



Chairman's Message



Dear Fellow Members,

I am sure most of you have already received ballots for 2006 IEEE Elections which include Region 10 Delegate - Elect / Director - Elect 2007-'08 and also exercised your franchise to elect the best candidate who can help most in promoting the cause of IEEE in India. You have a choice amongst 3 candidates nominated by Region 10 - (1) R. Muralidharan, Past Chair Bombay Section & India Council, nominated by IEEE India Council and all the Sections in India (2) Y. W. Liu, Honk Kong and (3) Yong Jin Park, Seoul, Korea. It is a polite reminder for those who could not find time so far to exercise their right to vote for IEEE Elections. Kindly do find some time to extend your valuable support to the most suitable candidate for Region 10 Director Elect. You must have received candidates' Biographies and Statements along with IEEE 2006 Annual Election kit. Last date for receiving ballots by IEEE is 12 O'clock on November 01, 2006. So if you are mailing hardcopies it should be done preferably not later than 16th October 2006 to allow adequate postal time and for electronic voting latest by 31st October 2006. If you have already voted, kindly ignore this request.

INDICON 2006 has just concluded. First three winners of MV Chauhan Student Paper Contest came down to Delhi to present their winning papers in person at INDICON 2006. Also on the last day Mr. K. Ramakrishna of Bangalore Section made a presentation for INDICON 2007 and invited all present to INDICON 2007 at Bangalore. For the first time, 2nd All India Student Congress was held at SSN College of Engineering at Kalavakka, Tamil Nadu from 28th to 30th September 2006.

It is now time to identify IEEE Volunteers for nomination to various IEEE Awards. Sections may nominate live wire volunteers to various RAB Awards and Outstanding Volunteer Award of Region 10. Last date for nominations is 15th October and 30th November 2006 respectively. For more details Section Chairs may kindly refer to mail dated September 19, 2006 from Fanny Su, Manager IEEE, Asia Pacific Office to Section Chairs of Region 10..

With warm regards,

Rajendra K. Asthana

Chairman - IEEE India Council
asthana@ieee.org

Delhi

01 October '06

Editor Writes....

Friends,

'Multi-use Approach - To Conserve Resources'

Recently I saw a charging facility for mobiles at an airport, courtesy a commercial bank. There were a number of adaptors, to suit the different brands of cell phones - Nokia, Motorola, Sony Ericsson, Panasonic.....

Walk into the drawing room of any modern home, you will see a number of remote controls lying scattered all over - one for the TV, another for the music system, a third one for the set-top box.....

In this era of standardization in all fields aberrations as above still happening, are really unfortunate. Technologies exist to do away with proprietary remotes or chargers. In fact, some half-hearted attempts to introduce universal remotes are there. May be, there is no will or there are other compulsions based on too-narrow a commercial outlook.

The Personal Computer introduced in 1981 by IBM was a great leveler in computing arena which brought computers to the reach of common man. The credit should go to the visionaries behind it, who allowed others in the field to make PCs based on IBM standard or write programmes for it. Till then IBM was famous for its 'holding to the chest' approach - not divulging any of the innards of its systems for the benefit of others.

All these point to a simple fact: since we have not paid attention to the standardization aspect with all the seriousness it deserves, massive wastage of resources takes place. Finally, the planet earth is destined to receive more of e-wastes on this account also, thanks to lack of engineering planning.

Can we resort to a new way of thinking - a multi use approach in all our areas of activity? Like a single remote, programmable for all the gadgets in the house, including those to be added later, conforming to a universal wireless connectivity standard. Chargers can be another area for such innovation. It is too late now, as otherwise we could have realized the dream of a universal electrical grid. The age old 50 Hz vs 60 Hz frequency standards and 230 vs 110 voltage standards unfortunately stand in the way, even today.

It should be our endeavor to identify more avenues for practicing multi-use approach, thereby conserving scarce resources and saving the environment.



