



# IEEE India Info



IEEE India Council  
Newsletter

Vol. 2 Number 6

June 2007

Single Copy : Rs 4/-

## IEEE The Institute of Electrical and Electronics Engineers, INC

### Chairman's Message



Friends,

The topic of discussion today in every conceivable media –be it print or electronic- is 'global warming'. The catastrophic effects of this dreadful phenomenon are presented vividly everywhere, interspersed with the message that we take care not to add our share –small or big- to increase its intensity. For general public, this may prompt them to have a re-look at their actions, from a global warming perspective. But for members of IEEE, the responsibilities are much more.

Primarily, we know the innards of global warming better than ordinary people so that actions could be taken from a better footing. Secondly, our members are there in most of the action areas that also cause global warming – say, power generation, transportation engineering, to name a few. This gives us ample opportunities to do our might to reduce the impact of our actions on global warming.

I write this specifically at this juncture of heightened lobby against this ecological problem, to urge our members to come forward and set examples for others to emulate. Energy conservation measures, containing e-waste generation through recycle-reuse initiatives etc can all be effectively done by us, taking advantage of our pre-eminent position as knowledgeable 'engineers'. Even though doing service silently is most desirable, a little bit of visibility in our societal actions is often needed. Can our Sections and Society Chapters take leadership roles in this matter?

I understand preparations for INDICON 2007 under the aegis of Bangalore Section and All India Student Congress under Gujarat Section are in full swing. Best wishes to both the teams.

The achievement of Thadomal Shahani Engg College, Mumbai securing the 'Outstanding Performance' Award for its IEEE EMBS Chapter is laudable. The team of students led by Prof. Poorva Waingankar and other advisors deserves to be congratulated for their excellent work. Bombay Section can also be proud of this achievement.

Finally, the Engineering Council of India in which IEEE IC is an active member, is seen to be coming out of the deadlocks, as observed during its BoG meeting at Delhi on 28 May'07, attended by me and former IC Chair, R K Asthana.

With best wishes,  
Trivandrum  
1 June '07

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

### Section Support via Region

#### Proposals invited for 2007 SSVR Funding

IEEE Region 10 is accepting proposals from Sections for special projects for funding using the SSVR funds.

Every year, Section Support via Region (SSVR) funds are allocated at the discretion of the Region Director through HQ. The Director/Secretary collects requests from Sections having financial difficulties to support "special projects" and upon approval of the Director, the Treasurer will instruct HQ to disburse the funds to the Sections. The deadline for submission of proposal is Sat. 30 June 2007.

Please send in your proposals to Prof. Marzuki (marzuki@utmkl@utm.my) and Mr. Takatoshi Minami (r10-treasurer@iee.org) for consideration, with cc. to Fanny Su (Manager)

IEEE Asia Pacific Operations Centre  
Singapore (ieeapo@pacific.net.sg)

### INDICON 2007 Updates

**Theme: Advances in Electrical, Electronics, Communication and Information Technology**

Preparations for INDICON 2007 and 16<sup>th</sup> Symposium of IEEE Bangalore Section, scheduled during 6-8 Sep 2007 in Bangalore, are gaining momentum. The necessary organisation structures comprising Organising Committee, Technical Committee, Finance Committee and Publicity Committee have been formed. The Chairs are respectively Mr. K Ramakrishna, Dr. MH Kori, Wg Commander (Retd.) H Parthasarathy and Mr. MM Babu Narayanan. Overseeing these preparations are General Chair Mr. AK Tripathy, Conference Chair Mr. H Ramakrishna and Conference Convener Mr. D Rajagopal.

There was overwhelming response to Call for Papers. By 31 May, the last date for receiving abstracts of technical papers, over 230 abstracts have been received, and subjected to review by the Technical Committee. Select papers will be included in the conference proceedings and the authors invited to present them at the conference.

Invited papers by experienced professionals and academics, on various topics related to the theme of INDICON 2007, will also be included in the conference.

### Editorial Board

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*Visit*

[http://www.ewh.ieee.org/r10/india\\_council](http://www.ewh.ieee.org/r10/india_council)

*"We must be the change we wish to see in the world." - Mahatma Gandhi*

## From India Council Secretary



Dear IEEE Member,  
The activities for the year are picking up in various sections. The flagship event of the India Council for the year, Indicon 2007, will be held at Bangalore during 6-8 Sep'07. Another major all-India event is the All India Student Congress in Gandhinagar during 28-30 Sep, 2007. The Bangalore Section and Gujarat Section are enthusiastically preparing for the respective events.

I request the involvement of every member in India to make these events very successful. You can contribute by way or participation, getting sponsors, advertisers or exhibitors, presenting papers or simply disseminating information.

MV Chauhan Student Paper Contest is another all-India activity this year. Student Activities Vice Chair, Dr. SC Pal will be shortly announcing the details.

The India Council is also planning to create a National Resource Pool to help sections and student branches to tap into the enormous knowledge resource available with our members.

