



IEEE THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC

Chairman's Message



Friends,

People who are not sociable face a higher risk of dying from a heart disease or stroke than those who network well with others, according to a recent study conducted by researchers at Chicago's Northwestern University. They tracked the health of more than 2,000 men in the age group of 40 to 55 for a period of three decades. At the start of the

study, the target team filled in questionnaires designed to set their levels of sociability. By the end of the 3 decades long study, 60 percent had died and the analysts compared the questionnaire contents with death certificate details which revealed that sociable men have healthier hearts than their more reserved friends.

It is in this context that the relevance of IEEE comes in, which promotes networking among its members and with the society they live in. Let us come out more in the open and interact with many more people, everyday. A question often asked by engineers when prompted to join professional societies is: What do I get by joining? The answer is '*Heart healthy and long life.*'

Reporting in these columns the news of a number of dormant student branches identified by H.Kalyanasundaram, has set in motion brisk actions to revitalise many of them. Now, Prof. M R Krishnamurthy, a veteran IEEEian and Life Fellow, has also come forward, offering help.

The news of Ayush Bhandari from India winning the R10 undergraduate student paper contest brings cheers to Indian IEEE movement. Congrats to Bhandari.

India Council is in the process of releasing rebates to the seven chapters under it.

Finally, INDICON at Bangalore and AISC at Gujarat are gearing up for the final show in September. We urge all sections to extend support to these activities with their active participation, through delegates, advertisements etc.

With best wishes to the IEEE fraternity,

Trivandrum
01 August '07

N.T. Nair
Chairman, IEEE India Council
ntnair@gmail.com

NOTICE OF THE ANNUAL GENERAL BODY MEETING 2007

September 06, 2007 at Bangalore

All IEEE Members are invited

Dear Members,

Notice is hereby given to all the IEEE Members that the AGM of the IEEE India Council shall be held from 16:30 hours to 17:30 hrs, followed by Tea on Thursday, the 6th September 2007 at CPRI, Bangalore, the venue of Indicon 2007. The agenda will be as follows:

1. Welcome by Chairman
2. Secretary's report
3. Treasurer's report
4. Any other point with the permission of the Chair
5. Vote of thanks

All are requested to make it convenient to attend the AGM.

KG Satheesh Kumar

Secretary / Treasurer, IEEE - India Council

01 Aug.'07

k.g.kumar@ieee.org

Mentors & Best Counselors

Dear Council & Section Chairs, SAC Chairs, Branch counselors and student volunteers,

Greetings! This email is to announce the call for nominations for the Outstanding Branch counselor award (Region 10 level) and also for hosting IEEE Alumni meets at student branch/section/council level. The announcements are in page 3 and 4. The deadline for the Outstanding Branch counselor award applications is 15th September and for Alumni Meet proposals is 31st August 2007 (by e-mail).

I urge the student volunteers to nominate your branch counselor who has immensely helped you in the branch activities. Please plan to call your IEEE alumni back to your student branch/school for better interaction and mentoring, by sending a proposal for hosting an alumni meet.

For any clarifications, please feel free to contact me at mini@ieee.org

Best Regards

Dr. Mini S. Thomas

R 10 Student Activities Chair

mini@ieee.org

Editorial Board

Prof. V. K. Damodaran	Editor
Er. J. Muraleemohan Lal	Member
Er. K. G. Satheesh Kumar	Member

Visit

http://www.ewh.ieee.org/r10/india_council

'It is the province of knowledge to speak, and it is the privilege of wisdom to listen.' -Oliver Wendell Holmes

From India Council Secretary



Now that IEEE Spectrum has gone online, several of the concerns related to its mailing and non-receipt would get addressed. The spectrum is now available for download in pdf form (about 5 MB) or to read online. Members registering for online delivery get the issue at the same time as the print version gets posted. One of the interesting features of online viewing is an instant zooming feature. To zoom into a specific portion of a page, one just has to point to it and click. Clicking again will return the page to normal size. The downloaded pdf version has the same look and feel as the print magazine and any difference in quality is hardly discernable.

In addition to the Spectrum Magazine Online, IEEE now has several online products. Visit <http://origin.www.spectrum.ieee.org> to know more about these products. The Spectrum Online Techinsiders webinar series has quite a few interesting webinars for viewing. One may also register for the upcoming webinars. Webinars can be watched on either Windows Media Player or Real Player. There is also a provision to download the slides used in the presentations.

Our members, especially academics, researchers and professionals, would greatly benefit from using these products. At the moment there is a lack of awareness about them. Creating awareness among members is a challenge volunteers need to take up.

Cheers!

K G Satheesh Kumar

Secretary, India Council, IEEE

Registration Now Open!

The IEEE Power Engineering Society Announces

"Plain Talk about the Electric Power System for the Non-Power Engineering Professional" .

On October 17-19, 2007 at the St. Louis, Missouri Airport Hilton

A series of courses that focus on the Electric Power System for the Non-Engineering Professional

The three areas covered are:

- Power System Basics—Understanding the Electric Utility Operation Inside and Out
- Delivering Power to the Customer—Planning and Operation Today's Distribution System
- The Grid—The Interconnected Electric Bulk Power System

• Visit: <http://edge.halldata.com/HDS/Q8/PDF253.pdf> to see the Plain Talk Brochure

• Visit: <https://event-wizard.com/secured/eww3.01/forms> to view the entire program and for registration details.

