



## Message from Chairman



Dear Members,

Greetings from IEEE INDIA COUNCIL. Following last month, we still continue with more awards and recognitions.

From the statistics for Dec 2011, Delhi Section and Bangalore Section have the highest no. of member recruitment in 2011. R10 will give these Sections USD500 each as an incentive

IEEE started concerted efforts towards its visibility program and Mr. Daman Dev Sood from Delhi Section was interviewed 4 times in each of the last two years – that gave visibility to IEEE in general and to the Delhi Section specifically. Mr. Daman Dev Sood is now an IEEE Ambassador - one of 40 across globe, and only one from India.

Heartiest Congratulations to IEEE DELHI , IEEE BANGALORE SECTIONS and To Mr. Daman Dev Sood.

**The INDICON 2011 has been a great Success and I had given details about the same in my last Message. INDICON 2012 will be coordinated by IEEE Kerala Section at Rajagiri School of Engineering & Technology ,Kochi. INDICON 2012 will focus to bring out innovations in Social and Humanitarian Engineering from all disciplines of Science and Engineering. Further details can be obtained from Mr. Satish Babu <sb@inapp.com> , Chair IEEE Kerala Section.**

**Thanks for your kind support and** Looking forward for your inputs.

Dr. Ram Gopal Gupta

# IT in 2011

Prof. S. Sadagopan



## General

- ♦ Union Budget 2011 ends the 17-year old tax holiday (Sec 10 A & 10 B) for software industry
- ♦ Wikipedia celebrated 10th Anniversary on January 15, 2011
- ♦ "App" is the top word of 2010 (announced on January 6, 2011 by American Dialect Society)
- ♦ Bangalore Metro starts rolling on October 20, 2011
- ♦ India wins World Cup on April 2, 2011
- ♦ Smaller coins (less than 50 paise) become history on June 30, 2011
- ♦ Anti corruption crusade led by Anna Hazare takes centre stage; former Telecom Minister Raja and sitting Member of the Parliament Kanimozhi are arrested: Telecom Minister Maran is forced to resign: Parliament passes Lokpal bill on December 27, 2011 but Anna Hazare unimpressed
- ♦ Telengana issue paralyses life in Andhra Pradesh on and off in 2011
- ♦ China replaces Japan as the world's No 2 economy in 2011
- ♦ S&P downgrades US sovereign rating from AAA to AA+ on August 5, 2011
- ♦ Egypt, Yemen, Sudan erupt; South Sudan is born
- ♦ Osama Bin Laden was killed on May 2, 2011; Libyan leader Gaddafi killed on October 9, 2011
- ♦ Japan suffers earthquake, Tsunami and Nuclear disaster on March 18, 2011

## Technology

- ♦ IBM researchers talk of "Graphene-based" computers that can be 30 times faster than silicon-based machines
- ♦ UC Berkeley team led by Jeffrey Baker talks of "magnetic" computers in July 2011
- ♦ Intel unveils 3D chips in May 2011 and solar powered chips in August 2011
- ♦ IBM India showcases solar-powered data Center
- ♦ Internet almost ran out of IPv4 addresses in 2011
- ♦ India to shift to Digital TV by 2015

## Products

- ♦ WWW turns 20 on August 4, 2011
- ♦ IBM PC turned 30 on August 12, 2011
- ♦ Apple launched
  - ◆ iPad 2 on March 2, 2011
  - ◆ new iMac on May 3, 2011
  - ◆ iCloud, iOS 5 and Mac OS 10 on June 6, 2011
  - ◆ iPhone 4S on October 4, 2011
- ♦ Apple iPad arrives in India on Jan 27, 2011 (after 9 months); iPhone 4 on May 27, 2011 (after 7 months); iPhone 4S on November 25, 2011 (within 2 months of US Launch)
- ♦ Nokia and Microsoft announce Windows Mobile powered mobile phones in February (after Nokia decides to phase out Symbian); Nokia made Windows Mobile-powered Lumia 800 and 710 phones reach the market in December

