

Video: Automatic Building Mapping to Aid Emergency Responders (2m 07s): MIT researchers have built a wearable sensor system that automatically creates a digital map of the environment through which the wearer is moving - a tool that could help emergency responders coordinate disaster response. The prototype sensor includes a stripped-down Microsoft Kinect camera and a laser rangefinder. Connected to the array of sensors is a handheld pushbutton device that the wearer can use to annotate the map. In the prototype system, depressing the button simply designates a particular location as a point of interest. The researchers envision that emergency responders could use a similar system to add voice or text tags to the map-indicating, for example, structural damage or a toxic spill. Watch it at http://goo.gl/cTk4t

Video: Estimating Greenhouse Gas Emissions Across Urban Landscapes (4m 47 s): Arizona State University researchers have developed a new software system capable of estimating greenhouse gas emissions across entire urban landscapes, all the way down to roads and individual buildings. Until now, scientists quantified carbon dioxide emissions at a much broader level. Dubbed “Hestia” after the Greek goddess of the hearth and home, the software combines extensive public database data-mining with traffic simulation and building-by-building energy-consumption modeling. Its high-resolution maps clearly identify carbon dioxide emission sources in a way that policymakers can utilize and the public can understand. Watch it at http://goo.gl/ra1VZ

Book: Real-World Engineering: A Guide to Achieving Career Success: This book helps readers cultivate natural abilities, adapt to on-the-job pressure, cope with people problems, broaden their knowledge base, and, above all, plan a genuinely rewarding and successful engineering career. Throughout the book, real-world examples, taken from the author’s own career, depict both the best and the worst on-the-job decision-making. IEEE members can access this book free at http://goo.gl/2mMor

Book: Communication Patterns of Engineers: Communication Patterns of Engineers brings together, summarizes, and analyzes the research on how engineers communicate, presenting benchmark data and identifying gaps in the existing research. Written by two renowned experts in this area, the text: Compares engineering communication patterns with those of science and medicine; Offers information on improving engineering communication skills, including the use of communication tools to address engineering departments’ concerns about the inadequacies of communication by engineers; and Provides strong conclusions to address what lessons engineering educators, librarians, and communication professionals can learn from the research presented. IEEE members can access this book free at http://goo.gl/lFbd5
Book: The Unofficial IEEE Brain Buster Game Book: Mental Workouts for the Technically Inclined: "...Made my head hurt! -- Isaac Newton... Doesn't bug me! -- Grace Hopper... Rang my chimes! -- Alexander Graham Bell These innovative, witty, and utterly outrageous brainbusters engage reasoning power while honing problem-solving skills. Beginning with easier puzzles, then getting progressively harder, this tantalizing collection will increase brain power with each puzzle conquered. Also included is a special Solutions section that gives a detailed answer to each brainbuster." IEEE members can access this book free at http://goo.gl/8xCgj


Video: The Intelligence Revolution: Professor Michio Kaku, famous Theoretical Physicist and one of the inventors of Light Cone String Field Theory hosts a documentary on the use of computer technology, cognitive science, mathematical groupings, faster computers, sophisticated algorithms and, most importantly, better education that will lead to "The Intelligence Revolution".

Ubiquitous computing is fast approaching us, with computer technology quickly becoming present in almost every facet of society and technology. Soon computers will be so ubiquitous that they will toll away in almost pure invisibility: in our glasses, in our clothing even in our own body.

The synthesis between computer fabrication, computer connectivity and of nanotechnology will mean that computers will be smaller, more connected and everywhere with minimal impact environmentally and spatially but creating a renaissance in information control by the individual.

This synergy of Information Retrieval, Information Processing and Information Implementation is the engine of creativity and prosperity that, if we plan it correctly, could solve most of the problems facing us today:

Global Warming, Environmental disasters, Disease, War, Hunger and Energy shortages are all problems which need quick access to information to solve and fast processing of plans to implement action. The Internet has given us one way to do this, but with more work on smart computing, cloud computing and the expanding field of Neural Networking and Grid Computing we may be able to solve problems as a Global Civilization would.

The fact that our world will be governed by computer intelligence will be replaced by the development of artificial intelligence. We may all the time in the world to simply ponder existence and have an armada of computer brains to help us find the secrets of existence.

