

<b>IEEE India Bulletin Vol. 9 No. 3 March 1999</b>
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*This electronic version of the IEEE India Bulletin is an adaptation of the official, printed newsletter. This adaptation has required some minor modifications and restructuring of the original text, to suit its viewing as a webpage.*

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## CHAIRMAN'S MESSAGE

### Professionalism & Role Models

Dear Members,

The growth of professionalism in any field requires progress in many directions. We have to begin with excellence in both education and research & development at the Universities and other institutions of higher learning. There have to be vibrant platforms, like the one provided by IEEE, for exchange of ideas and for promoting vigorous discussion on technical issues. And all the various strands must finally lead to good products, in which the designer and his company can take pride.

As we move towards the next millennium, we the engineers in India, must progress from being intelligent users of technology towards effective contributors to the totality of knowledge in our field as well as to the products in the market place. While we already have success stories in the development of software for the whole world by Indian engineers, greater stories of success are about products from Taiwan, Hong-Kong, China and Korea, even if the older developed world of Europe, North America and Japan are left out. And we must join to these success stories, some of our own.

But can you develop excellent products without great engineers and enterprises with confidence in their capability ?

Can you have innovative products without the backing of strong research and development ?

When the exodus of young men, every year, from our top-rated technical institutions is towards finance and marketing, if not administration, can you hope to attract and retain brilliant young minds in product design? For this purpose, we shall have to create an environment where the young are willing to slog for better product design. An important component of inputs required for the creation of such an environment is the presence of Role models, whom one may want to emulate.

**ROLE MODELS :** I believe that whereas successful engineers, as role models for the young are required in any society, they are needed even more in ours. It is because most of our bright young men step out of their highly supportive home environment, for the first time, when they join our engineering colleges and universities.

One way of recognizing great engineers in our field is to look for those who have been honoured by IEEE for their contributions.

IEEE FELLOWS: IEEE has the worlds most extensive and highly prestigious program for Award of Fellowships. I am happy to report that, two engineers working at I.I.Sc. Bangalore and T.I.F.R. Bombay, have been awarded IEEE Fellowships in 1999.

It is a matter of pride for the whole of our profession, when some of us receive this high distinction.

I consider the task of recognition of excellence as an essential part of a system which aims at fostering excellence. It is therefore, an important duty of professional associations.

Moreover, the two IEEE Fellows of 1999, along with our previous Fellows, constitute well recognized Role Models for the young in India. It is in this spirit that I have requested Professor V.K. Damodaran to publish the views of our Fellows on the issues facing the engineering community.

I hope to get them published very soon and also that all of us would find these interviews to be interesting and valuable.

Ahmedabad Dr. A. K. Aggarwal  
1st Feb. 1999 Chairman



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PAGEMASTER CALLING !

### **Happy Birthday !**

One year ago, the IEEE India Council launched its own webpages. This gave the world an opportunity to know more about our activities and achievements. We were amongst the first to use the then new Entity Web Hosting service provided by IEEE HQ. The actual preparations for these pages took two months, when a lot of testing and reviews was done behind the scenes, before the public launch. And, ever since, the webpages have been constantly updated and maintained. However, no creation is perfect. These webpages can be made more useful, interesting, and factually correct. And that can be achieved only with **YOUR** feedback and suggestions. Please spend a few minutes, at least today, and send us some constructive criticism of these webpages.

Give yourself and the India Council a birthday gift, today !

S. Parthasarathy  
Pagemaster -- India Council

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### FIRST COMMITTEE MEETING OF 1999 IEEE INDIA COUNCIL

The first IEEE IC Committee meeting Of 1999 was held at the office of the Hyderabad Section on 22 January 1999.

The IC meeting was preceded by a meeting of the Section EXECOM. Dr. A.K. Aggarwal, the IC Chairman was an observer to part of the EXECOM meeting. After the meeting, he conveyed his

BEST WISHES to the new office bearers. He also complimented the EXECOM members on the keen interest that the members were taking in technical discussions. Thereafter the Chairman invited all the EXECOM members to join the IC Committee meeting .