OUTSTANDING BRANCH COUNSELOR AWARD Call for Nominations Deadline: 15th September'07

Aware of the unusual and dedicated efforts of Student Branch Counselors and Branch Chapter Advisors, the Regional and Technical Activities Boards sponsor a cash award to each of, approximately ten outstanding Counselors and Advisors throughout the world.

Winners will be those individuals who, through their work as Counselors and Advisors, exemplify the Institute's commitment to the educational, personal, professional, and technical development of students in IEEE related fields of interest.

Eligibility:

Students **submit an essay in English (not to exceed 1,500 words)** on why they feel their Branch Counselor or Branch Chapter Advisor has earned the qualifications of "Outstanding Branch Counselor and Advisor" for the year. Student Branch and Section interaction and activities are an important part of the award criteria.

Recommended supporting documentation provided by the Branch or Branch Chapter (in English):

Petition of endorsement by Branch or Branch Chapter members.

Letters of recommendation from persons such as other IEEE faculty members, Department Chairs, fellow Student members, and IEEE Section Representatives.

Brief biography of Counselor or Advisor emphasizing his or her IEEE related activities rather than technical contributions.

Please supply the information requested on the prescribed **Nomination Form.**

Possible resources for preparing the nomination include the Electrical Engineering Department Chair or appropriate subject matter teacher, Dean of Engineering, faculty members, Dean of Students, Academic Dean, fellow Branch or Branch Chapter members and IEEE Region, Section or Chapter volunteers.

Nominating Branches or Branch Chapters must meet the requirements of the IEEE Bylaws in the current academic year, by submitting required reporting forms and holding at least three meetings during the year.

The primary criteria for selection are the enthusiastic support of the Counselor by his or her students and the commitment he or she has made to the engineering profession by the fostering of activities which encourage the development of IEEE Student members. Other factors include:

Evidence that the Branch is active in the paper, device, and other competitions and has an active program of meetings and field trips.

Evidence that the Branch has either a high membership level or good growth.

Evidence that the Branch is striving to meet the scientific, educational, and professional purposes of the IEEE.

Recognition of efforts to instill leadership qualities in student officers and to guide them in their efforts to administer the Branch or Branch Chapter operations.

Recognition of efforts to assist student officers in the development of yearly activities which lead to the technical and professional awareness of Student members.

Recognition of efforts to foster effective interaction between the Student Branch and the local IEEE Section.

(Contd.)

"The automobile has not merely taken over the street, it has dissolved the living tissue of the city ... Gas-filled, noisy and hazardous, our streets have become the most inhumane landscape in the world." — James M. Fitch

The required evidence will be two letters, one from the Student Branch and one from the Section

Prize

Headquarter level: Each winner will receive a US \$500 cash award and a personalized certificate. For the Student Branch submitting the nomination for the award recipients selected will receive a US \$200 cash award. Deadline 28th Feb. Announcements of award recipients will be made in March. [Submit nomination form to I.durrett@ieee.org]

R10 level: Each winner will receive a US \$250 cash award and a personalized certificate. For the Student Branch submitting the nomination for the award recipients selected will receive a US \$100 cash award. **Deadline: 15th September.** Announcements of award recipients will be made in March. [Submit nomination form to R10 SAC mini@ieee.org]

**Deadline: 28th February (Headquarter level)
15th September (R10 level)**

KG Satheesh Kumar

A letter from HK on a miracle

Giving hope for those sick branches

Dear Chairman Prof Desai,

It is indeed great news to know that VJTI IEEE Student Branch has secured the 2006 RAB Membership growth award. This achievement has to be viewed with the backdrop of VJTI having been in the 'sick list' in respect of member strength for 5 years (Dec 2001- 2 students, 2002-6, 2003 - 6, 2004- zero and Dec 2005- 1 student). It was then that our Life Members Affinity group stepped in and under the guidance of Prof M M Shah, had a number of meetings with the students - the result is for all of us to see and rejoice.

I was just looking at my scrappy gleanings re VJTI Branch. Approved 22 Nov 1986 (the same day when *Baroda M S Univ., NSS Coll of Engg., TKM Coll of Engg., and Pondicherry Engg. College Branches were approved - indeed that year 10 new Branches were approved in R10 - 9 in India and one in Thailand) . VJTI Branch had the peak strength of 86 students in 1986.

This appears that it is the first time that VJTI has secured the RAB Growth Award. Incidentally, in Bombay area, in 1987 IIT-Powai secured the growth Award, when their membership moved from 45 of previous year to 106 in 1987. Year 1994 saw T S Engineering securing the Award when their strength moved up to 184 from 58 of previous year.

I have also prominently noted that VJTI Branch secured the 1990 Bendix Award for their Project "A Low Cost Ambulatory ECG Monitoring System" sharing that year the \$1000 Award with BHU Branch.

