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**CHAIRMAN'S MESSAGE****Service to Students  
New Initiatives in India****Students Congress:**

7th July 2000 was a historic day for the IEEE Student Branches in India. The leaders of the Branches assembled at the First Students Congress for 3-day deliberations on issues of concern to them. (A report on the Students Congress prepared by Er.S.A Soundara Rajan, Chairman of Madras Section appears else where in this issue of the Bulletin). Since the participants felt that such an event is of great use to them, it is now for the best of our Branches to join with India Council to conduct such events in the future.

**India Council Web-Site:**

India Council's web-site is located at URL = [http://www.ewh.ieee.org/r10/india\\_council](http://www.ewh.ieee.org/r10/india_council). The site has all the old issues of the Bulletin of 1999 and 2000. Besides it contains useful information for IEEE members in India. There is also a well-known facility (called 'the majordomos' in the jargon of computer professionals), which the members can use to convey messages among themselves. I call upon all the members in India to visit the site. Let us all use the site effectively. If there are any suggestions for improvements, please convey them to the India Council's Web Master, Mr. Haresh Bhatt.

**A New Web-Site for Student Members:**

India Council is setting up a new web-site [ieevidyarthi.org](http://ieevidyarthi.org) as a part of the activities pertaining to the Student Congress-2000. The site will contain information about the Student Branches and about the institutions where the Branches are located. It will also contain the Resumes of the student members, who are in their final year. US Activities Board is the only other unit of IEEE which has a web-site containing the Resumes of its members. The multi-national companies of United States of America and many United Nations organizations take advantage of this site to locate good engineers for themselves.

There are not many MNCs, with their headquarters in India. Nor do we have the headquarters of many United Nations organizations here. However it is by now well-

known that the Indian education system, in spite of many shortcomings, is able to come up with brilliant and well-trained young engineers, who can hold their own as compared to the best from any other country. IEEE student members, I believe, constitute the best group out of all the final year students in India. It is because this membership provides undoubtedly the best vehicle for keeping one informed about the developments in their fields. I therefore feel that if the Student Branches in India cooperate in creating and maintaining the site as current, all the good companies in India will be able to take advantage of the site for getting the young engineers they may need.

Besides, the site will offer information about admission to the institutions where our Student Branches are located and links to the sites of the institutions. This will make the information easily available to all those who are seeking admission to the courses of their choice. You may visit the proto-type site which has been created and you may please offer suggestions so that the site may be organized well. .

Ahmedabad  
01 August, 2000.

**Dr. A. K. Aggarwal**

Chairman



**E-mail :** [aka19@hotmail.com](mailto:aka19@hotmail.com)

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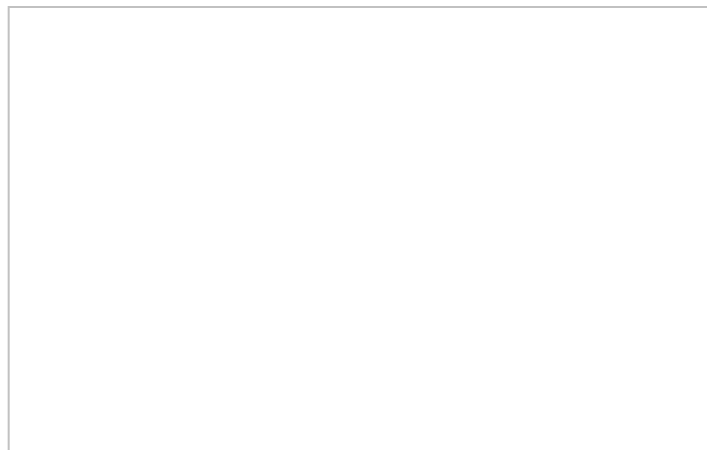
### **DISTINGUISHED SECTION AWARD FOR BOMBAY SECTION**

The Region 10 Award Committee Chairman Y. W. Liu wrote to R. Muralidharan, Chairman, Bombay Section of IEEE, announcing the first Award for distinguished sections instituted by IEEE, as follows:

"Congratulation to Bombay Section! The Award Committee chaired by me has endorsed that the winner of the newly set up 1998 Distinguish Section Award belongs to Bombay Section in recognition of the extreme well done job in the membership development in 1998. Bombay Section is the first Section to receive the Award.

