



## IEEE THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC

### Chairman's Message



Dear Fellow Members,

A new year has just dawned. It is our wish that this year throws open wonderful avenues for all of us at IEEE to contribute significantly to improve the quality of life of our citizens, in line with the objectives of this great professional society. The adage that 'Technology for the benefit of mankind and not for its own sake' should be kept

in mind when we try to develop any new technology or apply the existing ones in our professional life.

The relevance of IEEEians is becoming more and more, as the world gets challenged from all angles - depleting fossil fuels, e-wastes, greenhouse gases and what not. Fortunately or unfortunately, our members are there in all the action areas related to these and many more. We are cause and solution as well. As technology developers, we can not stay away from 'cause' scene, as IEEE members are playing lead roles everywhere, around the world. In 'solution' front also we are called upon to apply our techno-managerial wisdom to solve man-made or naturally occurring problems. Let us play this role well in the New Year, so that society will be thankful to us.

IEEE movement in India has made its mark over the years and the credit should go to the dedicated volunteers who have come forward to lead the movement with ever increasing commitment at India Council and the various Sections. I wish to put on record our acknowledgement of the yeomen services rendered by the outgoing office bearers as well as those continuing in their seats. Mr. R K Asthana, and Dr. Ramnath (outgoing IC Chair and Secretary respectively) and the other IC members, are handing over a robust and vibrant organisation to the new team. In all humility, we, the new IC team including K G Satheesh Kumar as Secretary, Prof. V K Damodaran as Editor and other IEEE veterans, vow to put-in all efforts to carry IEEE to further heights, with support from each and every member.

Once again wishing that 2007 be an excellent year for you,

**N.T. Nair**

01 Jan.'07  
Trivandrum

Chairman, IEEE India Council  
ntnair@gmail.com

### New Team Takes Over

The IEEE India Council Slate of Office bearers for the year 2007 has been uncontested and the Nominations Committee headed by Mr. R. Muraleedharan has declared the unanimous election of the volunteers listed below as the team to lead the IEEE India Council from January 1, 2007. The new team has taken over the new positions. Your support and guidance for another active year will make a difference to what service the team can give to IEEE members in India.

Sl. No	POST	SECTION	NAME
1	Chair	Kerala	Mr. N. T. Nair
2	Exe. Vice Chair	Bangalore	Prof. Kasi Rajagopal
3	Secretary / Treasurer	Kerala	Mr. K. G. Satheesh Kumar
4	Immediate Past Chair	Delhi	Mr. R. K. Asthana
5	VC - Professional Activities	Hyderabad	Mr. R. Kannan
6	VC - Student Activities	Madras	Dr. Suresh C. Pal
7	VC - Technical Activities	U. P.	Dr. S. C. Srivastava
8	VC - Educational Activities	Calcutta	Mr. K. K. Mallik
9	VC- Membership Dev.	Gujarat	Dr. A. R. Dasgupta
10	News Letter Editor	Kerala	Prof. V. K. Damodaran
11	Ombudsman	Bombay	Prof. M. M. Shah
12	Member at Large	Bombay	Mr. Quraish Bakir
13	Member at Large	Kharagpur	Prof. Rajib Mall

### A Very Happy New Year

To the Readers of IEEE India Info From the Editorial team

#### Why We Eat, What We Eat

Chinese food and its variety are best known throughout the globe. The Chinese are also fastidious about their tradition, food and festivals. For anything the Chinese eat, there is a reason for it. Here are some examples of why they eat, what they eat - at least on festivals and occasions:

Oysters - for success in business

Abalone - for abundance

Long noodles - for long life

Candied melon - for good health

Black sea weed/dried (soya) bean curds - for wealth

Peanuts - for longevity

Red colour - for good luck and happiness

There are many more. But, next time you have a Chinese hospitality, you know what your host wants you to be!

### Editorial Board

Er. N.T. Nair	Editor
Prof. V.K. Damodaran	Member
Er. J. Muraleemohan Lal	Member

Visit

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

*We have proved to the world that if you build a market for the rich, the poor wouldn't participate.  
If you build it for the poor, the rich would participate extensively.*

*-Udayshankar*

## From India Council Secretary



Dear IEEE Member,

Warm Greetings and New Year wishes from your 2007 India Council Secretary!

The purpose of this column is to explore ideas and ways for the IEEE to be of better service to its members in India. Please feel free to interact with me freely at [k.g.kumar@ieee.org](mailto:k.g.kumar@ieee.org)

Through these columns, I intend to provide more information about the organisational aspects of IEEE.

Let me admit that I am no expert in these aspects and my information will be based on what is already available at the IEEE website. To supplement this interaction, we will identify veteran volunteers to run columns on specific aspects.