N.T.Nair

Editor

Trivandrum

01 October '06

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'When it comes to getting things done, we need fewer architects and more bricklayers.'

- Collen C. Barrett

IEEE NEWS & EVENTS

IEEE Seminar on Aeronautical Navigation & Communications: Present & Future

New Delhi August 17-18, 2006

AES-COM-LEO Society Chapter India

A report

Dr. K Ramalingam, Chairman, Airports Authority of India, inaugurated the event. Eminent speakers who presented papers include Dr. Agam N. Sinha, The MITRE Corporation, USA, Dr. Surendra Pal and Dr. Suresh V Kibe, ISRO, Bangalore, Prof. R. John Hansman, MIT, USA, Mr. Sumant Hattikudur, The Boeing Company, USA, Mr. Ian Ash, Preston Aviation Solutions Pty Ltd., USA, and Prof Rodney Walker, Australian Research Centre for Aerospace Automation (ARCAA) (Paper was read)

Dr. VP Kodali, General Chair presented the objectives of the seminar and Dr. Zafar S Taqvi, member of the IEEE-AESS Board of Governors, outlined the close linkage of IEEE with academia and the industry. 131 participants attended the seminar from 48 different organizations.

Reported by: Dr. R.G. Gupta, Chair, IEEE-AES-COM-LEOS Society Chapter India

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AES All-India Student Project Contest

Hyderabad, 19 August 2006

IEEE-India AES/Com/LEO Societies Chapter

Report on Activities

Student Project Contest - 2006 was supported by IEEE Aerospace and Electronic Systems Society (AESS) under a special grant to IEEE-India AES/Com/LEO Societies Chapter. The Contest was organized by the Chapter in association with IEEE Hyderabad Section, and was open to all IEEE Student Members residing in India. Technical areas of the projects were however restricted to be within the AESS fields of interest. IEEE member statistics (December 2005) show a total worldwide membership of 73780, with 13101 of them living in India. Programs addressing IEEE Student Members in India therefore assume importance.

A total of 22 under-graduate (UG) and 2 post-graduate (PG) entries were received. Concept, creativity, technical content and presentation were included among criteria for judgment. A Panel of Judges, chaired by Dr V.U. Reddy, Life-Fellow of the IEEE, selected three UG projects for presentation and demonstration.

First Prize: 'Autopilot Development for Mini UAV: Hardware-Software Co-Design', by Mohit Mangal, Mohit Mundhra, Gaurav Gupta & Shobhit Niranjan, Indian Institute of Technology, Kanpur.

Second Prize: None qualified.

Certificate of Merit: 'Design and Fabrication of Automatic Tyre Inflating System' by J Guru Prasad, D Harikrishna, S Rajesh & D Saravana under, Sona college of Technology, Salem, Tamilnadu. & 'Advanced Step in Mars Exploration', by TV Abdul Anas Monsha, CS Anooob & CA Ameersiraj, Sri Narayana Gurukulam College of Engineering, Kolenchery, Kerala.

The First Prize consisted of a cash award of Rs.20000.

Further, Professor Rajat Moona of IIT-Kanpur, who guided the First Prize winning entry, was presented with Certificate of Recognition and membership of IEEE and AESS for 2007.

IEEE Reg. 10 Execom 2007 - Indian Representation

Prof. M. M. Shah, Chair, IEEE Bombay section (Vice Chair, IEEE India Council) has been nominated as Technical Activities chair and Dr. Mini Thomas, Secretary, IEEE Delhi section as Students activities Chair of IEEE Region 10 Execom for 2007. Japan has eight members in the list, Australia has 5, two each from New Zealand (including the Director herself), Malaysia, Singapore and one each from China, Thailand, and Korea.

Congratulations, Prof. M. M. Shah and Dr. Mini Thomas.

