

Chairman's Message



Dear Members

I appeal and remind all the members to renew the IEEE membership if you have not done.

This year IEEE has introduced a new Developing Nations e-Membership category with full year dues as \$55.00.

The IEEE All India Student Congress (AISC) for the year 2010 was organized successfully with IEEE-CRCE, on September 24,25 and 26 2010 at Fr. Conceicao Rodrigues College of Engineering. INDICON 2010 organised by Kolkata Section, jointly with Jadavpur University and India Council is scheduled during 17-19 Dec 2010. The theme, of the conference is "GREEN ENERGY, COMPUTING AND COMMUNICATION". These two major technical events were organized under India Council.

The M V Chauhan All India Student Paper Contest 2010 was conducted with good response from students this year. However, the quality of the papers is still highly unsatisfactory. Many papers are plagiarized from Internet and resubmission their work already published earlier. There were few papers where coauthors are either faculty or from industry. This makes them ineligible for student paper contest. The results are published in this edition of the newsletter. I wish to thank all the people associated with the evaluation of the entries and assisting me in conduct of the contest.

The good news is that Ashish Phophalia (Dhirubhai Ambani Institute of Information and Communication Technology), and Aditya R. Kaskhedikar and Paritosh D. Peshwe (G.H. Raisoni College of Engineering) won 3rd prize in R10 Student paper PG and UG contest respectively.

The distinctions won by many of our members, sections, chapters etc, reported in this newsletter from time to time are commendable.

IEEE Presidents' Change the World Competition. **Mr. Gurpreet Singh Walia**, Thapar University, Patiala, Punjab-**Design & Fabrication of 3 Blade Vertical Axis Wind Turbine** and **Mr. Shantanu Pal**, University of Calcutta, West Bengal-**Digital agriculture and precision farming, modernized methods to improve an ancient lifestyle for the betterment of mankind and the land he inhabits**, and **Karthikeyan Ramasamy** (lead); and **Japaprakash**, BANNARIAMMAN INSTITUTE OF TECHNOLOGY, AFFILIATED TO ANNA UNIVERSITY, Chennai-**HIGH SPEED BIO-GAS ENGINE GENERATOR SET FOR RURALAREAS**.

R10 Student branch website contest 2010 - First Place: (US\$ 500) Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT), Second Place:(US\$ 350) ARUNAI Engineering College, and Third Place:(US\$ 200) Thadomal Shahani Engineering College

University of Hyderabad **2010 Supporting Friend of IEEE Member and Geographic Activities Award** for outstanding and continued support of the IEEE Hyderabad Section by providing significant contributions to Section meetings, encouraging faculty to serve as IEEE volunteers, and hosting both TENCON 2008 and the Workshop on Cloud Computing 2009.

R10 Distinguished Large and Small Section Awards – 2009 - Kerala Section - Large Section

IEEE Communications Society (COMSOC) Calcutta Chapter which has been selected as a **winner** for this year's **Communications Society Chapter Achievement Award (CAA)** by the COMSOC HQ. **IEEE IAS Chapter, Calcutta Section - 2010 IAS Outstanding Small Chapter for 2009 performance**

Global WIE Committee Chair for the year 2011, Mr. Deepak Mathur - 2010 MGA Achievement Award, Mr. Gowtham Prasad – R10 Gold Award, Arjun R Pillai (College of Engineering Chengannur, Kerala Section) - Larry K. Wilson award 2010 Winner, Mr. H R Mohan,

Chair, IEEE Computer Society, Chennai Section Chapter, 2009 – Certificate of Appreciation.

R10 Outstanding Volunteer Award, 2010 Satish Chaparala
(Bangalore Section) and **Anil K. Roy** (Gujarat Section)

K. Ramakrishna

On behalf of IEEE India Council and all the IEEE Members of India, I congratulate **Prof. Subhasis Chaudhuri**, IIT Mumbai, **Prof. Dwarakadas P Kothari**, VIT, Vellore, and **Dr. Biswadip (Bobby) Mitra**, Texas Instruments, Bangalore on being elected as **Fellow of IEEE 2011**.