At the Committee meeting, the Chairman complimented Prof V.K. Damodaran for making the publication of the IC Bulletin regular. He also praised the contribution of Dr. Parthasarathy, the Page master for IC. Dr. R.K. Bagga, the past Chairman of IC, mentioned that the membership of IEEE in India has reached 10,000.

Shri N.V. Rao, the past Secretary- Treasurer of IC, presented the audited Statement of Account, which was then approved unanimously.

### **Program planning for 1999:**

It was decided that IC would help our Sections or Chapters successfully bid for International Conferences by actively working for all those cases, wherever the Section or Chapter asks for help. It was also decided that Sections may be asked to bid for ACE-2000 and ACE-2001 at the April 99 meeting of IC to be held along with the Region 10 Committee meeting on April 23-24, 1999.

The Chairman informed that the hosts for ACE-99, the Kerala Section, would shortly inform about the dates for ACE-99.

**Other suggestions:** The Chairman asked the members about their suggestions about what IC should take up immediately in 1999.

There was an interesting discussion in which Prof. Pardesi Rao said that IEEE publications should be received in bulk in India and then posted from here for Indian Members in the interest of faster delivery. At the end, the Chairman thanked all IC members and the Hyderabad Section for enabling smooth conduct of the meeting.

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## INTERNATIONAL CONFERENCE: IBTI - 99

14-15 April 99 organisers:

### **INSTITUTE OF ENGINEERING & MANAGEMENT & IEEE, CALCUTTA SECTION**

An International Conference on INTERNATIONAL BUSINESS THROUGH INTERNET (IBTI -99) is organised by IEM, Calcutta and IEEE Calcutta Section jointly on 14th and 15th April 99 at the Science City, Calcutta. The idea of the International Conference is to dissipate the knowledge & technique of uses of Internet for enhancing business globally.

Prof. Satyasadhan Chakraborty will inaugurate the International Conference. Dr. Charles Rubenstein of IEEE, New York, U S A will be Chairman of Technical Committee, Dr. A. K. Aggarwal, IEEE India Council Chairman, will be the Chairman of the Organising Committee and Mr. F. C. Kohli, Chairman, Tata Consultancy will give the key-note address. Technocrats of International repute in the field of Web Technology and Internet will take tutorial classes to discuss ways and means to utilise the Internet for enhancing import, export & home market business through the intelligent use of Internet.

The participants in the conference will include amongst other, exporters, importers, professionals, manufacturers and research works. It is expected that the participants will be immensely benefitted from the conference. A circular letter detailing the various aspects of the conference is attached. You are cordially invited to participate in the International Conference and also invited to contribute Technical and Business papers for the subject which will be read in the Conference and published. IBTI-99 calls upon the businessmen, scientists and professionals from industries as well as from academic institutions to take advantage of this International Seminar by:

- o Submitting paper.
- o Giving a proposal for tutorials.
- o Taking manufacturers presentation slots. (Book your time slot now. The rate is Rs.5000/- (US\$150) for 30 minutes slot.
- o Registering or sponsoring delegates.
- o Sponsoring various activities of the Seminar and Exhibition.

**The Conference elicits papers on the following and related topics**

- o Use of Internet in the field of Import Business.
- o Use of Internet for enhancing Export Potential.
- o Use of Internet for enhancing Home Market.
- o Use Internet for enhancing Home Market.
- o Use of Internet for enhancing the Technology.