To make a beginning, I have chosen for our first discussion, the topic of member-grade elevation. The information provided below is available at the IEEE website [www.ieee.org](http://www.ieee.org)

1. Affiliate to Member: Society Affiliates may apply for elevation of their status to full IEEE membership online at <https://swww8.ieee.org/membership/Affiliate/affiliate.htm>

2. Associate to Member: Members are eligible to vote and hold office positions, while Associates are not. Member grade implies a combination of education and work experience for at least six years. Associates may apply for transfer to Member grade online at <http://www.ieee.org/elevate>

3. Senior Member Grade: The grade of Senior Member is the highest for which application may be made and shall require experience reflecting professional maturity. For admission or transfer to the grade of Senior Member, a candidate shall be an engineer, scientist, educator, technical executive, or originator in IEEE-designated fields for a total of 10 years. Members may apply for senior membership at <http://www.ieee.org/web/membership/senior-members/guide.html>

4. Fellow Grade: The grade of Fellow recognizes unusual distinction in the profession and shall be conferred only by invitation of the Board of Directors upon a person of outstanding and extraordinary qualifications and experience in IEEE-designated fields, and who has made important individual contributions to one or more of these fields. More details are available at <http://www.ieee.org/fellowprogram>

May I urge you to check if your membership grade is due for an elevation? In that case, please go ahead with your application at the earliest. The online process is quite simple and user-friendly.

Cheers!

**K G Satheesh Kumar**

Secretary, India Council, IEEE

## Quotable Quotes

Choose the highest ideal and live your life up to that. Look at the "ocean" and not at the wave.

- Vivekananda

We need to distinguish between data, information, knowledge and wisdom. Data are undigested observations. Information is organised data by others. Knowledge is information put to use in my mind and tested in practice. Wisdom is integrated knowledge.

- Herlon Cleveland

## Tech News

### New Solar Cell Breaks Efficiency Record

A new concentrator solar cell, manufactured by Boeing-Spectrolab in America, has broken the world record for conversion efficiency at an impressive rate of 40.7 percent! Unlike most cells, which have an efficiency potential in the 12-18 percent range and only capture a minimal range of the sun's

energy, the new solar cell achieves its high percentage by using an optical concentrator to increase the absorption of the sun's energy, allowing it to capture a wider spectrum of solar energy. Because the developers made the cell out of numerous layers, each layer can harness the sunlight and contribute it toward the overall cell-output potential. To get to know more:

<http://www.energy.gov/news/4503.htm>

### Led by India and China, Asia Pacific Emerges as Wind Power's New Frontier

Led by wind markets in India and China, Asia Pacific is emerging as global wind power's new frontier, with the region expected to add over 46,000 MW of wind power over the next decade, according to a recently released market study from Emerging Energy Research (EER) - a leading advisory and consulting firm tracking emerging technologies in global energy markets.

The region's market leaders China and India are expected to add over 36,000 MW between them by 2015. Together they will represent over 80% of the Asian wind market during the period, according to EER's new study, *Asia Pacific Wind Power Markets and Strategies 2006-2015*. Japan and Australia will each add between 100 and 300 MW per year followed by less-developed markets in South Korea, New Zealand, Taiwan, Pakistan and the Philippines.

"The Asia Pacific wind power market finds itself at the threshold of a new phase of large-scale growth," according to EER Research Director Keith Hays. Combined with North America, EER predicts the region will account for most of the global wind power industry's growth through the next decade. "Asia Pacific will see an exponential scaling up of its wind power sector over the next five years from the size of wind turbines installed to the dimensions of utility and Independent Power Producer (IPP) portfolios," says Hays. For more details: [saldock@emerging-energy.com](mailto:saldock@emerging-energy.com)

**IEEE NEWS & EVENTS**

## International Conference on Communication and Power Systems

At Velammal Engineering College, Chennai 14 – 16 December 2006



*The ICCPS in Madras Section with VEC: From Left to Right - Dr. G. B. Jaiprakash Narain, Dr. Lalit Goel, Prof. Dr. S. Ramachandran, Thiru. M. V. Muthuramalingam, Prof. T. S. Vasudevan, Dr. V. M. K. Sastri*

At the Inaugural session, Thiru. M. V. M. Velmurugan, CEO of the College welcomed the gathering. Thiru. M. V. Muthuramalingam, Chairman, honoured the guests by garlanding and presenting mementos. The Conference was inaugurated by Prof. Dr. S. Ramachandran, Vice Chancellor, University of Madras, in the presence of Prof. T. S. Vasudevan, Chief General Manager (Retd.), Department of Telecom and Dr. Lalit Goel, Professor & Head, Division of Power Engg., School of EEE, Nanyang Technological University, Singapore, and Chairman, International Steering Committee of ICCPS.