IEEE Sections congress will be held in August 19-20, 2011 at San Francisco, CA, USA exactly one year from now. As members, it is an opportunity for all of us to convey to the IEEE what are our priorities, vision and goals. Our members should convey to the section chairs what is the pulse of students, academicians, professionals and industry in the country who in turn should carry it to Section Congress as our recommendations. I request all the members and volunteers to give sufficient thought to our priorities and requirements and prepare a IEEE India document which can be conveyed to Section Congress and IEEE HQ.

At the June IEEE board Meeting Series, the **IEEE Board of Directors** approved that to support IEEE's strategy, **an office is scheduled to open in Bangalore, India. The Office is now open at Prestige Meridian, S-306, Block 2, Level 3 Mahatma Gandhi Road, Bangalore**

The IEEE Member and Geographic Activities (MGA) Board approved **the elevation of the IEEE Pune Subsection to IEEE Pune Section** in Region 10 and **formation of Malabar Subsection of the Kerala Section**.

I wish to thank Dr. Hitesh Mehta, the editor and publisher of the IEEE India Info, who justified my faith in him as a dedicated volunteer. He took the challenge of producing the newsletter electronically, when the newsletter team from IEEE Kerala Section, which served the India Council for more than a decade, desired a break.

I wish to put on record my sincere gratitude to a host of IEEE volunteers who whole-heartedly supported the India Council activities – India Council Executive Committee, Mr. N T Nair, Past IC Chair, Prof. Lawrence Jenkins, IISc., Senior IEEE Volunteer, Mr. R Muralidharan, former Chair IC and another IEEE veteran, Dr. Hitesh Mehta, Newsletter Editor, Prof. V K Damodaran, Past Newsletter Editor, Prof. G Sai Narayanan, NDLP Coordinator, Mr. Raju Heera, Mr. Arup Dasgupta, Dr. V R Singh, Prof. Mini Thomas, Prof. Ramalatha Marimuthu, Mr. Amarnath Raja. Prof. M B Srinivas, and Dr. Ram Gopal Gupta. I would like to express my gratitude and thanks to Chairs Sections, Sub-sections and Society Chapters, NDLP coordinators and many others for their unstinting support and assistance. Finally, I thank Prof. Y J Park, R10 Director, and Prof. Janina Mazierska, Past R10 Director for inspiring the Indian IEEE community with their charisma and support and guiding me.

The AGM was held at Dr. K P Basu Memorial Auditorium, Jadavpur University Campus on 18th December 2010 at 5:30 PM. The item of discussion on proposed bye laws could not be taken up as there was no consensus in the executive committee on it. The bye laws were corrected and the concerns raised by the sections during its circulation from first week of August 2010 were addressed. The section chairs present in EXECOM meeting preceding AGM still had some objections and it would not proper to proceed further in the absence of other section representation.

I wish you all a Very Happy Christmas and A Very Happy, Healthy and Prosperous New Year-2011.

Kasi Rajgopal
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International Conference
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VENUE: SCIENCE CITY AUDITORIUM (KOLKATA, INDIA)