**Deadline: 25 March 1999**

Contact: Prof. P. K. Mukherjee  
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COMING SOON

FORTH COMING ISSUES WILL COVER

Well considered view points on Role of technologies and Professional Societies like IEEE in the next millennium from Indian experts

Please Await announcement in the next issue: **ACE - 99** to be held at Trivandrum

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ELITEX '99

Exhibition-cum-Seminar (on Technologies developed in Electronics)  
 2 & 3, February 1999

Organised by  
 IEEE

Aerospace & Electronic Systems, Communications and  
 Lasers & Electro-Optics Society Chapter, India

During the above most successful exposition, the Honble Shri. Jagmohan, Minister of Communications released the following New Software . Products:

1. Multimap - Developed by C-DAC, Pune
2. Leap Office Ver.2.0 - Developed by C-DAC,Pune
3. Communication Co - Developed by Processor Chip C-DAC, Pune
4. CD on Bilingual Hindi Dictionary - Developed by ER&DC, Noida (A unique software of English to Hindi Dictionary having one lakh Words)

Participants in Bangalore also participated via Video Conferencing link through INSAT designed and developed by STPI. It is first of its kind, which was also inaugurated by the Honble Minister. The Technology Sessions on Information Technology, Strategic Electronics, Communications,

Micro-Electronics & Photonics, Technology Development Programmes of DoE, Material & Components and Panel Discussions on Indigenous Technology Development for Improving the Global Competitiveness of the Electronics & IT Sector in India were well attended.

The exhibition has shown tremendous potential and created the impact both within and outside in terms of awareness and availability of indigenous technologies/products.

During the concluding session Secretary, DoE has kindly agreed for holding the event annually and the creation of New Business Development Division for the speedy known how technology transfer, its commercialisation and dissemination of the information to public at large. We were also able to transfer the following technologies to the industry for its full commercial exploitation:

1. Micro Remote Terminal Unit by ERDC Trivandrum to M/s Micromax System Pvt.Ltd.
2. Versatile Color Sensor by ERDC Triv. to M/s ECIL Hyderabad.
3. Integrated Receiver Decoder System by CEERI, Pilani to M/s Nanak Antenna, New Delhi.

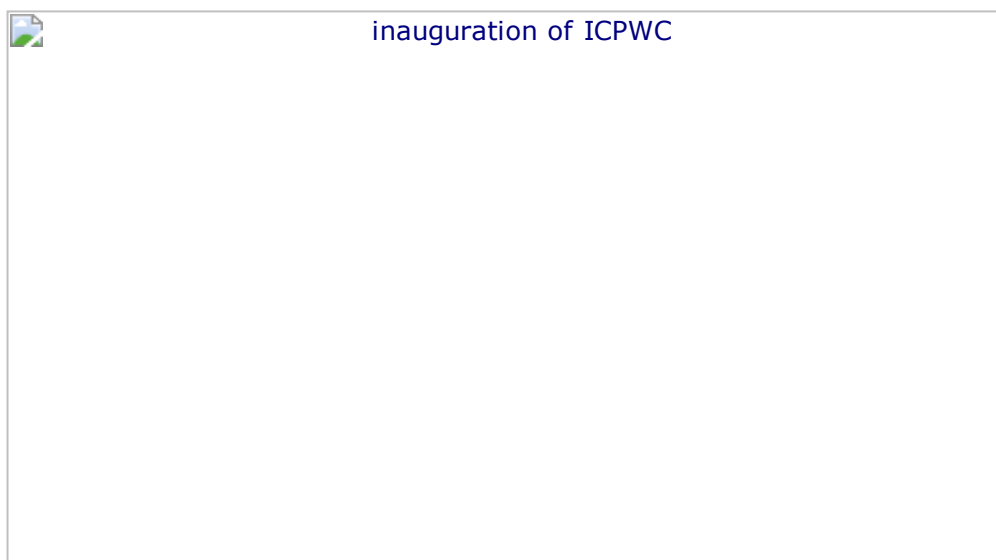
The following technology transfer has been discussed in details and it is expected that these transfer will take place shortly:

- o Integrated Multichannel Electronic Choke. Indicator for Tractor driven seed drills, Rice Polish Measurements Systems, Soil Nutrients Estimation System, and other Agriculture Products developed by JNKVV, Jabalpur to M/s Automation Interntation, FABCO India, Reliance Electronics and Sh. Harjeet Singh, Delhi.
- o Superior Piezo Ceramic Acoustic Transducer for under water applications developed by IIT Delhi to CEL Sahibabad with Navy as user.
- o DDG (Engg.), ICARI has placed prototype order for 25 nos. for Agriculture products on developing institute JNKVV, Jabalpur itself.