Conference on Software Engineering Education & Training 2007

Started in 1987 by Norm Gibbs at the Software Engineering Institute (SEI), the Conference on Software Engineering Education & Training (CSEET) has become the premier annual conference focusing on education and training in software engineering. The conference has received the sustained support and sponsorship of IEEE - Computer Society, academia and industry.

Dublin City University is hosting CSEET 2007 in Ireland during 3-5 Jul 2007

The conference attracts educators in academia and professionals in industry, offering a forum for sharing experiences and fostering collaborations in improving the state-of-the-art and state-of-the-practice of software engineering. Following is a

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partial list of possible areas for exploration and sharing:

- Education theory and pedagogy (ETP)
- Curriculum and inter-disciplinary offerings (CID)
- Learning environments and tools (LET)
- Performance evaluation methods (PEM)
- Student projects and internships (SPI)
- Training models in industry (TMI)
- Industry-academia collaboration models (IAC)
- Value driven software engineering (VSE)

The Call for Papers is open now. Last date for submitting Abstract is 1 Nov 2007.

Visit the conference website at <http://www.computing.dcu.ie/cseet2007> for further details

Contact person: R. Narayanan, Program Committee Chair, CSEET 2007 (Advisor, Tata Consultancy Services Ltd. r.narayanan@tcs.com)

IEEE Communications Society Chapter Achievement Awards

Carole Swaim, Executive & Volunteer Services, has informed that the following 4 chapters have been selected winners of this year's Communications Society Chapter Achievement Awards:

- AP -India Chapter - Ram Gopal Gupta - guptarg@mit.gov.in; r.gupta@ieee.org
- EAME - Hungary Chapter - Tibor Berceci - berceli@mht.bme.hu
- LA - Colombia Chapter - Jose David Cely - j.d.cely@ieee.org
- NA - Chicago - John Poust - John.Poust@Rauland.com

One among these members will be selected "Chapter-of-the-Year" for 2006 (and this announcement is forthcoming). That chapter chair or representative will have expenses paid to attend the IEEE GLOBECOM Awards Luncheon in San Francisco and be honored during the ceremony.

M V Chauhan Paper Contest

The first three paper winners presented their papers at the INDICON 2006 held at Delhi.

Mr. R. K. Asthana, Chair, India Council and Prof. M. M. Shah, explained about the MVChauhan Paper Contest and its significance and also gave away the Certificates and the Prizes.

IEEE All India Student Congress AISC 2006

September 28 - 30, 2006

SSN College of Engineering(SSNCE), Chennai

A Brief Report

All India Student Congress 2006 was held at SSN College of Engineering(SSNCE), Chennai during September 28 - 30, in association with IEEE Madras Section. The meet kick started with the inaugural function on 28th Sep. with the following chief guests participating:

Mr. Ravi Vishwanathan, Vice President - TCS and Mr. Soma Sajeewan T K, Country Head in HR - EDS India. It was also attended by many other senior members of IEEE : Dr. M Ponnavaikko, Chairman -IEEE Madras Section ; Dr. P. Suresh Chander Pal , Chairman, student activities- IEEE Madras Section ; Mr T S Rangarajan , Vice Chairman- IEEE Madras Section, Prof. M. M. Shah, Vice Chairman - IEEE India Council, Mr N T Nair, Executive Vice Chairman- IEEE India Council and Dr. S. Salivhanan, Vice Chairman-IEEE Madras section, Principal-SSNCE. There were 415 registrations - the highest ever recorded in any congress. Two technical lectures followed this; one by Mr. N T Nair on "Disruptive Innovations" and the other by Mr. T S Rangarajan, TCS on , 'RFID Solutions'. There was a presentation by Prof M. M. Shah on the various student branches of IEEE across the world and India. He also informed that Madras section is one of the richest sections in terms of membership and activities. The lively presentation by Dr. Suresh Chander Pal on "How to organize a Vibrant Student Branch" was another notable event.

