



सह वीर्य करवावहै

Vol 5, No. 6

Nov-Dec 2003

Greetings and Best Wishes for a Happy and Prosperous 2004

## FROM PRESIDENT'S DESK



The year 2003, no doubt was a year of great significance in the history of IETE. Institution completed its 50 years in the service of the nation. During this year we pursued our aim more vigorously through Golden Jubilee celebrations at all the IETE centres. Achievements of our Institution over the years give a sense of great satisfaction and pride to all of us. The growth and the high reputation gained, points towards the thoughtfully selected aim by the founding fathers of the Institution way back in 1953. We are the beneficiary of the selfless work put in by all those who served this great Institution before us. I pay my regards to them.

All organizations commence with the noble aim and objectives and only those reach to greater heights who continue to pursue their aim. Our Institution is committed to the societal service and that too in the field, which is witnessing new technologies, products and innovations every day. Continuous updation and maintenance of quality is an essential and necessary requirement in our profession specially when new institutions are coming up all over and offering engineering & IT education. I am happy that all Committees and Boards of the institution are working towards it.

The positive feedback from the finale of Golden Jubilee celebrations of the Institution gives us all the more reason to firm up our resolution for the new year. We will not only continue to work hard but harder than before, as that is the only way to reach out and take IETE to new heights. Our task of building knowledge society though most important in the context of economic growth, is also very demanding. Our work entails latest and rapidly changing technologies. We have kept up the pace so far but need to do a lot more. We are creating infrastructure to help people acquire quality education near their places. IETE has added 5 local centres during 2003 and 4 more at Meerut, Dharwad, Ranchi and Raipur are planned in early 2004. Functioning of these centres enables people to take on the engineering work in modern electronics industry and also help in their career advancement. The Board of Research is looking for suitable candidates for fellowship in emerging wireless technologies and microwave radar fields. We would deliberate on the topics of national interest and give our inputs to the policy makers and planners to help them in decision making for the prosperity of the nation.

We are prepared to take on the challenges that would be thrown up during the year 2004. We have knowledgeable, experienced, energetic, enthusiastic and selfless workers in our fraternity. We would work together to the advantage of our institution and the nation. Let us resolve to work with verve, vigour and application of knowledge to improve further, the quality of service our institution is providing. सह वीर्य करवावहै।

I wish you all a very Happy & Prosperous New Year.

*K. K. Aggarwal*  
(K K AGGARWAL)



## NEWS FROM HEADQUARTERS

## Conferment of Honorary Fellowship on Shri F C Kohli

## CITATION

**Shri F C Kohli** graduated in Electrical Engineering from Queen's University, Canada and took Post Graduate degree from Massachusetts Institute of Technology, USA. After working with the Canadian General Electric Companies and later for the Ebasco International Corporation, New York returned to India in 1951 and took up an assignment with the Tata Electric Companies. He became Director-in-Charge, Tata Consultancy Services in 1974 and Deputy Chairman in 1994.

Shri Kohli has rendered yeomen service of exceptionally high order to the discipline of Electronics, Telecommunications and IT. He provided valuable directions to the Boards of large number of organizations and companies which include Tata Sons Ltd, Tata Infotech Ltd, Software Development Consultancy India Pvt Ltd, to name a few.

Shri Kohli is a Fellow of the Institute of Electrical and Electronics Engineers, USA; Institute of Electrical Engineers (UK); Indian National Academy of Engineering, Institute of Management Consultants Association of India and the Institution of Electronics and Telecommunication Engineers. He is Honorary Fellow of the Singapore Computer Society of India and a Distinguished Fellow of South East Asian Regional Computer Confederation (SEARCC).

Shri Kohli has made significant contributions in the field of power system management, automation of power systems and computer-aided design as well as for the growth and development of software industry in the country. Contribution of Shri Kohli is mainly responsible for the phenomenal growth of the Tata Consultancy Services culminating in a major break through for India in the area of software exports. Electronics Man of the Year 1992, Shri Kohli indeed can be called the father of the IT Industry in India.

Shri Kohli was conferred the award of Padma Bhushan by the President of India on the occasion of the Republic Day on 26 January 2002 for his outstanding contribution in the field of Information Technology.