It is a fascinating exercise to keep track of the achievements of our Branches and I am proud of VJTI Branch.

Regards,

H. Kalyanasundharam

Call for proposals: IEEE Alumni Meet

The aim is to foster relationship between the Alumni and the current student members to encourage mentoring program. Applications to: mini@ieee.org. Deadline: 31st August 2007

Aim: To formulate an IEEE alumni forum at each student Branch, which will keep in continuous contact with the IEEE alumni of the college (wherever they are) and constantly motivate them to retain IEEE membership, with special programs and meetings organized for them in the branch.

Activity: IEEE Alumni Meet at student branch level.

Pilot project for Student Branches

Sections with 10 or more student members and in existence for 3 years and above can apply for this project. Two or three student branches can jointly host the congress as well. The proposal is to hold half day/full day meetings of the IEEE Alumni members and the current student members to interact and share their experience.

Expected outcome:

- Link will be established between the Alumni and the current members
- Mentoring can begin with the Alumni pledging to mentor the junior students
- Discussion about the do's and don'ts in the corporate world with the inputs from the Alumni
- Technical knowledge sharing by the Alumni
- **IEEE alumni group in each student branch will be formulate and activated within one year,** which will enhance membership retention and many other activities.

The proposal should include

1. Theme of the meet
2. Reasons for Application
3. Desired Objectives other than stated in this announcement
4. Proposed Venue & Dates (should be before December 31, 2007)
5. Proposed Budget for Alumni meet (The R10 support to the student branch/ section level event would be limited to US\$ 500 The rest of the budget projection if any has to be raised through sponsorship and support by local section/ chapter/student branches).
6. Others, if any

All the proposals should be submitted by email to

1. Dr. Mini S. Thomas, R10 Student Activities Coordinator mini@ieee.org positively BY 31st August 2007, the 3 most innovative proposals will be selected.

Congratulations

Mr. Ayush Bhandari!

1st prize winner in R 10 Undergraduate Student paper contest.
Topic: Sampling Theorems and the Nyquist Criteria: A Unifying Approach
32/1,Shivalikpurum,Gms Road ,Dehradun, 248001
ayushbhandari@gmail.com

"I think of your own faults the first part of the night when you are awake, and of the faults of others the latter part of the night when you are asleep." - Chinese Proverb

Editorial



Emerging, a new Convergence

Convergence is no new thing for the EE & IT professionals. We have been focusing on a number of convergences to achieve certain beneficial results from what appear to be streaming out newer technologies. However, a new kind of convergence is apparently emerging with bio-sciences, health sciences, mathematics and engineering, especially electronics and communications. Invasion of mathematics and computers into medical, pharmaceutical and healthcare has been becoming a thing of the past after over three decades of strong incursions of technology into the health arena.

Now we are talking of software and hardware functions linked to living tissues. E & E profession will have a much larger say in reaching the innards of living beings to evaluate changes taking place and even to deliver remedies in real time war on diseases. Gene therapy, gene splicing etc are very exacting scientific steps, which depend upon lots and lots of modern technologies.

On the other side, day to day life and domestic work, treatment of diseases requiring continuous care like for diabetes, may have this kind of convergence of traditionally divergent study areas. To get these kinds of tasks to get on, may be, we need a professional curriculum and syllabus which would help mould the right kind of entry level people. Are we ready for such things, or are we dilating further and further on software alone?

Regards,

Trivandrum
01 August 2007

Prof. V. K. Damodaran, Editor
vkd@ieee.org

Technology Snippets

Rubbery Metal

Vibrations create headache for engineers, who often go to great lengths to get rid of them. In the worst scenarios, unwanted vibrations can lead to loss of life, for example when they cause cracks to spread in an aircraft's turbine blades. At the other end of the scale, unwanted vibrations may merely make power tools, baseball bats, or tennis rackets uncomfortable and jarring to use.

The most widely used method of eliminating vibrations is to use some kind of suspension system that dampens them out, perhaps rubber mountings. Other techniques, which imply counteracting vibrations by producing another set, exactly opposite to the first ones, so that they cancel each other out, can also be used, but they are cumbersome and more expensive.

But what if the metal itself could dampen vibrations, just like rubber? That's exactly what researchers from Virginia Polytechnic Institute and State University in Blacksburg, US, claim to have come up with.

Their exotic material is a composite consisting of ceramic particles embedded in a metal matrix. The metal provides strength and stiffness, while the ceramics have a curious property known as ferroelasticity, meaning vibrations are converted into tiny rotations of crystals within the material. The composite offers the strength of a conventional metal with the vibration-dampening properties of rubber.

The aerospace industry is notoriously conservative when it comes to incorporating new materials. And, a lot of work will have to be done characterising this material's properties before aerospace engineers will touch it. So, for a while we're more likely to see new material in those non-life-threatening applications, like baseball bats and tennis rackets.

Quotes

"The ultimate test of man's conscience may be his willingness to sacrifice something today for future generations whose words of thanks will not be heard." - Gaylord Nelson

'Do not confine your children to your own learning, for they were born in another time.' - Chinese Proverb

To

IEEE India Info
AUGUST 2007

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