CHAIR, IEEE-AES-COM-LEO  
Society Chapter INDIA.  
Dr.Ram Gopal Gupta  
E.Mail:[guptarq@xm.doe.ernet.in](mailto:guptarq@xm.doe.ernet.in)

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#### REPORT ON INTERNATIONAL CONFERENCE: ICPWC



*At the inaugural session of ICPWC*

IEEE Aerospace & Electronic Systems, Communications and Lasers & Electro-Optics, Society Chapter, India successfully held the 1999 IEEE International Conference on Personal Wireless Communications at Jaipur during February 17-19, 1999. The response was overwhelming. 187 participants from 21 countries attended.

There were 24 technical sessions with 101 papers, 4 exclusive tutorials and the Plenary and Panel discussion sessions during the Conference. The Plenary session was Chaired by Shri P.S. Saran, Member, Telecom Commission, Govt. of India. Nearly 90% of the technical papers were presented. This is an incredible achievement. To encourage participation from the semi-urban and rural areas of India, 38 complimentary registrations were granted to the colleges and universities around Jaipur. This it is expected will also ensure that the technical activities of IEEE and the Chapter are known in the area around Jaipur. 15 complimentary copies of the proceedings and tutorials notes were given to volunteer students from the local engineering colleges who helped organize and ensure the smooth running of the Conference. 200 copies of the proceedings are being shipped to IEEE HQ for wider circulation throughout the world.

Chair  
IEEE-AES-COM-LEO Society Chapter  
Dr. Ram Gopal Gupta  
E-mail:[guptarg@xm.doe.ernet.in](mailto:guptarg@xm.doe.ernet.in)

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#### WISE AND OTHERWISE

Fostering growth is not easy, it needs competence, caring, objectivity, capacity to let go, and a whole list of superlative qualities in the bosses.

-Anonymous

It's no longer just the principle of the thing. It's the interest.

-Doug Larson

The shortest distance between two points depends on who is giving directions.

-Anonymous

Bad news travels fast. Good news takes the scenic route.

-Doug Larson

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#### BREAKTHROUGHS

##### **Solar, the Saviour?**

The Sun provides enough power in 44 minutes to satisfy the entire planets power needs for a year. How to tap it? Breakthroughs in the form of very novel innovations are already tested. A solar plant has started functioning in Crete which produces 35 kW of power, although the mirror assembly is large enough to produce 100 kW. A gas turbine engine is introduced into the receiver which tracks the focal point of the rays throughout the day. The system sucks in air, pulling it over a ceramic material that has been heated by the suns concentrated rays to 800 deg. C. This heated air is used by the gas turbine to produce electricity. This plant costs nearly Rs 68 lakhs. (Source: VATIS update on NCE, APCTT)

##### **Coconut Oil for Diesel engines**

A breakthrough discovery which enables the use of coconut oil in diesel and petrol engines is reported from Bolton Institute in UK. An engineering student by name Mr. Mikaele Drue, who

made this invention has extracted the oil from coconut flesh without producing much of toxic sulphur, unlike in the traditional copra drying process. (Source: News Digest)

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## TECHNOLOGY CORNER

### **Speech Intelligent Hearing**

Some would claim that hearing aid have an image problem. Too bulky for many users, they are also often useless in noisy environments. Such worries are now over - thanks to PRISMA, a fully digital, computer-based, hearing aid system from Siemens. Fitted with a microchip, the tiny device improves hearing by up to 80 percent and also boasts speech intelligence: it can distinguish speech from loud ambient noise. Moreover, with a chip measuring just 3x4 millimeters (0.12x0.16 inches), PRISMA is virtually invisible when worn.