- ♦ There was a flurry of Tablet launches
  - o BlackBerry Tablet Playbook on April 19, 2011
  - o Samsung 10" Tablet on July 20, 2011;
  - o Amazon Fire priced at \$ 199 on September 28, 2011
  - o India-made Tablets from HCL, Airtel, Reliance and the low cost (Rs 2,000) "Akash" on October 28, 2011
- ♦ Google launches Music Beta in April, Google+ on July 6, 2011
- ♦ HP announces Veer phone, TouchPad Tablet and scraps them later all within months!
- ♦ TCS announces ON cloud-based offering for SME sector
- ♦ Nokia launches dual SIM Phone 100 in India
- ♦ Sabeer Bhatia launches "Jaxtr free SMS" on November 22, 2011

## **Markets**

- ♦ Coal India is the most valued company on August 17, 2011 going past Reliance & ONGC
- ♦ British Petroleum and Reliance \$ 7.2 billion deal got completed on August 30, 2011
- ♦ Stock markets everywhere saw severe beating in 2011; Sensex tumbled to record low in 2 years.
- ♦ Rupee touched 53 against USD in November 2011
- ♦ IBM market capitalization goes past Microsoft on May 24, 2011
- ♦ Apple with \$ 337 billion goes past \$ 331 billion market capitalization of Exxon on August 10, 2011; Apple beats Google to become most valued brand on May 9, 2011 (BrandZ)
- ♦ In M & A (Mergers & Acquisitions) in the Indian market include
  - ◆ Essar selling 33% stake to Vodafone for \$ 5 billion on March 31, 2011
  - ◆ Synopsys buying "Magma Automation" for \$ 507 million on December 1, 2011
  - ◆ Indian BPO major Genpact buying "Headstrong" for \$500 million on April 6, 2011
  - ◆ Infosys acquiring Australian BPO on December 20, 2011
  - ◆ CSC acquires AppLabs on Sept 14, 2011
  - ◆ iGate acquires Patni computers in January 2011
  - ◆ Pearson acquires TutorVista in January 2011

## **Globally**

- ◆ AT&T decides to buy "T-Mobile" for \$ 39 billion in March 2011 but drops the plan in December 2011
- ◆ Google acquires "Motorola Mobility" for \$ 12.5 billion on August 14, 2011
- ◆ HP acquires UK-based unstructured data company "Autonomy" for \$11.5 billion August 18, 2011
- ◆ Microsoft acquires "Skype" for \$ 8.5 billion in 2011
- ◆ Texas Instruments buys "National Semiconductors" for \$ 6.5 billion on April 1, 2011
- ◆ SAP buys "Success Factors" for \$ 3.4 billion on Dec 4, 2011
- ◆ Ericsson acquires Telcordia for \$ 1.15 billion on June 14, 2011
- ◆ Ericsson sells its part of Sony Ericsson to Sony for \$ 1.15 billion

## **Indian IT companies**

- ♦ Tech-Mahindra joins the billion-dollar club in April 2011
- ♦ TCS wins \$ 2.2 billion (over 15 years) contract from UK-based Friends Life Insurance company in October 2011
- ♦ Essar BPO Aegis gets \$ 2 billion contract (over 8 years) from Saudi Telecom
- ♦ Cades gets \$ 300 million order from Airbus in April 2011
- ♦ SoftBank to invest \$ 200 million in mobile Ad company "inMobi" (started by youngsters from IIT Kanpur)
- ♦ Airtel has 50 million customers in Africa by December 2011