For his scientific vision and invaluable contribution to the progress of Science and Technology, the IETE confers on him the Honorary Fellowship of the Institution.



Shri F C Kohli, receiving IETE Honorary Fellowship from Prof K K Aggarwal, President IETE at New Delhi on Dec 6, 2003





**Maj Gen K B Jhaldiyal, AVSM** has retired from the post of IETE Secretary General on December 2, 2003 after serving the Institution for 7 years.



**Maj Gen C M Logani, VSM** has joined the Institution as **Secretary General** on 01 Dec 2003 after retiring from the Corps of EME as Additional Director General, EME (Engineering Support Management), Army HQs. An alumnus of National Defence Academy, he did his B Tech

from the Military College of Electronics and Mech Engg (MCEME), Secunderabad and was awarded the DGEME Gold Medal for standing first in the Course. Apart from this, he has done a number of professional courses in India and abroad including Post Graduation in Telecommunication Engineering from MCEME, Secunderabad. In this course too he was awarded "Distinguished and Instructor" Grading and Commandant's Silver Medal being first in the course. Thereafter he taught electronics to officers in the MCEME. He has also done an elite management course-Long Defence Management Course from the College of Defence Management, Secunderabad. During his long career in the Army he held various important appointments.

As a recognition of his distinguished services, Major General Logani was awarded VISHISHT SEVA MEDAL by the President of India on the occasion of Republic Day on 26 Jan 2003.

#### NEWS FROM LOCAL CENTRES

##### Bangalore

The important events held at IETE Bangalore centre were :-

Shri G R Joshi delivered technical lectures on Embedded Systems by giving real world examples, interfacing hardware & software and Introduction to DSP on October 12, 2003.

A two-day seminar on "Spatial IT for Electric Power Systems" co-sponsored by IEE (UK), IETE Bangalore centre and IEEE Bangalore Chapter was organized on Oct 30<sup>th</sup> & 31<sup>st</sup> 2003 at Hotel Capitol, Bangalore. Dr Stan Jones, OBE, F R Eng, Trustee of IEE UK

inaugurated the seminar and delivered the keynote address. Dr Chennakeshava Advisor, CPRI, Bangalore was the Chief Guest. Welcome address was delivered by Shri M R Seetharaman, Chairman IEE (UK). Dr M H Kori, Past Chairman IETE Bangalore Centre and Technical Director Lucent Technologies delivered the vote of thanks.

- The 4<sup>th</sup> International Radar Symposium India- (IRSI-2003) was held during Dec 02-05, 2003 at Hotel Grand Ashok, High Grounds, Bangalore. This prestigious international event was organized by IETE Bangalore centre and co-sponsored by IEE, IEEE, SEE, BEL, DRDO, HAL and ISRO.



Inaugurating the IRSI-2003 Symposium. Seen (L to R) Wg Cdr CPK Menon, VSM, Prof K K Aggarwal, President IETE and Dr V S Arunachalam, Former Advisor to Minister of Defence

The IRSI-2003 was inaugurated by Dr V S Arunachalam, Former Advisor to Minister of Defence. The inaugural function was presided over by Prof K K Aggarwal, President IETE. He released the souvenir of IRSI-2003. In his address Prof K K Aggarwal brought out the important role played by the IRSI in deliberating important aspects of Radar System Development that are currently going on world over. He said that IETE has initiated Research Fellowship in Microwave & Radar Technology at GGS, Indra Prastha University with a monthly grant of Rs 15,000/- and a contingency grant of Rs 12,000/- per annum. He said that this fellowship has been funded out of the proceeds of previous International Radar Symposium India. Wg Cdr CPK Menon, Chairman of the symposium in his welcome address brought out the aim & scope of IRSI-2003. Shri Y Gopala Rao, CMD, BEL in his Patron's address deliberated on role played by BEL in



development and manufacture of radar systems in India. He gave the details of indigenously developed Radar Systems manufactured by BEL. Shri K U Limaye, Director LRDE, DRDO and Symposium Co-Chairman deliberated on the contributions of LRDE/ DRDO labs in the indigenous development of radar systems. He gave the genesis of the IRSI Award.