January 5th & 6th, 2011

For further information you may kindly visit the website

<http://iem.edu.in/conference/>



That's IT in November 2010

Prof. S. Sadagopan

In the general developments,

- **President Obama** had a very successful visit to India during November 5-8, 2010; the hall mark of the visit was his speech to the joint session of both the Houses (Lower & Upper) in the Parliament Hall, where he talked of US support to India getting a permanent seat in the UN Security Council
- In the **Asian Games** held in Guangzhou, China during November 14 - 27, 2010, India did well with the highest number of medals (64 including 14 Gold Medals)
- India's economic growth in the quarter ending September 2010 is a healthy 8.9%
- Bihar Chief Minister Nitish Kumar gets a record victory (206 of the 243 seats) and assumes charge as Chief Minister on November 24, 2010 for the second time on a positive image of "good governance"
- MNP (Mobile Number Portability) kicks in from November 25, 2010 and set to get rolled out all over India by March 2011
- GoP returns to power in both the houses in USA causing trouble for President Obama and his Democratic Party
- Scandals rock the country in November 2010; in the State of Karnataka, Industries Minister Katta Naidu resigns, in Maharashtra Chief Minister Ashok Chavan resigns, in Delhi Telecom Minister A Raja and Sports Minister Suresh Kalmadi resign; even public sector banks and LIC Housing were scam tainted; globally, the WikiLeaks makes available nearly 2,50,000 classified documents causing embarrassment to many governments, notably US government
- Andhra Chief Minister K Rosaiah resigns causing political stability in the Congress stronghold
- Ireland gets \$ 113 billion bailout package

In the products arena,

- **Apple** decides to sell Beatles on its music store iTunes on Nov 16, 2010; sets record sales of 2 million songs within 7 days!
- **Tablets** launch continue unabated! **Dell** launches **Dell Duo** on November 18, 2010 globally and Mobile handsets (XCD models) in India on November 23, 2010; **RIM** announces **Playbook** on November 10, 2010; **Acer** launches three Tablet PC models (Android & Windows powered models) in New York on November 23, 2010; in India, **TVC Skysop** set to launch low-cost (Rs 7,000) tablet; **OlivePad** goes on sale
- E Book Readers see lots of traction; **Amazon** launches Kindle 3 at \$ 135; **Sharp** launches **Galapagos** (to ship on Dec 5, 2010)
- E-Mail sees lots of action; **Facebook** announces its Messenger service on November 15, 2010; **AOL** revamps its Mail service on November 14, 2010
- HP debuts its "Made in India; Made for India" DreamScreen "all in one" PC at Rs 19,999 in November 2010 in India first and later in other markets
- **Tata DoCoMo** launches **3G Services** from Diwali (November 5, 2010)
- A special **John's Phone** was launched in Dutch market on November 3, 2010, that is "just a phone" – epitome of simplicity!

In the market-place,

- **Dell** buys Pennsylvania-based cloud integration company **Boomi** on November 3, 2010
- **EMC** buys **Isilon** for \$ 2.25 billion on November 16, 2010
- CIL gained 40% on Day 1 of listing (November 5, 2010)
- **Sensex** was at 20,894 on the last day of **Samvat 2066** (November 5, 2010) and rose 111 points to reach on 21,095 on Day 1 of **Samvat 2067** (November 6, 2010) (BSE <http://www.bseindia.com/histdata/hindices.asp>)

The Indian IT Companies continued to do well

- **Mphasis** with Rs 5,037 crores revenues for the year Nov 2009 to Oct 2010 (being the accounting year for HP, the current owner of Mphasis) joins the Billion Dollar club!

- **Airtel** goes through a high decibel image makeover with a new logo
- **Zensar** buys US-based **Akibia** (infrastructure and security specialist) for \$ 66 million on November 28, 2010
- **Patni** gets \$ 20 million contract from UK's **2e2**

MNC Companies in India continue to grow their India operations

- **Boeing** R & D to grow in India
- **Airbus** R & D to increase headcount in India from 180 to 300 in the next 3 years
- **Google** R & D to double India headcount by adding 300 more in the year 2010
- **Genpact** to increase India headcount to 6,000 (from current 3,000) by 2012
- **Standard Chartered** to hire 1,800 in India in 2010-11
- **GM** ships 100,000 cars from India plant on November 27, 2010 (in Calendar year 2010) setting a new record
- **CapGemini** acquires Chennai based **Thesys** (with head count of 300) on November 25, 2010

In telecom

- **MNP** (Mobile Number Portability) becomes real in India from November 25, 2010 (starts from Haryana)
- **Internet Mobile Payment Service (IMPS)** becomes a reality from November 22, 2010, thanks to National Payment Corporation of India; IMPS provides immediate money transfer between two subscribers' accounts (both the subscribers must be registered with this service through any one of the five participating banks) through mobile phone
- **Tata DoCoMo** keeps its promise of 3G launch in India by starting services from November 5, 2010 on Deepavali
- 2G License scam and Telecom Minister Raja kept hogging the headlines for most part of November 2010
- Airtel logo change was visible in every street corner!