More details of AISC 2006 are available in website: www.ssnce.ac.in

Reported by:

Ashwin Kumar Sahoo

Asst. Prof. and Organising Secretary - IEEE AISC -2006



FROM LEFT:

Prof. Sahoo, Branch Counsellor, Dr. S.C.Pal SAC, Madras Section, Dr. Ponnavaikko, Chair-Madras Section, Mr. Ravi Viswanathan, Chief Guest, Mr. Soma Sajeewan, Key Note Speaker, Prof. M.M.Shah, Vice Chair, India Council, Mr. N.T.Nair, Executive Vice Chair, India Council, Principal Dr. Salivahan.

TECHNOLOGY SNIPPETS**Storage Nanotechnologies
Revolutionising Computer Scene**

Nanotechnology, the science of engineering functional systems at the molecular scale, are in for creating wonders: A PC with instantaneous boot up or storing 10,000 gigabytes of data on a device the size of a coin with data-transfer rates unhampered by any latency.

Those are just two examples of the promises that storage nanotechnologies hold: combining the functions of memory chips and disk drives on a single piece of hardware that is a fraction of the size of devices today.

Systems in development today could do away with internal disk drives totally as well as the computer boot-up process, instantaneously bringing applications up when a PC or laptop is turned on. Other nanotechnology hardware may allow data to be stored for more than 100 years without having to refresh media.

IBM has an exciting project focusing on storage nanotechnologies - Carbon nanotubes, which are molecule-size objects composed entirely of carbon in a cylindrical structure, giving them unique properties. According to Tom Theis, IBM's director of physical sciences, "Nanotubes with diameters of only 1.5 to 2 nanometers possess many times the strength of steel and conduct electricity as both a metal and a semiconductor."

Another application of carbon nanotubes may be in the production of a high density, nonvolatile random access memory chip that could replace dynamic RAM, flash memory and even hard drives. Nantero Inc. of Mass., USA, has built prototypes of a chip called NRAM (for nanotube-based/nonvolatile RAM) that is faster than DRAM, as portable as flash memory, and able to provide permanent storage "This technology could enable instant-on computers that boot and reboot without delays and eliminate the need for internal disk drives on computers," says Greg Schmergel, CEO and co-founder of Nantero.

NEWS SNIPPETS**Compressed Bio Gas (CBG) to Run Vehicles**

Bio gas, a combination of methane(60%) and carbon dioxide (40%) is made out of solid waste, generated everyday at homes, hotels and such other places.

Biogas is formed when bacteria degrade biological material in the absence of oxygen, in a process known as anaerobic digestion. It is a renewable fuel produced from waste treatment. Anaerobic digestion is basically a simple process carried out in a number of steps that can use almost any organic material as a substrate - it occurs in digestive systems, marshes, rubbish dumps, septic tanks etc. After CNG, the Compressed Bio Gas (CBG) is emerging as an eco-friendly alternative to petrol and diesel. CBG is cheaper and more effective than not only petrol and diesel, but also CNG. According to an estimate, it can give fuel efficiency of 16 km per kg (for a Maruti van) and costs only around Rs. 8 per kg, whereas CNG costs around Rs. 24 per kg. The technology developed by the Centre of Rural and Technology Development at IIT-Delhi is now being used to make a plant that is mobile and can be mounted on a four-wheeler, to be installed at any place where cow dung is available. The process works like this: The machine purifies biogas, which is passed through different filtration systems and the main components methane, carbon dioxide and hydrogen sulphide are separated. Clean methane is compressed and filled in to 8-kg cylinders which can be directly used in the CNG-driven car. Regarding performance, it complies very well with standards of pollution control norms for emission levels in vehicles.

Food for Thought

- 'The only way for a rich man to be healthy is, by exercise and abstinence, to live as if he were poor.' - Paul Dudley White
- 'Inventing is a combination of brains and materials. The more brains you use, the less material you need.' - Charles F. Kettering

Editorial Board

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