A certificate would be presented to Bombay Section representative in the coming Lankawri Section Meeting. Another prize in the Award is that R10 will sponsor the travelling expense of one more delegate from Bombay Section with the primarily delegate, to attend the coming Lankawri R10 Meeting".

**Congratulations Mr. Muralidharan - Ed.**



[Click on image to see the image in full resolution](#)

***(At the inauguration of Students' Congress 2000. Seated from Left: Prof. R. Bhavani Sankar, Er. C. R. Sasi, Dr. R. Natarajan, Dr. M. Ananthkrishnan, Dr. A. K. Aggarwal, Er. S. A. Soundara Rajan and Thiru Jeppiar)***

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## IEEE IN GUJARAT : A RESUME

The IEEE Gujarat Section was started in 1990 by Professor A.K. Aggarwal and a few other active members. There were active members from the industry i.e. Shri Bharat L.Sheth of 'Inducto therm', Shri Amit Johri a computer consultant, Mr Ashwin bhai Trivedi, an eminent engineer from Vadodara, Prof A.R.Pandya from Nadiad and many other dedicated volunteers. At that time there were around 100 members. Since then the Section has grown to a strength of approximately 1100 members including 583 students. All students in the state pursuing a minimum 4 years programme in any IEEE designated areas and those of Colleges at Baroda, Vasad, Surat, Rajkot, Morbi, Ahmedabad, Gandhinagar are targeted for enrollment this year. A parallel drive for enrolling Senior Members in the ONGC, IPCL, Reliance Petrochemicals, Nirma Industries, Ahmedabad Electricity Company, Gujarat State Electricity Board, Mini Steel Processing Plants, the Department of Telecommunication Government of India, Indian Space Research Organization and others is to be launched. Efforts are being made to convince authorities at the State and Central levels about the investment value in reimbursing membership dues to their employees.

Cordial, supportive and mutually beneficial relations with National Professional Organizations are also being planned.

The Section organized in December 1998 a highly successful twin international Conference on Internet and in the application of subjects from Electrical, Electronics, and Computer Science and Engineering to the Oil Industry i.e. both upstream and downstream.

The processes of forming separate Student Branches at geographically separated areas was inaugurated by the then President of the IEEE, Dr. Kenneth Laker when he visited Ahmedabad from 23-24 Sep 1999. He also had meetings with Shri M. Ramabhadran, the Principal Secretary for Higher and Technical Education, Government of Gujarat, and Shri P.K. Laheri, Principal Secretary to the Hon. Chief Minister. He also met officers of the Indo-American Chamber of Commerce and Industry. Discussions were held on the accrediting of technical syllabi in the State by the IEEE, and accessibility to IEEE Software Standards to the IT Industry in the State. The members enjoyed in large

numbers the enlightened lectures given by the senior TAB officers of the IEEE. These lectures, as brought out in the Newsletter earlier, delighted audiences in other parts of the country as well.

Progress is being made in acquiring permanent office premises and the matter is being pursued with IEEE EXECOM. An International conference on 'Internet & Internet Computing' is being planned for May 2001.