In this documentary Michio Kaku shows us how the information revolution may reach these amazing new heights and how we may use our intelligence to reinforce our wisdom for generations by educating ourselves to think critically on real world problems. Watch this 55 min video at http://goo.gl/UX15E

Promising engineering careers in energy and mining: This new report at http://goo.gl/ULrB1 demonstrates that engineering students in energy and mining can expect to have excellent career and earnings prospects. The report from the National Academy of Sciences is titled "Emerging Workforce Trends in the U.S. Energy and Mining Industries: A Call to Action". By now you have all hear that retiring baby boomers are going to leave a big hole in the workforce. In the mining and energy sectors, that hole is expected to be about one third of the workforce in the next 10 years.

Guide to Spectrum Analysis: Tools, Tips and Techniques: The spectrum analyzer remains the most versatile measurement tool available today. This 64 page guide provides an essential reference to engineers wanting to gain a better understanding of spectrum analysis. It describes the critical performance characteristics of the spectrum analyzer, the types of signals measured and the measurement performed. The Guide to Spectrum Analysis also includes in-depth information on spectrum analysis basics, amplitude, frequency and pulse modulation plus a number of measurement examples. To download, visit http://goo.gl/LG1wr

Getting Back to the Basics of Electrical Measurements: Accurate measurements are central to virtually every scientific and engineering discipline, but all too often measurement science gets little attention in the undergraduate curriculum. Even those who received a thorough grounding in measurement fundamentals as undergraduates can be forgiven if they’ve forgotten some of the details. This 12 page white paper at http://goo.gl/0HQgZ is intended to refresh those fading memories or to bring those who want to learn more about making good quality measurements up to speed.

10 Reasons Why Multi-Material 3D Printing is Better for your Product Design and Development: The newest generation of 3D Printers is expediting product development and design. This innovative technology is revolutionizing the industry by combining various materials within a single printed model. Designers are discovering the advantages of these new systems to, produce concept models that more accurately represent final prototypes. This helps designers streamline their decision-making regarding product materials. In this white paper, you will learn about the different capabilities of multi-material 3D Printers from Objet and how companies are using rapid prototyping during the design and development of manufactured end products. Access it at http://goo.gl/Vtbg

eBook: How the Evolution of M2M Technology Can Benefit Your Business: Machine-to-machine or M2M technology refers to the communication between wired and wireless devices to capture and analyze data that is relayed through a network to an application, which then translates the data into meaningful information. By harnessing the power of intelligent endpoints to act upon that data, time becomes an immeasurable and valuable byproduct. Whether these solutions are tracking people, automobiles, high value cargo, pets, energy usage, or inventory, the objectives remain the same. As M2M technology has evolved, integration with mobile devices has further
allowed SMS messaging to become an important vehicle for the transmission of M2M communication. This ebook at http://goo.gl/LCS9p will explore how the evolution of M2M technology is changing the way the enterprise monitors and analyzes important data. Here you will find a compilation of the top news features, videos and whitepapers to demonstrate the depth of M2M and the benefits that M2M devices can provide for your business.

What is a Source Measure Unit Instrument and How to Choose One: Stated in the simplest possible terms, a source measure unit (SMU) instrument integrates the capabilities of a precision power supply (PPS) with those of a high performance digital multimeter (DMM) in a single instrument. This white paper explores how SMUs differ from DMMs and power supplies, SMU measurement terminology, and key selection considerations. For example, SMU instruments can simultaneously source or sink voltage while measuring current, and source or sink current while measuring voltage. They can be used as stand-alone constant voltage or constant current sources, as stand-alone voltmeters, ammeters, and ohmmeters, and as precision electronic loads. Their high performance architecture also allows using them as pulse generators, as waveform generators, and as automated current-voltage (I-V) characterization systems. Read the whitepaper at http://goo.gl/YkxBx

Management Skills Pyramid

To be successful, there are many skills a manager needs to master. I adapted Kammy Hatnes’ pyramid structure to show the increasingly difficult management skills you must master at each level and to also display how these management skills build on each other to help you achieve success in your management career.