In the Education & Research front

- More than 100,000 (of the more than one million) candidates opt for **online AIEEE** Entrance Exam (for admission to engineering colleges across the country) scheduled on April 24, 2011

In the people front

- Visitors to India in November 2010 include **US President Obama** (Nov 3-6, 2010) and many CEOs of US companies that include **Yahoo** CEO Carol Bartz and **Intuit** CEO Brad Smith
- **Ms Nikki Haley** (born to Indian immigrants from Punjab) is the newly elected South Carolina Governor in USA
- **Prithviraj Chauhan** and **Kiran Reddy** are the new Maharashtra and Andhra Chief Ministers (from November 6 and 26) respectively

Some interesting numbers

- **Shanghai Expo** gets 73 million visitors during May 1 to November 1, 2010
- India's Forex reserves on November 26, 2010 stood at \$ 294 billion (**Reserve Bank of India**)
- Sensex (Bombay Stock Exchange index) rose to 19,996 by November end (**Yahoo Finance**)

Medal tally in Asian Games, China (Nov 14 – 26, 2010) for the Top 10 countries - China 416 (199), South Korea 232 (76), Japan 216 (48), Iran 59 (20), Kazakhstan 79 (18), India 64 (14), Chinese Taipei 67 (13), Uzbekistan 56 (11), Thailand 52 (11), Malaysia 40 (9) (Figures in brackets represent Gold Medals)

Dear Members

This is to inform you all that following 3 distinguished persons have been elected as IEEE Fellows 2011.

Our heartiest congratulations to Prof. Subhasis, Prof. D P Kothari and Dr. Biswadip (Bobby) Mitra.

1. Subhasis Chaudhuri

Indian Institute of Technology Bombay Mumbai, India for contributions to graduate-level education in electrical engineering

2. Dwarakadas Pralhaddas Kothari

Vellore Institute of Technology Vellore, India for contributions in electrical engineering education

3. Biswadip (Bobby) Mitra

Texas Instruments (India) Pvt. Ltd.

Bangalore, India for leadership in the semiconductor industry and very-large-scale integrated circuit design

What a Million Engineers Collectively can do to Drive Engineering Excellence in India

A teacher's dream for engineers

P.G.Poonacha (poonacha.pg@gmail.com)

Poonacha received Ph. D. in Electrical Engineering from IIT Kanpur in 1987. He was a faculty member in EE Department at IIT Bombay between 1986 and 1996. He is currently with Epigon Media Technologies Pvt Ltd. He is also a Consulting Professor at IIIT Bangalore



Problem Statement

We don't need a survey or too much analysis to conclude that India ranks very low among nations which enjoy and benefit from exploration, research, design and development of technology for the future. Look at anything we want – airplanes, ships, guns, cars, buses, trucks, mobile phones, set top boxes, entertainment, processes, management theories – technology comes from outside. We rarely have our own designs and ideas which are world class. Many countries continuously find new ways to encourage, fund and support innovation for a better future on a continuous basis. Here is a question and a possible approach. Can we do something collectively towards driving engineering excellence in our country? First let us see if there is any such need.

Need for a Better Living

Leave out a few and all the rest will agree that each one of them wish to live in a nation which is rich, independent and powerful. One simple way (the most obvious way chosen by many) to do this is to put in just enough hard work and study well to go and live in a powerful and rich nation. However this approach has its own limitations. I think the best way to enjoy life with freedom, power and happiness is to make our nation where we are a primary citizen by birth the best place to live on Earth. This is not always an easy task. It requires right people acting as prime movers of change at the right times. Families, villages and states which do not have such people will either get ruled by others or degenerate and perish or wait for able leaders to be born. By hard work and imagination capable leaders try to achieve economic freedom for all around them and create independent and powerful families or states. They also create an environment to nurture and train more such individuals.