Pre symposium tutorials were arranged on Dec 2, 2003 in two parallel sessions. Tutorial -I on **"Multitarget Tracking and Multisensor Data Fusion"** was conducted by Prof Yaakov Bar-Shalom, Distinguished Lecturer IEEE-AESS, Connecticut University, USA and Dr Subhash Challa, Melbourne University, Australia. Tutorial-II on **"RF Mems for Radar Applications"** was conducted by Dr Philippe Lacomme, Thales, France and Prof S K Koul, CARE, IIT, Delhi.

Prof K K Aggarwal, President, IETE presented the **IETE IRSI (83) award** to **Shri L S Radhakrishnan, Scientist 'G' of LRDE** for his outstanding achievement of successful development of high-technology 3-D Surveillance radar systems.

#### Delhi

- A tutorial session on **"Digital Compression Techniques"** was conducted by Sh R K Singh, Member Executive Committee, Delhi centre for the student members on October 12, 2003.
- **Marconi Electronics Lab** to hold REB tests at IETE Delhi centre has been upgraded with the addition of a number of new test & measuring instruments and trainers kits.

#### Gwalior

IETE Gwalior sub-centre organized a **"State Level Technical Awareness Contest"** at Madhav Institute of Technology & Science, Gwalior on October 19, 2003. Dr P S Bisen, Director of the Institute distributed prizes and certificates to the winners.

#### Hyderabad

- A lecture on **"ASIC Design Process"** by Shri Manohar V Bommena, Design Engg, Manager, INTEL Corporation was organized on October 21, 2003.

- A 5 week short-term course on **"Cisco Certified Network Associate & Cisco Certified Network Professional"** commenced on November 3, 2003.

#### Nagpur

- A lecture by AVM U A Deshpande on **"Electronics in Space Exploration"** was arranged on Sept 13, 2003. AVM Deshpande briefly described various missions and the equipments used for Space exploration particularly for Jupiter and Mars. He deliberated on Pioneer 10 & Pioneer 11 Spacecrafts, Hubble Space Telescope, Mars Pathfinder, Deep Space Network (DSN), Landmark Systems etc.
- Another lecture by Prof P K Rangole was held on Oct 11, 2003 on **"Microelectronics Mind Control & Teleportation"**. He emphasized on the significance of mind reading, control and techniques used and that are under development. The lectures were attended by IETE members and students.

#### Palakkad

A seminar on **"Emerging Trends in Mobile Telecommunication & Wireless"** was conducted on Nov 11, 2003 at Hotel Fort Palace. The seminar was presided over by Shri C K Haridas, Chairman Palakkad Sub centre and inaugurated by Shri K C Rastogi, Gen Manager BSNL, Palakkad. Smt E Rajamma, Municipal Chairperson felicitated organizers of the seminar. Shri K Francis Jacob, Deputy Gen Manager, BSNL, Trichur presented a paper on **"Emerging trends in Mobile Communication"**. Shri V Regunandan, Deputy Gen Manager BSNL presented a paper on **"Wireless Scenario"**. Vote of thanks was proposed by Shri A S Rahulan, Hony Secretary.

#### Pune

The centre organized the following events:-

- **Prof SVC Aiyar Memorial Award** for the year 2003 for **Excellence in Telecom Education** was presented to **Prof Subhasis Chaudhuri**, Department of Electrical Engineering, IIT Mumbai on October 18, 2003 at Global Hall, IETE Pune Centre. Prof Ram Takawale, Former Vice Chancellor, University of Pune, Director Maharashtra Knowledge Corporation (MKCL) presided over the function.

Prof Subhasis Chaudhuri delivered a talk on **"Visual Data Analysis; New Ideas and Newer Challenges"**. It centered around the applications of image processing and computer vision. He said that with the progress in computer and sensor technology, video data can be



collected at a faster rate and processed in a near real time which has opened up new avenues for research and its subsequent applications. Informing about stereo analysis, Prof Chaudhuri said that by processing these images, three-dimensional structure of the scene could be reconstructed. Technology of visual data analysis has wider applications such as freedom to design an autonomous robot. Enhance the problem definition where you process a sequence of images, stitch them one after another and create visual kantha (mosaic) of the world around you. Thus one can imagine virtually placing himself at any point and can have the box office view of any event. While watching an event, if one thinks that it reminds him of some past incident, he may feel the need for a gadget that retrieves similar events for him. Such a search engine is available and this operation is called content- based video retrieval.