Level 1 of the Management Skills Pyramid shows the basic skills a manager must master just to get the job done. These are the fundamentals of the management job: Plan; Organize; Direct; and Control

Level 2 of the Management Skills Pyramid are the management skills that you use to develop your staff. There are many specific skills required, and these are grouped into these categories: Motivation; Training and Coaching; and Employee Involvement

Level 3 of the Management Skills Pyramid deal with improving your own development and are grouped as: Self-Management and Time Management.

The Top Level of the Management Skills Pyramid deals with the single skill that will help you the most in developing success in your management career, is leadership. As you develop your skill as a leader, as you make the transition from manager to leader, you will achieve the success you truly want in your management career.

Adapted from the article: Management Skills Pyramid by F. John Reh from About.com Guide at http://goo.gl/yJOXr

The 11 Laws of Likability: Relationship Networking . . . Because People Do Business with People They Like

Author: Michelle Tillis Lederman, Publisher: Amacom, Pages: 224

This book presents a practical guide to effectively connecting with other people. Being authentically likable enables all kinds of meaningful connections, whether new or old, professional or personal. Lederman offers a variety of personal and professional anecdotes to describe each of the 11 Laws, as well as best practices and examples. Each chapter concludes with a “refresh your memory” section to outline the key topics discussed in the chapter. The book is best read cover to cover, as the Laws build upon each other, culminating in the Law of Patience.

Key Concepts

1. The Law of Authenticity. The real you is the best you.
2. The Law of Self-Image. Before you can expect others to like you, you have to like you.
3. The Law of Perception. Perception is reality. Our perceptions of others become our realities about them.
4. The Law of Energy. Energy is contagious. What we give off is what we get back.
6. The Law of Listening. If we want others to understand us, we have to understand them by truly listening to what they are saying.
7. The Law of Similarity. People like people who are like them, and people trust the sources that they know best.
8. The Law of Mood Memory. People are more apt to remember how you made them feel than what you said.
10. The Law of Giving. Giving creates value in relationships, and will encourage others to give back as well.

Mother Teresa, CEO

Authors: Authors Ruma Bose and Lou Faust. Publishers: Berrett-Koehler

This book offers both inspiration and practical guidance to anyone interested in becoming a better leader and manager. Eight principles of
leadership identified with Mother Teresa are explained one by one in a compelling way. The authors provide examples and anecdotes from their own lives as well as Mother Teresa’s. While the chapters need not be read in order, an overall impression of Mother Teresa’s leadership style is best obtained by reading the book from beginning to end.

**Key Concepts**

1. Dream it simple, say it strong. Articulate a clear vision and demonstrate it in everything.
2. To get to the angels, deal with the devil. Draw an ethical line and evaluate all choices against it.
4. Embrace the power of doubt. Express doubt without showing fear and use it to take action.
5. Discover the joy of discipline. If it can be done now, do it. Seek joy in everything.
6. Communicate in a language that people understand. Good communicators must know their audience and adjust their communication style accordingly.
7. Pay attention to the janitor. Treat everyone with respect. The title never matters, the person always does.
8. Use the power of silence. Silence is about stopping. Stop talking and listen; stop thinking and be thoughtful.

**Books**

**Digital and Analog Communication Systems**

Author: K. Sam Shanmugam.  
Published by: Wiley India Pvt. Ltd.  
Pages: 624.  
Price: Rs. 429/=  

This book gives a unified treatment of theoretical and practical aspects of digital and analog communication systems, with emphasis on digital communication systems. It integrates theory with design, keeping theoretical details to a minimum, with over 60 practical and worked examples illustrating real-life methods. The emphasis is mainly on deriving design equations that relate performance of functional blocks to design parameters. It also illustrates how to tradeoff between power, bandwidth and equipment complexity while maintaining an acceptable quality of performance. The material is arranged into three different study areas, a review section, the study of digital communication systems, and the study of analog communication systems. The book also includes over 300 problems and an annotated bibliography in each chapter. This book will be useful to students of Electrical and Computer Science Engineering Published by. Pages: 624. Price: Rs.429/= More about the book at [http://goo.gl/FyjNA](http://goo.gl/FyjNA) Readers of CSI-eNL can get this book at 20% discount with free shipping. Contact: abhhardwaj@wiley.com (This book is being given as a prize to the Info Quiz Winners)