Power of a Nation

In the past independence and power of a state depended to a great extent on the ruler or king and his army. Today a nation's independence and power can be measured easily by the amount of money it earns by creating and selling world class products in all domains for its market and to outside markets. More money spent on buying products and technology from other nations means less independence. Today power of a nation can be measured by the number of nations which depend on it for its products. Real power and stability of a nation depends ideally on its ability to develop and sell products in the world market on a sustained basis.

One trivial way to be independent is not to buy products from outside even if it is essential. This is not a good option for all of us would love to buy the best products which we need. Moreover, there is no competition from outside to develop better products and services. This could lead to suboptimal levels of innovation and creativity guided by internal competition only. A better way for a nation to be independent and powerful is to develop world class products for its own consumption as well as for selling it to others. This must be done in all aspects of economic activity. This will help us compete with the best and continuously innovate on new products and services in all spheres of life

Business Scenario in India Today

In India today business community focus mainly on maximizing returns on investment by using technology from outside and sell finished or assembled products. Profit margins are reasonable in such businesses and enough money could be made easily due to our market size. Similarly we are also recognized as good IT based service providers in the world. Even though profit margins are limited we can make enough profits through numbers and difference in currency rates. This is a good way to pull us out of poverty.

Service model is good to earn enough money on year on year or quarter on quarter basis. But in order to create real wealth, stability and freedom we need to invest on research and development and create world class engineering designs which have great economic potential in the future on a continuous basis. Our market is huge and this market need is met today by buying costly products and technology from outside. Buying engineering know-how or technology is too expensive. Even if we buy what we get is not the latest and

the best one. We don't have core research and technology developing industry in India today. It is not an interesting business option today due to heavy and longtime investment it requires, risk involved in developing world class technology from scratch and fear of failure due to active competition.

Need for a Better Future

However, in the long term to be really economically independent and powerful we need to invest heavily in research and development of world class technology and products for the future. How can we improve our engineering capability and benefit from it in a big way and help our future generations to see better days? Are there ways other than waiting for government to do it or some miracle to happen? As of now we are seriously constrained by our economic conditions which prevent us from investing on such future requirements. Due to severe economic constraints, even if the government starts such initiatives it is very difficult to deliver well on them due to lack of funds. Allocated funds by the government for such purpose will be small as the total amount of money available when divided by the number of requests leads to small amount of money per project with which it will be impossible to compete with rest of the world.

Missing Link: Why VC funds are not enough?

Today in the country we have reasonably good infrastructure and good management institutes to define, measure, analyze and rank businesses in various ways. We have enough venture capital funds to support promising business ideas and bright teams who can convert and market their business ideas well with in a short span of time. What is missing is the right core support infrastructure to enable and empower research and development on future technology. Bright people interested in doing such work, need sustained and attractive financial support for long durations to develop good understanding and achieve path breaking results on new domains. If we cannot support bright people well they will definitely migrate to places where they get better support. VCs will not be able to support such long duration efforts as they have a definite mandate to multiply money by many times as early as possible. As mentioned in the end of above paragraph government alone will not be able fill this gap well due to several constraints. Just like we are not able to give enough support to farmers to give strong agricultural backbone to India, we have very limited resources with the government to provide good support to develop a strong innovation backbone for India. Our educational infrastructure also faces similar problems and cannot attract good number of bright minds to settle down in India to set up world-class labs due to lack of good enough incentives to manage a good life style.

A Proposal

My thought and a humble request to the engineering community from India is the following. In order to drive engineering excellence shall we cooperate and create a proper support infrastructure in which bright and risk taking minds can focus their attention to research and design of future technology for the benefit of all? The support structure should encourage and empower capable bright engineers to work and create powerful technologies and product companies for the future. We are yet to have big companies which do research and design products for the future. Would it be possible for us to collectively contribute and fund a few product companies to do active research with support from academic institutions to change India's engineering image in the world market? The engineering know how created by this activity can help India and the world in more ways than we can think in the years to come. What I am going to propose is a least risk venture for our engineering community. This I think can be the first step and provide right inputs for better approaches in the future.