Members who are willing to be speakers at seminars, conferences, tutorials etc. and who can provide consulting support on specific areas are invited to join the National Resource Pool. Just send an email to [ieeeindia@gmail.com](mailto:ieeeindia@gmail.com) indicating the area of expertise and experience.

Cheers!

KG Satheesh Kumar

## All India Student Congress - AISC 2007

**Congress Theme: 'Networking to Share for Excellence'.**

All India Student Congress – AISC 2007 - will be held on 28 - 30 September 2007 at Dhirubhai Ambani Institute of Information and Communication Technology (DAIICT), Gandhinagar (Gujarat).

AISC, an annual event of IEEE India Council, brings the IEEE student members of various student branches from India and provides a platform for sharing their views and experiences. This excellent opportunity for networking allows them to discuss issues related to their technical and professional development as well.

SPCTS (Student Paper Contest and Technical Symposium), an annual event of IEEE Gujarat Section will also be part of AISC 2007. Call for papers for SPCTS shall be made separately.

The detailed announcement of the programme will be made shortly. The event will be coordinated by Dr Anil K Roy, Vice Chair, IEEE Gujarat Section.

Reported by: Deepak Mathur, Chair, IEEE Gujarat Section

## Outstanding Performance Award for IEEE-EMBS Chapter of TSEC

IEEE EMBS Chapter of Thadomal Shahani Engg College, Bandra (w), **Mumbai** has secured the 'Outstanding Performance' Award. It is the result of the sustained hard work put in by students and advisors like Ms. Poorva Waingankar, Prof Kranti Kumar, Aliasger Shaiwallah, Jyoti Vazirani and Chapter Chairs Anita Atwani, Susheel Sulchanta and others. IEEE Bombay section provided active support and encouragement.

**Congratulations to all for bringing this honour to the TSEC. - India Council.**

**Anthony Lobo of Bombay Section writes:**

Dear All,

Our students have proved time and again that they are the pride of IEEE Bombay Section and India Council as well. Thadomal has had a great heritage and are growing from strength to strength and it is an honour to be recognised for what is called one's "core competency", in this case the Bio Medical field. Congrats to Prof Poorva, the students and Prof Kranti Kumar and the management of TSEC.

Mr HK's student database (Brief given separately) was a magnum opus but we must ensure that it remains a live document by undertaking to update and keep it current. Prof M M Shah had initiated a lot of efforts in the direction of a student website and we must pick up and take all such initiatives to completion. As is said, one cannot change what one cannot measure, metrics are the order of the times.

Warm regards as we enter the second half of the IEEE year and the last few months of the "membership" year.

Best wishes,

Anthony Lobo

**The IEEE International Conference on Industrial Engineering and Engineering Management**

**December 2-5, 2007, Singapore**

**Organized by IEEE Engineering Management Society, Singapore Chapter**

**For details: [www.IEEM2007.ORG](http://www.IEEM2007.ORG)**

## Jottings from H Kalyanasundaram, veteran IEEE Member

For about 10 years from 1984(IEEE India Council was established in 1976) when I got into MD circuit, at that period in IEEE Reg.10 we had 22 Sections and 37 Branches (6 & 21 respectively in India) By virtue of my EC position with Region and fellowship with then Region Directors & SAC, Madras Section Chairmanship and continuous position in IC EC and above all close interaction with all Section Chairs, enabled me secure particulars of most Awards & honors won by all Sections & Branches. It was then I have noted \*1991- "Vincent Bendix Award \$500"- T S Engg.-Project- "Transmission of Frozen Ultrasound Images on Telephone Lines". Again in 1994- "RAB-Student Branches Membership Growth Award"-Thadomal Shahani- (for growth from 50 to 184). Incidentally, in this decade almost all Sections were struggling hard for finance to meet both ends and support their branches...

The next decade saw, in general, a new generation of Section Officers having their own concepts and priorities and the dynamic IEEE kept moving forward. By 1993 we were 34 Sections & 135 Branches in Region (10 Sections and 98 Branches in India.). Our student population in India has grown from 1389 to 2375. This decade saw all Sections turning the corner to have fairly good bank balances and receptive to support their Branches.

In 2002, it was found that we have reached 194 Student Branches and a strength of 14738 student members. But, nearly 30% of the Branches were 'sick', primarily owing to lack of poor monitoring and financial support by Parent Sections. IC EC agreed to a proposal to have a central cell to monitor, guide and support Branches. To achieve this, as a first step, I drafted a data base of all the Branches in India, taking help of Mr Anthony Lobo to edit & document and in Nov. 2005, had the data bank of near 300 branches passed on to IC SAC Prof. M M Shah, for further action by him and his successors. (we now have 372 Branches). I may also mention that this decade saw all Sections are 'cash rich' and can now be generous to support their Branches at least to the extent they receive rebates and grants from HQ & R10 on account of students.

Regards,  
H Kalyanasundaram(HK).

## Technology News

### Robot to Rescue Injured Soldiers

A robot with a teddy bear-style head, called BEAR (Battlefield Extraction Assist Robot) is being developed by US military to help carry injured soldiers away from the battlefield. The robot's "friendly appearance" is designed to put the wounded at ease. They can scoop up even the heaviest of casualties and transport them over long distances over rough terrain. It is expected to be ready for testing within five years.