Dr Chaudhuri said that to perfect these arts, work is going on. There are so many loose ends and there are more problems than what have been solved till date. There is a need to have more accurate algorithms, faster computers, algorithmic robustness and the capacity to handle data occlusion.

**“Dr Homi Bhabha: A Role Model”** a lecture was delivered by **Dr S R Gowariker**, eminent Nuclear Physicist, Director Tolani Institute of Technology & Management, Pune at Firodia Hall, Pune.

Dr Gowariker systematically described and focussed on the achievements of Dr Bhabha right from his school days starting at St Cathedral & John Conan High School, Elphinston College, Royal Institute of Science in Bombay and later at Cambridge.

Dr Gowariker brought out the versatility of Dr Bhabha. As a Physicist Bhabha worked in the field of “Cosmic Radiation”. After his return to India in 1940, he worked as a reader in the IISc, Bangalore and rose to the level of Professor in less than 5 years. He initiated Nuclear Research Programme in India in 1944 and established the famous Tata Institute of Fundamental Research (TIFR) in June 1945. Dr Bhabha then planned the entire Atomic Energy Programme of India, which spanned nearly 20 years from the TIFR. TIFR, is thus called the Mother Institute for Indian Atomic Energy Programme. In this way Dr Bhabha designed

and developed right from scratch, the whole nuclear cycle-making India the 5<sup>th</sup> advanced nation in the world in planning the production of nuclear power. This was a totally new field of technology that had to be mastered under the most adverse conditions. Dr Bhabha made effective use of the Indian Education system to develop young and talented Nuclear Scientists to achieve self-sufficiency in the field of Nuclear Science. It was Dr Bhabha who got the Atomic Energy Act passed and Atomic Energy Commission constituted. He is rightly called the Father of Nuclear Science in India.

Dr Bhabha set up Dept of Atomic Energy in 1954. And today DAE umbrella covers a whole range of institutions and expertise. The five decades of DAE have seen trend setting efforts in developing technologies in a difficult area despite the restrictive technology control regimes, and in applying them for development, prosperity and security of India. Today the nation can be justifiably proud of its self-reliant capability in translating R&D in nuclear power technologies to world class excellence. The credit for all these achievements goes to Homi Bhabha.

Along with the design and construction of Indian nuclear reactor, Dr Bhabha also started indigenous development of electronic instruments required for use in it. Through Bhabha Committee Report, he laid down the guidelines for research, development and manufacture of electronics and telecommunications in India.

Dr Bhabha died on January 24, 1966 in a tragic air crash near Mont Blanc. Indian Atomic Energy Programme continues to follow the master plan designed by him, even today, 37 years after his death.

Atomic Energy Department and all its constituent units observe October 30, the day Dr Homi Bhabha was born in 1909, as their “Founder’s Day” and pledge to rededicate themselves to the cause of nation building in the field of Nuclear Sciences.

#### ISF ACTIVITIES

- The IETE Student Forum at **Madhav Institute of Technology & Science, Gwalior** organized a state level Paper presentation contest “**Intellotronics**” on August 10, 2003. 52 papers were submitted for the contest out of which 35 papers were selected



for presentation. The prize distribution was done by Er C B Middha, Executive Director, IRCOTECH, Gwalior.