**Know Your English (Vol. 1): Idioms and their stories**

Author: S. Upendran  
Published by: Universities Press.  
Pages: 216.  
Price: Rs. 195/=  

This book is the first of a four volume series, based on the popular column, *Know Your English*, which has been a regular feature in *The Hindu* since 1982. Teachers, students, and those who are keen on honing their speaking and writing skills will find the series useful. This volume contains a selection of more than 300 idioms, and each entry gives the meaning of the idiom, provides examples of its use, and wherever possible, traces its origin. For the second language learner who encounters idioms in everyday contexts, they pose challenge for very often there is no connection between the words that make up the idiom and the actual meaning of the expression. For eg. When we say, “It’s raining cats and dogs”, we do not mean that cats and dogs are actually falling from the sky. More details at: [http://goo.gl/7ph2g](http://goo.gl/7ph2g) (This book is being given as a prize to the TechQuiz Winners)

**TechQuiz 2013-04**

(Two Prizes to win Books reviewed will be presented to the winners)

1. What is common to these. Carbon dioxide, methane, nitrous oxide
2. “Your most unhappy customer is your greatest source of learning”. Who said this?
3. Who has become the first Indian to be inducted into the prestigious Satellite Hall of Fame, Washington.
4. Middle East countries are part of IEEE Region ----- (no)
5. The development/invention of ------ (device) gave rise to the industrial revolution.

Email your answers by 10th May 2013 to ieee.techquiz@gmail.com with subject “techquiz-2013-04”. Please provide your name, designation, company/institution, full postal address (to send the prize) and the contact phone nos. after the answers. There are TWO prizes to win. Two prizes will be in the form of books which are briefly reviewed in this edition of the newsletter. They are being offered by Wiley India Pvt. Ltd (www.wileyindia.com) and Universities Press (www.universitiespress.com). Answers along with the winners' info will be published in the next issue.

**Answers & Winners of TechQuiz-2013-03**

Waste Electrical & Electronic Equipment, William Gilbert, FLOPS per watt, The IEEE Medal of Honor, Paro

“Harnessing Green IT: Principles and Practices” from Wiley India to Jeharaj Selvapeter (Bangalore)

“Engineering Optimization - A Modern Approach” from Universities Press to Ayush Sagar (New Delhi)

Workshop on Mobile Cloud Computing. April 4, 2013 at Velammal Engineering College, Chennai. Contact: tificare.ganesan@velammal.edu.in or tificare.anithajulian@velammal.edu.in Website: http://tificare.velammal.org/

Texas Instruments India Educators’ Conference 2013: Industry-Academia Confluence for Education & Innovation. April 4-6, 2013 at NIMHANS Convention Center, Bangalore. Contact: M. Rambabu, +91 80 25099727, Email: tiiec2003@list.ti.com Website: http://ieeecas-bangalore.org/activities/tiee2013/tiee2003.html

ICT-2013: IEEE Conf. on Information and Communication Technologies. April 11-12, 2013 at Noorul Islam University, Kollam, Kerala, India. Contact: icict2013@gmail.com Website: www.icict.in

TSPC-2013: National Conference on Trends in Signal Processing & Communication. April 12-14, 2013 at Bhagwant Institute of Technology, Muzaffarnagar. Contact: Dr. Harish Kumar; Vibhor Bhardwaj; +91-9412534872; +91-9458562550; tspc2013@gmail.com Website: http://bhagwantgroup.com/tspc

National Level Workshop on Recent Technologies in Renewable Energy Systems. April 13-14, 2013 at GMR Institute Of Technology, Rajam Srikakulam Dist. Last date for registration: 4th Apr 2013. Contact: M. Rambabu, +91 9985456004. Email: rambabu.m@gmrit.ac.in Website: www.gmrit.org Online registration: http://111.93.20.157/empdb/workshops/participants.aspx


FDP on Embedded systems and its application to power system, power electronics: May 3-4, 2013 at Arunai College of Engineering, Tiruvannamalai, Tamil Nadu, India. Contact Dr. N. Kumarappan at kumarappan_n@hotmail.com or Dr. T. SIVAKUMARAN at sivakumaran1969@gmail.com or Section office at ieeemas@iiremail.in / ieeemas@gmail.com