**Mayank M. Pande**

Secretary/Treasurer, IEEE Gujarat Section



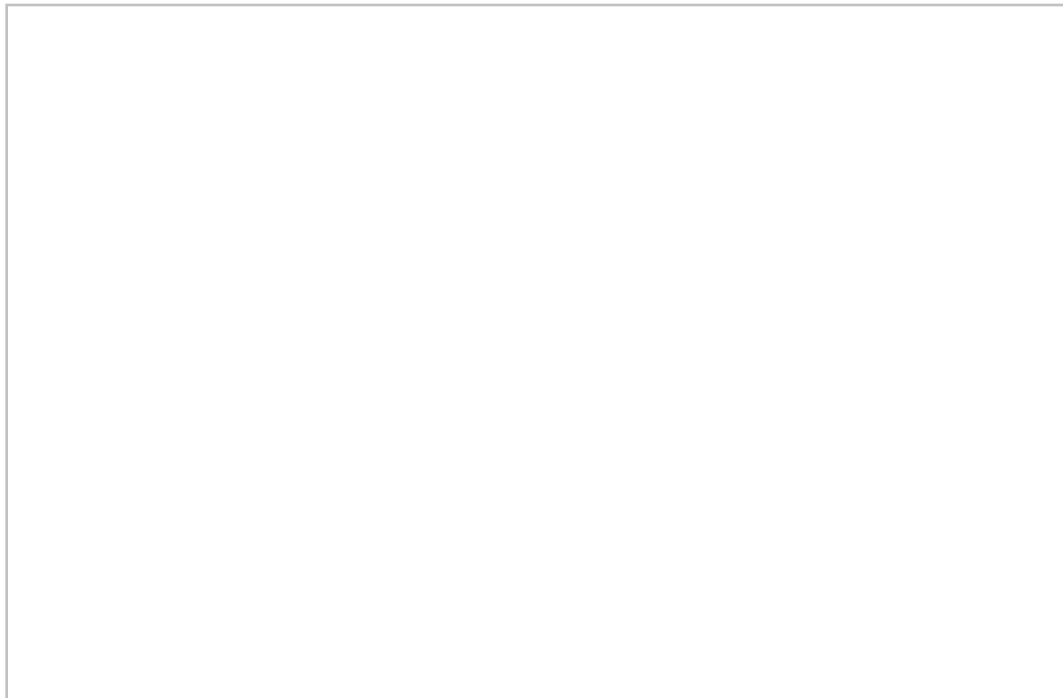
*(A Student Chapter programme at NIT, in which participating are: (seated from left) Chintan Trivedi, Vice Chair, Gujarat Section; A. R. Pandya, Chairman, Gujarat Section; H. V. Trivedi, Principal, NIT; Karshan Bhai Patel, Founder of Nirma Group of Industries; Hon'ble Shri. Suresh Mehta, Minister of Industries, Gujarat; Ambubhai Patel of NIT and M.D. Desai, Head, EC Department, NIT.)*

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**WISE WORDS**

Six most important words  
Five most important words  
Four most important words  
Three most important words  
Two most important words  
One most important word  
The least important word

**I admit I made a mistake**  
**You did a good job**  
**What is your opinion?**  
**If you please!**  
**Thank you**  
**We**  
**I**



Student power behind the success of the International Conference organised by the Gujarat Section

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## Software Challenges Ahead

### Annual Convention & Exhibition

*15-17 December 2000, Bombay, India*

#### Scope of the Conference

Innovative software technologies and products have dramatically impacted the global economy by radically changing the way businesses operate. The rapid growth of Internet, its role in the convergence of the press, radio, television and telephony, and the advent of E-commerce has enhanced the need for software tools and techniques that can meet the challenge of designing and developing reliable, scaleable, high-performance software.

ACE 2000 invites papers reporting work on any aspects of software challenges ahead including original research papers, case studies, experience reports with novel tools and techniques, tutorial and panel proposals, exhibits and demonstrations.

#### Submissions

An indicative, though not exhaustive list of broad areas for papers is given below.