- **IETE Student Forum –Sreenidhi Institute of Science and Technology (ISF-SNIST)** was inaugurated on October 9, 2003 by Shri V Premsagar Rao, Chairman Hyderabad Centre and Shri K Babu Rao, Council Member, IETE presided over the function.
- The IETE Student Forum of **AC Patil College of Engineering at Koper Khairane, Navi Mumbai** arranged for one-day industrial visit on Oct 17, 2003 to D-Link (India) Ltd at Goa. The students learnt the latest manufacturing techniques and various aspects that are followed in a manufacturing unit.
- **The Department of Electronics & Communications Engineering at School of Engineering, Cochin University of Science** organized an All Kerala Technical Symposium “**SANCHAR ODYSSEY**” during October 17-18, 2003 under the aegis of IETE Student's Forum and IEEE Student Chapter. The symposium had four events comprising of electronics project exhibition, lectures, quiz and paper presentations. The aim of the event was to open a platform for interaction amongst the engineering colleges in Kerala. The technical lectures were on “Microwave Communication” by Dr K G Nair, STIC, CUSAT, “Optical Communication” by Dr VPN Nampoodiri, International School of Photonics, CUSAT, “Underwater Communication” by Shri Sivakumar N, Scientist ‘E’, NPOL, and on “Satellite & Launch Vehicle” by Shri Rajeev U P, Scientist SE, Launch & Guidance, VSSC, Trivandrum.
- Shri M N Shukla, Chairman IETE Pune Centre inaugurated a IETE Student Forum at **Government Polytechnic, Pune**. Shri P P Marathe, Director

Computer Home, Pune was the Chief Guest and he spoke on “Entrepreneurship – A Success Story”. Prof R V Yenkar, Head of Electronics & Telecommunication Department, delivered a talk on “Importance of Student Centered Activities”. The programme was presided over by Prof P B Chikate, Vice Principal.

#### AWARDS

**Prof T S Rathore** has been selected for the **ISTE Maharashtra National Award-2003** for his outstanding research work. The award consists of a cash prize of Rs 6000, a medal and a certificate. It will be presented during the inaugural function of 33<sup>rd</sup> Annual Convention of ISTE at Kumaraguru College of Technology, Coimbatore Tamil Nadu.

**Shri C P Dwivedi** (SG-857387) student member of IETE Mankapur Centre, was awarded **SHRAM SHRI Award** for highest productivity & excellent quality work by Govt. of India. He was felicitated at IETE Mankapur Centre on Sept 8, 2003 by Shri P P Singhal, General Manager, ITI Mankapur.

#### OBITUARY

With profound grief we inform the sad and untimely demise of **Lt Col NK Tandon (F-14731L)**, Executive Committee Member, Delhi Centre, on November 7, 2003, due to a fatal heart attack. He is survived by his wife and two young children. With his demise IETE has lost an active member whose contribution towards the development of IETE Delhi centre especially its Library, will always be remembered. Members of IETE fraternity deeply mourn his untimely demise and convey their condolence to the bereaved family members and pray to God to grant the departed soul peace in heaven.

#### IETE FORTHCOMING EVENTS

The following is the planned schedule of events to be organized by IETE during 2004.

Date	Topic	Event	Centre
Mid Jan 2004	Emerging Trends in Television Broadcasting	Seminar	Noida
16-17 Jan '04	Telecom Development Strategy for National Growth	Seminar	Mumbai
23-24 Jan '04	Role of Information Technology for Productivity and Safety Improvement in Coal Sector	Seminar	Nagpur