My proposal is to contribute small amounts of money to create a fund and support a few product companies from India? The money we contribute will be back with us after 10 years along with company ownership through shares and dividends. Interest generated from our money will be used for funding product companies from India for the world market. This I think can be the first step of our approach on how we can collectively give back a small gift to India with minimum investment. I am confident that this experiment and its later variations will make significant impact on India's economy in the years to come and improve the engineering image of India significantly. I am very confident that we can find youngsters who will be interested in working in such organizations and help create companies which will be known in the world market for its products.

A Mechanism

We create a fund say "XYZ Fund" or any better name. Each one of us contribute X amount or multiples of it to the fund with the following understanding. This money will stay with the trust for 10 years. Interest earned from this fund only will be invested in the companies to be chosen through a good selection process. This fund will be run by professionals who care only for performance. At the end of 10 years investors will get back their money. During 10 years there may be returns in the form of dividends in case a company is able to make money from its products. An agreement to cover all this can be signed between the fund and the individual. Each contributor will be a share holder of the fund and the fund will be the share holder of all companies in which it invests. Most importantly invested money will be back with the investor after 10 years if nothing else happens.

With a strong advisory board with a driven management team and proper processes to manage the fund it will help in many ways.

A Class Room Example

Let us say 1500 engineers contribute \$5000 each. Our "XYZ Fund" will get interest on 7.5M USD. Even with 5% interest we will get 375K USD per year. Let us start a product company and run it for 1 year! Assume that there are 10 bright engineers at an average salary of 24K USD. Facility operation cost will be 24K USD. Registration etc. will be around 5K USD. Computers and other equipment etc. will be max 50K USD. Product companies don't need major investment till a product is ready for the world market!

Total Cost to company per year can be kept low without diluting living standards till the product starts selling in the market. Employees of the company will get enough sweat equity shares so that when all succeed they make enough and more money and name.

Note: In case these calculations look too simplistic please use right inputs and right numbers (This is how a teacher escapes).

Worst Case Scenario

In case we fail to develop any interesting solution or we are unable to increase business value we still have our money intact in the bank. We can walk out saying that it was a bad experiment and try some other experiment! Probability of this event is very small if we manage the show well for at least 10 years!! Then it will continue to grow and expand. We will not be required to run it. Don't believe me. This is possible!

Are there any takers? If there are better approaches than the one outlined above I will simply go for it for the dream is to see more investment into future research, exploration and technology development in India and in other developing nations. This dream is strongly driven by the fact that many little drops of water can create a mighty ocean by coming together! This approach can be tried in other domains also.

M.V. Chauhan Student Paper Contest 2010

MVC 2010 UG Paper contest

1st Place (Rs. 6000 + Certificate)

Apoorv Hombali (IEEE No. 90525786), Vaibhav Gorde, Abhishek Deshpande

Department of Electronics Engineering, Vishwakarma Institute of Technology, Pune Maharashtra, 411037

Title: Monocular Depth Perception using Image Processing and Reinforcement Learning

2nd Place (Rs. 4000 + Certificate)

Rajasekhar Anguluri- Student Member IEEE No. 90753876

Electrical and Electronics Engineering, National Institute of Technology-Warangal, Andhra Pradesh

Title: A Hybrid GA-ABC Based Tuning of Fractional order (FOPI) Speed Controller for PMSM Drive

3rd Place (Rs. 3000 + Certificate)

Chintan Kaur (IEEE No. 90573202)

E&EC Department, PEC University of Technology, Chandigarh, India

Mahima Arrawatia (IEEE No. 90914198)

Department of Electrical Engineering, Indian Institute of Technology, Powai, Mumbai, India

Title : Over the Sea Transmission of GPS data using RF Transceivers for Fishermen Boats