- *Component-based Systems*
- *Embedded Systems Software*
- *Software for Secure E-commerce*
- *Safety-critical Real-time software*
- *Mobile code and Intelligent Agents*

*Hardware/Software Computer Design*

- *Distributed Co-operative information systems*
- *Indexing and Searching Techniques*
- *Data Mining*
- *Neural Networks*
- *Artificial Intelligence Systems*
- *Multimedia*
- *Computer Simulation*
- *Tools for Microelectronics Design*
- *E-CAD*
- *Wireless Communication*
- *Software for Power Engineering*
- *Services on Mobile*
- *WAP/Bluetooth/iNet*
- *WML/HTML*
- *Embedded Software for Applications*
- *Parallel and Distributed Processing*

Three copies of papers, not exceeding 12 pages, along with a one-page abstract should be sent to Prof. G. Sivakumar, Department of Computer Science, IIT Bombay, Powai, Mumbai 400 076, (e-mail: [siva@cse.iitb.ernet.in](mailto:siva@cse.iitb.ernet.in)) so as to reach on or before September 15, 2000. Papers should be preferably submitted online, as per the instructions contained on the conference web-site.

Authors will be notified of acceptance by October 15, 2000. Final papers will be due by October 31, 2000 and will be published in the conference proceedings.

<b>Conference Web Site</b>	<a href="http://www.ieee.org/bombay/ace2000">http://www.ieee.org/bombay/ace2000</a>
<b>Conference Venue</b>	The Centrum, World Trade Centre, Tower I, Cuffe Parade, Bombay 400 005
<b>General Chair</b>	Mr. Q Bakir
<b>Co-chairs</b>	Dr. A K Aggarwal, Mr. R. Muralidharan
<b>Advisory Committee</b>	Mr. F.C. Kohli, Mr. S. Ramadorai, Dr. N. Jain, Mr. Ashank Desai, Mr. A. Godbole, Mr. N. Nilekani, Prof. D. B. Phatak, Mr. Govinadrajana, Mr. Dewang Mehta
<b>Program Committee</b>	Mr. Raju Hira, Prof. G. Sivakumar, Mr. David D'lima, Prof. Damdhare, Dr. R. K. Mittal, Mr. Pankaj Jolate
<b>Organizing Committee</b>	Mr. Anthony Lobo, Mr. B. R. Prabhu, Mr. A. K. Banerjee, Dr. V. K. Madan

**ACE 2000** will attract a technically knowledgeable audience from various areas of Information Technology. This will be an excellent opportunity for Indian software companies to showcase their innovations in software, products and services.

**R. Muralidharan**

Chairman Bombay Section & Co-Chair Organising Committee

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**IEEE STUDENTS' CONGRESS 2000**

The IEEE Students' Congress 2000 was conducted with the theme : "I.T. and Education" at Chennai with sponsorship of all professional bodies, VSNL and self financing Colleges under the joint auspices of IEEE India Council and IEEE, Madras Section on 7th to 9th July 2000 at Image Auditorium. The Congress was inaugurated by Dr. R. Natarajan, Director, I.I.T. Chennai, with Dr. A. K. Aggarwal Chairman IEEE, India Council in the presidential chair, Dr. M. Aananthakrishnan delivering the keynote address on IT and Education, Smt R. Rajalakshmi, Director, STPI, Chennai releasing the proceedings, Sri. N. S. Ganesan, Chief Engineer, All India Radio & Doordarshan inaugurating the exhibition, Thiru Jeppiaar, Thiru M. V. Muthuramalingam and Er. N. Parameswaran Senior General Manger, VSNL offering their felicitations. Er. S. A. Soundara Rajan, Chairman, Madras Section welcomed the gathering. Prof. R. Bhavanishankar highlighted expatiately the technical programme content for three days, the salient features of the Congress and the participating Industries' profiles. Er. C. R. Sasi proposed the vote of thanks.