Jan 2004	Computer Networking	Seminar	Palakkad
14 Feb '04	Relevance of ISO 9001:2000 Certification, for getting Competitive Edge in different sectors	Seminar	Nagpur
Feb 2004	Smart Card applications	Seminar	Palakkad
Feb 2004	IT Enabled Services, Trends in Telecommunication	Seminar	Nashik
Feb 2004	Exploitation of KU Band	IETE Apex Forum	
28 Feb'04	8 <sup>th</sup> Sir C V Raman Memorial Lecture		New Delhi
Mar 2004	Indigenisation in the field of Electronics and Telecommunications	Conference	Pilani
12-13 Mar '04	Bio-Informatics and its Prospects in India	Seminar	Kolkata
Mid Mar 2004	Seminar on Modern Technologies in Mobile Communication/Telecommunication	Seminar	Noida
April' 04	e-Governance	Seminar	Hyderabad
Apr 2004	Cyber Security & Digital Signature SOC (System on Chip)	Seminar	Palakkad
Apr 04	Trends in Broadband Communications	Zonal Seminar (South)	Bangalore
	—	Zonal Seminar (North)	Delhi
	Electronics in the Automotive Industry	Zonal Seminar (East)	Bhubaneswar
		Zonal Seminar (West)	Pune
8-9 Apr 04	Bio-Informatics; Applications & Emerging Technologies	35 <sup>th</sup> - MTS	Nagpur
17 May 04	36 <sup>th</sup> -Word Telecomm Day		IETE HQ & All centres
May 2004	Suitable topic of IT	Seminar	Noida
2 <sup>nd</sup> week of June 2004	Emerging Trends on Electronics & Telecommn. — Its Impact on daily life.	Seminar	Rajkot
July 2004	DTH & Related Technologies	IETE Apex Forum	
July/Aug 2004	(i) Recent Trends in Cellular Communications (ii) Recent developments in Microelectronics	Seminars	Warangal
Aug 2004	3G & Related Technologies for Mobile Communications	IETE Apex Forum	
24,25 & 26 Sept 2004	Broadband Wireless Technologies	47 <sup>th</sup> - ATC	Ahmedabad
Sept/Oct 2004	Recent Development in Microelectronics	National Conference	Warangal
09 Oct 2004	Network Management National Conference on Microelectronics	Seminar	Nagpur Coimbatore
30 Nov '04	10 <sup>th</sup> Sir J C Bose Memorial Lecture		New Delhi



## CALENDER OF EVENTS

Subject	Date	Venue	Contact
• National Seminar on "Telecom Development- Strategy for National Growth"	16-17 Jan 2004	Mumbai	S C Khasgiwal, Hony. Secretary IETE Mumbai Centre C/o BSNL Complex, Telecom Complex, Juhu Danda, Santacruz West, Mumbai-400 054 Tel : 2661 0124 Fax : 2660 9598 E-mail : icetumbai@vsnl.net Website : www.icetumbai.org
• BES EXPO 2004- International Conference & Exhibition on Terrestrial Satellite Broadcasting	4-6 Feb 2004	New Delhi	Shri N M Mehra Hony Secretary, BES (I) 52 D, Pocket C, Siddhartha Extension, New Delhi- 110 014 Telefax : 91 11 6903534 E-mail : bes@nda.vsnl.net.in Website : www.besindia.com
• World Congress on Natural Disaster Mitigation	19-21 Feb 2004	New Delhi	Shri K N Agrawal, Organizing Secretary General, World Congress on Natural Disaster Mitigation The Institution of Engineers (India), Engineers Bhawan, Bahadurshah Zafar Marg, New Delhi- 110 002 Tel : 91 11 2337 0168, 2337 0548 Fax : 91 11 2337 8851 E-mail : tmcwec@del3.vsnl.net.in
• International Conference on Digital Libraries (ICDL 2004) – Knowledge Creation, Preservation, Access Management	24-27 Feb 2004	New Delhi	ICDL 2004 Secretariat TERI Darbari Seth Block, Habitat Place Lodhi Road, New Delhi 110 003 Fax : +91 11 2468 2133 Tel : +91 11 24651629, 24682100, 24682111 E-mail : ICDL200@teri.res.in Web : www.teriin.org/events/icdl
• ELITEX' 2004, Electronics & Information Technology Exposition	26-27 April 2004	New Delhi	Dr Ram Gopal Gupta Ministry of Communications & Information Technology, Electronics Niketan, 6 CGO Complex, New Delhi- 110003 Tel : 91 11 24363095, 24301231 Fax : 91 11 24365404 E-mail : r.gupta@icee.org : guptarg@mit.gov.in

Note: The Institution of Electronics and Telecommunication Engineers assumes no responsibility for the statements and opinions expressed by individual author and speakers.

Printed and Published by Maj Gen C M Logani, VSM (Retd) for the Institution of Electronics and Telecommunication Engineers  
2 Institutional Area, Lodi Road, New Delhi-110 003 (India) at the Manish Comprint, F-117, Sudershan Park, New Delhi-110 0  
Managing Editor : Air Cmde (Retd) P D Badoni, VSM

(Cost of Production : Rs 2.00)