ICACCI-2013: IEEE International Conference on Advances in Computing, Communications and Informatics. August 22-25, 2013 at Sri Jayachamarajendra College of Engineering (SJCE), Mysore. Last date for submission of papers for Main Tracks and Special Sessions: March 30, 2013 and for Workshops and Affiliated Symposiums: April 30, 2013. Contact: Dr. Manjunath Aradhya, Mobile: 09886896108 E-mail: aradhya.mysore@gmail.com Website:http://icacci-conference.org/


SYMPOL-2013: International Symposium on Ocean Electronics. October 23-25, 2013 at Kochi, India. Contact: 1 Dr.P.R.S. Pillai, Email: prspillai@cusat.ac.in Mobile: +91 484 2576418 and Dr.M.H. Supriya, Email: supriya@cusat.ac.in Mobile: +91 484 2576418. Website: http://sympol.cusat.ac.in/

IEEE CATCON 2013: IEEE International Conference on Condition Assessment Techniques in Electrical Systems December 6-8, 2013 at Jadavpur University, Kolkata, India. Last date for full paper submission: July 15, 2013. Contact: catcon2013@gmail.com Tel: +91 33 2414 6949, +91 98300 92189, +91 90511 64988. Website: www.catcon2013.org

ACC 2013: Second International Conference on Advances in Cloud Computing. 19-20, Sep 2013 at Bangalore. Contact: Dr. Anirban Basu at absau@pqrssoftware.com

ICICN-2013: International Conference on computational Intelligence and Communication Networks. September 27-29, 2013 at GLA University Mathura. Last date for paper submission: April 30, 2013. Contact: GS Tomar. Email: gstomar@ieee.org Ph: 09425744460. Website: www.cicn.in

ISGT ASIA - 2013: Innovative Smart Grid Technologies Conference. November 10-13, 2013 at Bangalore, India. Last date for paper submission: 20th June 2013. Contact: pesbangalorechapter@gmail.com Phone: +91-80-42455555. Website: http://iee-isgt-2013.asia/

Create the Future Design Contest 2013

The Create the Future Design Contest was launched in 2002 by the publishers of NASA Tech Briefs magazine to help stimulate and reward engineering innovation. The annual event has attracted more than 8,000 product design ideas from engineers, entrepreneurs, and students worldwide. The Primary Sponsors of the Create the Future Design Contest (the “Contest”) are Tech Briefs Media Group, COMSOL, Inc., and SAE International. The contest form the year 2013 is open for entries from March 1, 2013 and closes July 1, 2013. Entries can be filed under any on the following eight categories.

- Aerospace & Defense: Product innovations with applications in the aerospace, aviation, and/or defense markets.
- Consumer Products: Products that increase quality of life in the workplace, at home, during leisure time, or while traveling.
- Electronics: Products that improve computing, communications, and other fields that rely on advances in electronic components and systems.
- Machinery and Equipment: Products that speed and improve work, manufacturing, or scientific research processes.
- Medical Products: Products that improve the efficiency and quality of healthcare.
- Safety and Security: Products that enhance the security or safety of individuals, businesses, communities, or nations.
- Sustainable Technologies: Products that help reduce dependence on non-renewable energy resources, as well as products designed for other purposes using environmentally friendly materials or manufacturing processes.
- Transportation & Automotive: Products that enable movement of people and goods from one place to another.

The prizes include: Grand Prize (1): $20,000 USD, provided by COMSOL and SAE International; First Prize in Each Category (8): A workstation computer (mobile or desktop) provided by Hewlett-Packard (HP); Best Student Entry Category (1): Maple or MapleSim software, provided by Maplesoft; and many more.