A number of topics as listed below were dealt with by many IEEE members over the three days. All the time the focus was on the theme IT and Education. Topics like SPAC, SPAVe, Yuforic, Gold programmes, Leadership Training, Communication Skills & Team Working and many issues relating to IEEE student chapters right from formation stage to effective working were discussed at length by many speakers, about 10 technical sessions with eminent professionals chairing each session and academic as well as professional IEEE members adorned the galaxy of events. The penultimate panel discussion by prominent IT professionals on IT and Education is a lovable event of the entire Congress with the valedictory address by Prof. R. M. Vasagam, Director, TANITECH and former Vice chancellor, Anna University. Dr. N. M. Parthasarathy, an IEEE Senior Member concluded the congress with all glamour and vigour. The effective interaction between the Students and Speakers in all the sessions was a noteworthy feature of the Congress.

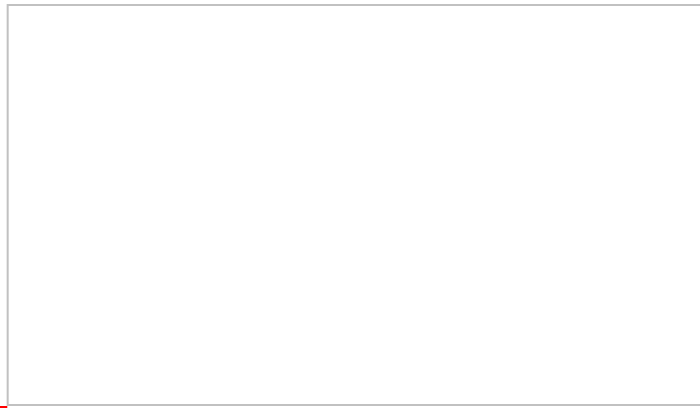
The findings of the Students' Congress are the following :

1. To set up an IEEE Web for all student chapters in India with all details.
2. To set up an IEEE Web for activities of various IEEE Sections.
3. To promote an effective IT based education in India and the key role to be played by IEEE in the venture by bridging the Industry & academia, is a marked finding of the Congress.

The IEEE India Council meeting with Dinner with the local Section, Cultural programmes and special dinner, a selective IT based exhibition are the other important events which added flavour and glamour to the Congress. About 50 Colleges right from Cape Comorin to Himalayas, and from East to West is a significant point to be noted. Another important thing to be noted is the full attendance right form Inauguration to Valedictory.

On the inauguration day, all the Engineering Colleges participated and the auditorium was packed to its full capacity of 1000 persons.

**S. A. Soundara Rajan**



Click on image to see the image in full resolution

***(A Section of the delegates to the students congress 2000 at the 'full packed' Image Auditorium )***

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## TECHNOLOGY CORNER

### **MW Wind Turbines for India**

Suzlon Energy Limited in India are in the process of installing 1 MW wind turbines in the country. The turbines will be operational very soon. Previously India used only lower capacity (like 250 kW) wind turbines for its production of wind power upto 1100 MW, of which 725 MW are in Tamil Nadu. Govt. of India Ministry of MNES has also established a R&D Centre for wind energy called C-WET near Chennai. India has an excellent environment for investment in wind power and has variously estimated its wind energy potential to be of 20,000 MW to 44,000 MW. The introduction of larger capacity turbines will no doubt hasten the wind energy utilization in India.

**(Source : Renewable Energy World M-J'00)**

### **Biomass for Rural Development - a new Chinese strategy**

After making dazzling global achievements in the area of small hydro power production which total over 24,000 MW in nearly 60,000 small power stations, China has come forward with a 'Rural village strategy of co-ordinated Biomass development'. This is in addition to China's installation of more than 6.5 million biogas plants since the 1960s.

Modern bioenergy will be of great relevance for developing countries. In this context, the identification of a flexible and sustainable integrated complex for the supply of energy, food and animal feed could provide a significant contribution. It is estimated that biomass residues in China have the potential to generate 450 TWh of electricity each year.