While it is important to get medical attention for injured soldiers as soon as possible, it is often difficult and dangerous for their comrades to reach them and carry them back. The 6 feet tall BEAR can cross uneven grounds without toppling, using a combination of gyroscopes and computer controlled motors to maintain balance. It is also narrow enough to squeeze through doorways, but can lift 135kg with its hydraulic arms in a single smooth movement, to avoid causing pain to wounded soldiers. While the existing prototype slides its arms under its burden like a forklift, future versions will be fitted with maneuverable hands to gently scoop up casualties. The Bear is controlled remotely and has cameras and microphones through which an operator sees and hears.

### R10 Distinguished Large Section and Small Section Awards - 2006

#### Message from: Hirohisa Gambe Ph.D, R10 Award Committee Chair

It is my pleasure and honor to announce the result of the R10 Distinguish Large Section and Small Section Awards.

The R10 Award Committee has selected Malaysia Section as the 2006 R10 Distinguished Section. Shikoku Section has been selected as the 2006 R10 Distinguished Small Section.

The selection of the two Awards are based on the performance summarized in the 2006 Annual Report submitted by R10 Sections. These two winning sections will be celebrated at the regional meeting in March, 2008. Malaysia and Shikoku Section have also been nominated to participate in the Regional Award Board Distinguish Large and Small Section Program.

### IETE International Conference on Nanotechnology & Health Care Applications (NateHCA - 07)

Organized jointly with IIT Bombay and in association with IEEE Mumbai Section, IETE Mumbai Centre and the Institution of Engineers, Maharashtra State during Oct 11-13, 2007 at the Centre of Excellence in Telecom Technologies and Management, Technology Street, Hiranandani Gardens, Powai, Mumbai 400 076, Maharashtra, India.

Contact address: Dr T S Rathore  
Convener NateHCA - 07  
Chairman IETE Mumbai Centre  
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Mumbai 400103, India

## Technology News (Contd.)

### Waste Heat into Sound and then to Electricity New Renewable Energy Method

University of Utah physicists led by Prof. Orest Symko have developed a technology that turn heat into sound and then into electricity which holds promise for changing waste heat into electricity, harnessing solar energy and cooling computers and radars. This is a new source of renewable energy from waste heat in which the researchers convert waste heat to electricity in an efficient, and simple way by using sound.

Symko's work on converting heat into electricity via sound stems from his ongoing five-year, heat-sound-electricity conversion research project named Thermal Acoustic Piezo Energy Conversion (TAPEC).

Symko plans to test the devices within a year to produce electricity from waste heat at a military radar facility and at the university's hot-water-generating plant.

The research is funded by the U.S. Army, which is interested in "taking care of waste heat from radar, and also producing a portable source of electrical energy which you can use in the battlefield to run electronics" he says.

The researchers expect the devices to be used within two years as an alternative to photovoltaic cells for converting sunlight into electricity. The heat engines also could be used to cool laptop and other computers that generate more heat as their electronics grow more complex. Finally, they foresee using the devices to generate electricity from heat that now is released from nuclear power plant cooling towers.

Also these small heat-sound-electricity devices could be shrunk further so they could be incorporated in Micro-Electro-Mechanical Systems (MEMS) for use in cooling computers and other electronic devices such as amplifiers. There are two steps in using sound to convert heat into electricity. The first step consists of developing new heat engines, technically called "thermo-acoustic prime movers" to convert heat into sound. When heat is applied – with matches, a blowtorch or a heating element – to the heat-to-electricity acoustic devices made as cylinder-shaped "resonators" In their laboratory, the heat builds to a threshold. Then the hot, moving air produces sound at a single frequency, similar to air blown into a flute. These sound waves are used to produce an electrical voltage, using the existing technology of "piezoelectric" devices which when squeezed produce electricity.

[Courtesy: www.utah.edu]

## Editorial

### Warming Up



The Sections and Student Branches as well as Society Chapters are warming up to give excellent technical presentations/technical gatherings and society interaction programmes this year. The joint activities between various other professional societies also have been gathering momentum during the last few years. If reports from various sections are any indication, it looks as though we are rightly investing in the younger generation. I am currently travelling in Kenya, where I find youth in thousands are jobless and activity less, in spite of the excellent economic performance of the country at a growth rate exceeding 6%. However, there is seen an awareness growing here that the lush resources should be matched with well trained youth in all walks of science and technology and many Universities are abuss with worthwhile research activities. More than that they consider India as a role model for sustainable development.

Hope in the areas of EE, our activity models could also inspire African countries in general and Kenya in particular. More of our EE products could go to these countries in trade.

I am confident that Info will have more to report on the cohesion of the Sections under the India Council.

Regards,

2007 June 01

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

## IEEE India Info JUNE 2007

**Rs 4/-**

**RNI. No. KERENG/2006/17872**

**Regd No. KLTV(S)/319/2006-2008**

**Licence No. Tech/62-2/2006**

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