### **Barge - Mounted Power Plants**

CMS Energy of the U S A and Engineering Power Systems (EPS) of Canada have formed a joint venture to develop, finance, construct, own and operate barge-mounted power plants throughout the world. The first project for the joint venture will be located in India. The contract is for a 212 MW barge mounted power project destined for Andhra Pradesh. In addition to generating electricity, the barge also contains a fresh-water production plant. Using reverse osmosis, this desalination system can produce up to one million gallons of drinkable water per day.

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## AN APPEAL

WE are members of IEEE and have formed a Robotics Club of India to create a high technology base in India. Robotics Club is a hobby club belonging to students, teachers, research scientists and engineers. We will like to hold a regular meeting of the members every six month. Our activity is fun and education at the same time. Laser sensors, opto-electronics, laser communication, CCD imaging, holographic vision, image recognition, color sensitive eye, precision servo and stepper motor control, laser encoders of speeds, displacement, level, vibration, sound and smell, artificial photo-stimulated memories and learning systems form some of the very interesting topics of the current science. We will also organize Robotics competitions every year and will award prizes for best entries. We will also participate in similar international competitions. Club will help any who is interested in building his/her own small or big Robot. Short Robotics training programs are also planned in all major cities of India such that young people will get exposed to the high technology at a very early stage of their life. We have an excellent Robotics Store where thousands of Robotics items are stored and made available for the members to purchase them. A new list of the items will also be made available to the members every year. We are bringing out a Robotics News Letter which will be mailed to the Robotics Club members every 3 months right now and on a later date it will be circulated every month.

We are looking for generous contribution from IEEE members and others who wish to contribute in any form to help us in running this Club. We also accept help in the development of high technology Robotics items in the areas of Mechatronics, Electronics, Sensors, Software and other related areas to Robotics.

We will have our own web site soon. For membership application form please write to Dr. Shyam Sunder Tiwari at the following address. Membership fee is Rs. 500 per person per year and Rs. 5000 for life membership. A national seminar on Robotics will be held at Gwalior in the year 2000 for which exact dates will be announced soon.

Shyam Sunder Tiwari, Ph. D.

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#### AN APPEAL FROM IAS AREA CHAIR

Dear members,

In my capacity as the IAS Area Chair for Region 10 (West), and as Chair of the Faraday Lecture (FL) Committee, I am trying to search and shortlist suitable eminent persons to give the 1999 Faraday Lecture at IEEE Hyderabad Section. Taking advantage of the lecturer, we want to request him to give tutorials and lectures at a few Chapters and Sections in India.

We have identified some names from the IEEE IAS and PES DLs list. Our preference is for those who can give application-oriented (tutorial type) information.

I request you to give your choice of names (with e mail addresses if known) and country of the experts especially from Neural Networks, Fuzzy logic and Power Electronics fields.

For the above purpose, I and the Faraday Lecture Committee would be thankful to receive your valuable inputs.

Hyderabad, 19 Feb. 1999  
C. Satish  
**e mail:** [c.satish@ieee.org](mailto:c.satish@ieee.org)

**Footnote from the Pagemaster:** Details of earlier Faraday Memorial Lectures can be found at [the homepage of IEEE Hyderabad Section.](#)

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#### EDITORIAL

#### Why Not?

I am getting messages which indicate that, lot of technical activities are being conducted at almost all the Sections in India. Yet, many office bearers do not consider them worthy of publication, for fear of being stamped as publicity conscious. These reports actually serve to act as models to be emulated, as also as an indication of the latest in technological avenues that are worth following. Thus it is a service to our fellow members and sister sections and chapters. So, why not report them?

Wish me better luck next time on my waiting for reports.

Trivandrum Prof. V K Damodaran  
01 Aug. 1998 Editor





**E-mail :** [vk\\_deo@usa.net](mailto:vk_deo@usa.net) [Click here to send an e mail to the Editor](#)

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### **Your feedback is important !**

- o *e mail: [algolog@hd1.vsnl.net.in](mailto:algolog@hd1.vsnl.net.in)*  
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**Thank you for your visit**

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