A possible biomass integrated complex for a population of approximately 3000 people could be composed by several sub-systems, such as:

- a plantation of 250-300 ha.
- a pre-treatment unit
- a cogeneration unit (500 kWel + 2000 kWth)
- a biomethanol micro distillery (1300 tonne per yr)
- food products (cereals, milk, meat, sugar)
- a village energy network connection (power, cooking fuel,, bioethanol for agricultural



machinery)

**[abstracted from a study report by David Chiaramonti and Giuliano Grassi in Renewable Energy World, May-June 2000. Website:<http://www.jxj.com>]**

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## TECON - 2000

### Kerala Section Organizes a Mega event

A seminar on "Technology Convergence for Global Communication" (TECON 2000) organised by IEEE Kerala Section was inaugurated by Smt. Aruna Sundararaj, Secretary IT Department, Govt. of Kerala, on 29th July at 9 a.m. at Technopark, Trivandrum

The seminar was organised in connection with the silver jubilee year celebrations of IEEE Kerala Section. TECON 2000 was intended to shed light on the cutting edge technologies in the communication arena, paving way for a global village.

Inaugurating the seminar Mrs Aruna Sundararaj emphasised that the topic is very relevant to the time and perhaps is the most extensively debated one. She narrated the recent trends in IT and how it influenced the society as a whole. "We have seen the import of IT in every day life and now we witness the synergy between Computing and Telecommunication" she added. The technologists, engineers, managers and policy makers have to realize the developments and to specifically look out as to how to adopt their developments in India, so that technology should be affordable to and accessible by common man. She concluded her speech by presenting a comparative data on tele-density and cable penetration in India and China from 1960 onwards and remarked that the forum like the seminar organised by IEEE will definitely pave way to adapt the technology to the benefit of the common man in India.

More than 160 delegates attended, including engineers, managers, professionals, and students from various organisations.

Mr. R. Narayanan, Vice Chairman Kerala Section gave an overview of the seminar and Mr. Nandakumar, M.D., SunTec delivered a keynote address on m-Commerce. Mr. Nandakumar gave a clear picture on m-Commerce including its definition, advantages, and various applications in a simple and lucid style. Representing IE(I) Mr. N.T. Nair; IETE Trivandrum Local Centre, Mr. Anandakumar Menon and CSI Mr. Madhusudanan Nair gave felicitation.

Mr. K.G. Satheesh Kumar, Chairman IEEE Kerala Section gave welcome speech and Mr. Philip John, Chairman, Organising Committee and M.D., Ushustec extended vote of thanks.

Following the inaugural function, in the technical session the following presentations were made :

- |    |           |                          |                                   |
|----|-----------|--------------------------|-----------------------------------|
| 1. | 3G Mobile | by Ajit Kumar Chaturvedi | IIT, Kanpur                       |
| 2. | MPLS      | by Pramoda Nallur        | Acatel Internet working Pvt, Ltd. |
| 3. | Bluetooth | by Srividhya Srinivasan  | Impulse soft Pvt. Ltd.            |
| 4. | WCDMA     | by Ajit Kumar Chaturvedi | IIT Kanpur                        |

- |    |         |                          |                                 |
|----|---------|--------------------------|---------------------------------|
| 5. | GSM/GPR | by Yogish K. Lavanis     | Motorola India Electronics Ltd. |
| 6. | WAP     | by Devaraj Krishnamurthy | NeST                            |
| 7. | VoIP    | by Cecil Mathews         | Nokia IP Telephony              |
| 8. | DSL     | by Biju Sukumaran        | Infineon                        |

The Seminar ended with the concluding session, in which the Organizing Committee Chairman Mr. Philip John and Organising Committee Secretary Mr. Simon Zachariah were honoured by presenting them mementos by the Section Chairman, Mr. Satheesh Kumar. Mr. Unnikrishnan A.K, Secretary IEEE Kerala Section, proposed vote of thanks.