For details: http://contest.techbriefs.com/

R10 SAC Activities / Contests for 2013

IEEE R10 Student/GOLD/WIE Congress 2013, July 11-14, 2013, Hyderabad, India. For more details, visit http://www.r10congress.org

IEEE R10 PG & UG Student Paper Contests: Deadline 22nd April 2013. For more details, visit www.r10sac.org/activities/competitions/paper.html

The IEEE R10 website contest: Deadline 22nd April 2013. For more details, visit www.r10sac.org/activities/competitions/website.html

For details, please visit Student activities page at the R10 SAC website at http://www.r10sac.org

Om Perkash
2013 IEEE R10 SAC Chair
**AlyeHum-2013: All IEEE-R10 Young Engineers’ Humanitarian Challenge 2013**

The All IEEE-R10 Young Engineers’ Humanitarian Challenge (AlyeHum) is a project-contest to encourage young scientists and engineers to solve real-world challenges applying science and technology. The contest aims at orienting young minds towards identifying community problems and developing technology solutions to address them, focusing on actual implementation reaching the beneficiaries.

The teams will be awarded fund grants to support their implementation. Suitable mentors from industry and academia will be invited to guide the teams, depending on the requirements and availability. In addition, webinars will be held to assist the teams on important topics such as Service Learning, Project Management and Planning.

After 4 successful years in India, this program is now being organized to reach participants from all the Asia-Pacific (IEEE Region 10) countries. Bangalore Section is sponsoring AlyeHum 2013.

**Eligibility:** Open to professionals and students from any science or engineering fields, below age 35. Participants need not be members of IEEE to apply and submit proposals.

**Deadline:** 30th April 2013

**Invitation for Volunteers (Jury, Mentors and Organizers) and Sponsors** are also open.

This project contest is organized by IEEE Bangalore Section with the support of R10 Humanitarian Technology Activities Committee, R10 Student Activities Committee, R10 GOLD, and R10 WIE.

For more details, pl. visit [http://ieeehumanitarian.com/](http://ieeehumanitarian.com/)

**Ramakrishna Kappagantu,**
Chair, AlyeHum-2013
Director Elect, IEEE Region 10, 2013-14

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**Call for Nominations MGA Outstanding Section Awards**

Each year, the MGA Outstanding Large/Small Section Awards are presented to one large Section and one small Section (across all Regions), to recognize their excellent work and successful efforts in fulfilling the educational and scientific goals of IEEE for the benefit of the public. The recipient Sections are acknowledged for maintaining, enhancing, and supporting the Student Branches, Technical Chapters, and Affinity Groups within their geographic boundaries. The MGA Awards and Recognition Committee is now using an online portal which streamlines the process by which Sections can submit for these awards. Nominators can submit nominations, and reviewers can review and rank nominations, all within the online system.

To nominate your Section for the MGA Outstanding Large or Small Section Award, please go to [http://mga-awards-section.myrviewroom.com/](http://mga-awards-section.myrviewroom.com/) Follow the links provided to review the selection criteria and submittal instructions.

The deadline for submissions is 15 May 2013. The recipients will be announced in July 2013.

Please note: We welcome all feedback about your experience with the online portal, so that we may continually work to improve the IEEE MGA and Region Awards processes. Please email questions and/or feedback to the Region Awards Chair (NAME, email), and MGA Awards Staff (mga-awards@ieee.org).

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**Contributions**

IEEE India Info, the newsletter of the IEEE India Council welcomes contributions from Sections and members.

The Section Chairs may pl. send brief reports on conferences, workshops and other major events held in the section along with info on news student & society branches added, honours & recognition to the members of the Section.

Call for papers & participation in national & international conferences organized or supported by IEEE Sections or Societies are also welcome.

While sending the matter, pl. ensure that they are in MS WORD doc / rft format. Pl. avoid matter in pdf / jpg format. For guidelines on submitting matter pl. visit [http://goo.gl/dzSIJ](http://goo.gl/dzSIJ)

Pl. send the matter by email to [ieeeindiainfo@gmail.com](mailto:ieeeindiainfo@gmail.com) or before 7th of each month for getting published in the same month issue of the newsletter.

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**Acknowledgement**

IEEE India Info wishes to acknowledge all the sources for the information published in this issue of the newsletter.

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**Address for communication**

Address all your communications relating to IEEE India Info to the Editor at: H.R. Mohan, AVP-Systems, The Hindu, Chennai-600002. Phone: 044-28576411. Email: hrmohan.ieee@gmail.com

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