MVC 2010 PG Paper Contest

1st Place (Rs. 6000 + Certificate)

Haricharan Aragonda , Student Member, IEEE No. 90912229

Department of Electrical Engineering, Indian Institute of Science, Bangalore 560012

Title : Quadrature Approximations in R2

2nd Place (Rs. 4000 + Certificate)

Sayantana Dhar (IEEE No. 90484499)

Electronics and TeleCommunication Engineering Department, Jadavpur University, Kolkata, INDIA

Title: A Hybrid Fractal Dielectric Resonator Antenna with CPW feed for IEEE 802.11 a/b applications

3rd Place (Rs. 3000 + Certificate)

Malay Bhattacharyya

Machine Intelligence Unit, Indian Statistical Institute, 203 B. T. Road, Kolkata - 700108, India

Title: Modeling the Co-expression Differentiability of Oncogenes

STUDENT LEADERSHIP CONGRESS 2010

The Student Leadership Congress (SLC) is an annual IEEE Bangalore section event aimed at instilling leadership qualities amongst its student members. Interaction amongst the various student branches in addition to talks and workshops by leaders from academia and industry are the highlights of the Congress. Members are expected to benefit in various ways ranging from effectively managing their own student branches to honing their personal leadership skills.

The IEEE Student chapter at National Institute of Technology Karnataka, Surathkal hosted this year's edition of the Student Leadership Congress (SLC 2010) during 13th-14th November 2010. The main aim of NITK Student Leadership Congress was to promote thought and actualizing leadership among young technical undergraduates.

Day 1 began with a workshop by I-Point Consultancy Services, a leading firm in providing professional leadership training. It was conducted by Mr. Pradeep Shenoy, the founder director of the organization and a reputed leadership trainer. The purpose of the congress was to inculcate the values of self leadership. After hours of an intensive discussion and demonstration between workshop groups, the participants were really charged. "Motivating teams and building a common vision is indeed a challenge.... a leader must be morally strong and a visionary because value based leadership is the only true form of leadership", said an enthusiastic IEEE member from MIT.

The congress was inaugurated the following day. The keynote speaker and chief guest was Mr. Narasimha Bhat, founder of Manipal Dot Net. He highlighted the importance and the urgent need of leaders in the field of technology, innovation and entrepreneurship, and IEEE's role in it.

Flagship event of the congress was the panel discussion. The topic of the panel discussion was "What should we do to make the leap from FOLLOWER to LEADER of technology, innovation & entrepreneurship?". The panellists represented academic and industrial leaders from various disciplines of technology. The elite panel comprised of Prof. Sandeep Sancheti, Director of NITK,

Dr. Pamela Kumar, head of India Systems and Technology Engineering Lab at IBM, Mr. Devadas Kamath, former Managing Director of TATA Refractories and Mr. Sameer Segal, an NITK alumnus and Asia-Pacific's most promising entrepreneur (Founder and CEO of Artoo).

The panel discussion served as a platform for the technological leaders sharing their insight into the challenge of converting India into a technological prowess. "The spirit of innovation and the ability to follow your dreams, truly defines a leader. ... If we want India to be a leader in technology and engineering, then this is the perfect time to make it happen". The audience was completely inspired by the words of wisdom from these luminaries.

After a scrumptious networking lunch between the participants, the workshop conducted by the Infosys Leadership Institute truly served to be a fitting end to the action packed weekend. Mr. Sreekanth Shenoy conducted the workshop and was amazed by the passion and intensity with which the participants were engaged in the leadership, goal building and team work tasks assigned to them. "The challenge of leadership in technology is not only about motivating people but getting the best out of people to produce 100% results".

The workshop definitely achieved its objective of inspiring the energetic engineering youth about the essence of leadership in different aspects of work and life. "Now I am really excited and confident in forming teams, whether it is for doing technical projects or leading our WIE program back in college... NITK IEEE Student Leadership Congress was a rewarding experience." was the final remark made by a young woman engineering student from Bangalore.

--NITK IEEE