**A. K. Unnikrishnan,**  
Secretary Kerala Section

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## TECH NEWS

### Laser to clear clots in stroke patients

A whole new approach for treatment of strokes is emerging. The report of Wayne Clarke of the Oregon Stroke Centre in Portland to the American Stroke Association reveals a new experiment in progress. Doctors want to test this procedure in atleast 12 patients, but have so far attempted only in 5 cases. Strokes happen when blood clots in the body break off and travel to the head, where they get stuck in a blood vessel and cut off oxygen to a portion of the brain. The only available approach is to use a blood thinning drug, which take upto 2 hours to dissolve a clot.

The team used a dye laser emitting at 577 nm, delivering three 1 micro second pulses per second at between 30 and 40 mJ/pulse. In the most successful of the procedures, the laser destroyed the clot in 49 seconds with a total of 147 pulses. Because the pulses are so short, tissue heating is not a problem at all.

*Abridged from article by Neil Savage in Laser Focus World April '00.  
([www.optoelectronics-world.com](http://www.optoelectronics-world.com))*

### Dr. Anju D. Unnithan

Inside a blood vessel, the beam dissolves a clot and restores normal blood flow.

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## BOOK REVIEW

### Electric Traction

By J. Upadhyay and S. N. Mahendra *Allied Publishers 186 pages Rs 330.*

This book is probably the latest well written book on the subject of Electric Traction, covering the up-to-date developments like application of computers in ET, LEM propulsion etc. The majority of available books on traction concentrates more on mechanics, motors and their control. But there is need to have information on protection, signalling, condition monitoring and trends in traction for the future utilities.

Refreshingly, the authors have covered these topics and the production is good. Besides its utility as a text, this book will be useful for engineers working in electric traction field.

**- Reviewed by Prof. V. K. Damodaran**



***(TECON 2000 being inaugurated at Trivandrum. From left : Philip John, Chair organising ; R. Narayanan, Vice Chair Kerala; Mrs. Aruna Sundararaj Secretary, IT, Govt. of Kerala; Nandakumar, Key note speaker; and K.G. Satheesh Kumar, Kerala section chair)***

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## EDITORIAL

### **Youth Power in E & E**

Yes, in this opening year of the third millennium, if anything is crystal clear, it is the undeniable role of youth power in applying Electrical and Electronic technology gains for sustainable development. Developed countries have been mobilising youth power from developing countries like India and the pressure and the potential is clearly felt by our budding engineers. This is also the time when the state and union governments are focussing on taking advantage of the frontier technologies like information technology and biotechnology. Science and many technologies are now converging and a brave new world is emerging. As our premier Prime Minister Jawaharlal Nehru said, we should 'leapfrog' and take control of the emerging scene. To enable our young engineers, especially the student members of IEEE, realise the power within and to unleash the latent energies, India Council of IEEE has definite plans, which our Chairman has outlined in his message this month. It is indeed a small step by the Council, but for the student community it will definitely be a leap forward.

Trivandrum  
02 Aug. 2000

**V. K. Damodaran**  
Editor  
E-mail:  
[vkd@ieee.org](mailto:vkd@ieee.org)



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## TEN WORST QUESTIONS

- \* *Will you promise not to get angry if I ask you something ?*
- \* *Do you have statistics to back up that statement ?*
- \* *You don't hoNestly expect me to believe that, do you ?*
- \* *haven't you any sense of humour ?*
- \* *You don't remember me, do you ?*
- \* *Have I kept you waiting ?*
- \* *Now, what is the matter ?*
- \* *You asleep ?*
- \* *So what ?*
- \* *When are you going to grow up ?*

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### Your feedback is important!

- *e mail: [haresh@ipdpg.gov.in](mailto:haresh@ipdpg.gov.in)*
- *[Click here to send your feedback, comments, remarks and suggestions.](#)*

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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.

**Thank you for visiting this webpage.**

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**Administrivia:**

**This page last modified on: September 5, 2000**

**Send your comments about this page, to: [haresh@ipdpg.gov.in](mailto:haresh@ipdpg.gov.in)**

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