Prof. S. Ramachandran, in his address, stated that the population of educated youth must increase to achieve the target of technological advancement in the coming decades. According to him, educational institutions must facilitate creation of knowledge for technological development through professional training to students. Now, only three percent of the students are undergoing professional education in India. These youngsters, who had the opportunity of better education facilities, must realize their responsibility to contribute to the country's advancement and reach out to the underprivileged people, he said.

Prof. T. S. Vasudevan, highlighted the disparity between supply and demand of power, having a shortage of around 20%. He opined that the conference should address issues such

as increase in efficiency, losses during transmission and distribution of power, the problems of load management, industrial congestion and disciplining of demand to conserve energy sources for future generations.

50 technical papers were presented on the subjects of Communication and Power Systems. The Conference with 130 participants was conducted in parallel sessions for Communication and Power Systems. The keynote lectures were given by eminent professors from NTU, Singapore; IISc; IIT, NIT and CPRI. The various topics of Keynote Lectures on the three day International Conference include Power System Reliability Assessment, Estimation in Distribution Systems, Computational Intelligence tools in Power Systems, Power System Stability and Control, Issues in Mobile Network, Issues in VANETs, Trends in application services for communication industry, Research Challenges in Pervasive Computing Techniques, etc.

Dr. J. B. Jaiprakash Narain, Principal and Dr. Sheila Haran, HOD/EEE & Organizing Secretary were thanked for their excellent guidance for the conference and contributions to IEEE activities.

*Based on Reports from Mr. M. Arun Bhaskar & Mr. S. Srinath, Co ordinators, ICCPS '06.*

*Wisdom is knowing what should be done. Virtue is doing it.*

## News Snippets

### Nanorobotics

New York University's Chemistry department has come out with a functional nanotechnology device called the DNA Cassette. In an array of DNA, this may lead to new synthetic fibres, better encryption of DNA information, and improved DNA based computation. The DNA based computation is a method by which units in DNA perform parallel functions at the same time. The cassette can also change DNA sequences. It functions as a nanoscale assembly line in the array, which can create new materials by altering sequences. Developed by a graduate student Shiping Liao, the device imitates DNA sequences. *Source: Down to Earth Jan 15, 2007*

### All for Olympics

China has successfully launched its second geostationary orbit meteorological satellite, Fengyun – 2D (FY-2D) to provide better weather forecasting services for the Beijing 2008 Olympic Games. The satellite will monitor weather changes at the games venues to help timely weather forecasts during the Olympics.

### Solution for Energy crisis?

Natural Gas Hydrates, stored in solid form at low temperatures, as recently found off the east coast of Canada (solid form of natural gas) could be a source of energy for the future. It is estimated that 10,000 billion tons of Carbon is stored in this form – double the supply of oil, coal and natural gas put together – around the world. Shallow deposits can be economically and easily tapped.

*[Source: American Geophysical Union]*

### 15,000 people trapped to death every year

100 million land mines still sit in the ground, spread out in 80 countries of the world. They kill or injure more than 15,000 people every year – most cases are unsuspecting people getting trapped, rather than soldiers.

*(Source: Spectrum Dec 2006)*

## Editorial



I am back again, after a break of more than 5 years. Almost for that length of time, I had been interacting with the various Sections of IEEE under the India Council as the Editor of IEEE India Newsletter and reporting to the members in India. In mid-2001, I left for China on work and the pioneer Editor Er. N. T. Nair who piloted the publication ever since its inception took over the tasks from me.

India Info has done a yeomen task in keeping the members informed of what is cooking in the technical platform of the Sections, which have grown in strength and academic as well as practical programmes.

Engineers are generally said to be very poor in communicating with the public, and also with their pay masters, notwithstanding the good and challenging tasks they carry out on daily basis. The same trend appears to be within IEEE too, where inter Sections communication is seen to be minimal. Many good activities are known to fellow members in India, only when some of them are rewarded with recognition from the Region or Headquarters. The most that India Info can do is to break this barrier and let exemplary new ideas and activities known to members all over the country and to our higher bodies in the IEEE structure.

May I therefore, request you to flood the Editorial team with reports and programme briefs, with photos of course, before and after the events and your views on how we can build a more vibrant IEEE Technical Forum in each and every conglomeration of EE professionals in the country - spread out in towns and cities! Also, on how we can do something that matters to the masses, who are bewildered at the fast pace of technological changes.

I solicit your cooperation.

Regards,

**Prof. V. K. Damodaran**

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Contents Editor

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