## **MNC companies in India**

- ♦ IBM celebrates its centenary on June 16, 2011; decides to offer 1,000 ESOPs to all its Indian employees; starts operations in Doon, Gandhinagar & Raipur taking its presence in India to 18 cities
- ♦ The largest computer firm HP goes thru a turmoil; CEO Apotheker visits India in January 2011; announces scrapping TouchPad tablet and quitting PC business in August; gets fired; the new CEO Whitman reverses the decision to quit PC business in October
- ♦ Accenture has 70,000 of its 2,15,000 global employees in India
- ♦ Microsoft opens second development facility in Bangalore in December 2011
- ♦ Honeywell starts Hyderabad operations in January 2011
- ♦ Samsung expects \$ 5 billion from India operations in 2011; Dell expects \$ 2 billion
- ♦ Nokia plant in Chennai crossed 500 million handset production; Samsung triples handset production out of India
- ♦ GE talks of Rs 1,000 crores investment in India
- ♦ Daimler to double investment in India
- ♦ Nokia Siemens expands delivery Center in Chennai with increased head count from 120 to 1,000
- ♦ Carl Zeiss opens R & D Center in Bangalore
- ♦ Toshiba invests Rs 450 crores in India
- ♦ SanDisk ramps up India operations in 2011
- ♦ Huawei plans \$150 million expansion of its India operations
- ♦ 3 M invests Rs 100 crores in Bangalore R & D Center
- ♦ Zynga increased R & D head count in India
- ♦ Hitachi opened its R & D centre in Bangalore on October 13, 2011
- ♦ LinkedIn opened its R & D facility in Bangalore on November 16, 2011

### Applications

- ♦ Indian companies permitted to use video conferencing for AGM
- ♦ EPFO (Employees Provident Fund Office) goes online in July 2011
- ♦ Karnataka voter ID process goes online on October 1, 2011; Chief Minister office is open for video viewing on November 30, 2011
- ♦ Mobile banking and mobile trading started in India in 2011; Reserve Bank eases cap on mobile transactions beyond Rs 50,000 in December 2011
- ♦ State Bank starts "Unhappy" SMS message to address customer complaints
- ♦ Amazon allows Kindle readers to borrow eBooks from 11,000 public libraries

### Education & Research

- ♦ IIIT Bangalore and IIT Bombay bring WWW Conference to India for the first time in 20 years; held in Hyderabad during March 28–April 1, 2011
- ♦ **Infosys Science Prizes** were announced November 16, 2011; the winners are
  - ◆ Prof. Kalyanmoy Deb of the Indian Institute of Technology, Kanpur - **Engineering Sciences**
  - ◆ Dr. Imran Siddiqi of **CCMB, Hyderabad - Life Sciences**
  - ◆ Prof. Kannan Soundararajan of Stanford University, USA - **Mathematical Sciences**
  - ◆ Prof. Sriram Ramaswamy of the Indian Institute of Science, Bangalore - **Physical Sciences**
  - ◆ Prof. Raghuram Rajan of the University of Chicago, USA - **Social Sciences (Economics)**
  - ◆ Dr. Pratap Bhanu Mehta of the Centre for Policy Research, New Delhi - **Social Sciences (Political Science & International Relations)**
- ♦ **Nobel prizes** for the year 2011 announced in October 2011; the winners are
  - ◆ Saul Perlmutter of Univ. Of California, Berkeley, USA, Brian Schmidt of Australian National University and Adam Reiss of Johns Hopkins University, USA - **Physics**
  - ◆ Dan Shechtman of Technion, Israel - **Chemistry**
  - ◆ Bruce Beutler of Univ. of Texas, USA, Jules Hoffman of French National Academy of Sciences and Ralph Steinman of Rockefeller University (who unfortunately died before the announcement could reach him) - **Medicine**
  - ◆ Ellen Johnson Sirleaf & Leymah Gbowee both residents of Liberia and Tawakkal Karman of Yemen in Africa – **Peace**
  - ◆ Swedish poet Tomas Tranströmer – **Literature**

- ◆ Thomas Sargent of New York University, USA and Christopher Sims of Princeton University, USA - **Economics**
- ◆ CSIR announced Bhatnagar prize winners on September 26, 2011; the winners are
  - ◆ Amit Sharma of ICGEB, New Delhi and Rajan Sankaranarayanan of CCMB, Hyderabad - **Biological Sciences**
  - ◆ Balasubramanian Sundaram of JNCAR, Bangalore and G N Sastry of IICT, Hyderabad - **Chemical Science**
  - ◆ Shanker Doraiswamy of NIO, Goa - **Earth, Atmosphere, Ocean & Planetary Sciences**
  - ◆ Sirshendu De of IIT Kharagpur and Upadrasta Ramamurthy of IISc, Bangalore - **Engineering Sciences**
  - ◆ Mahan Maharaj of RMV University, Kolkata and Palash Sarkar of ISI, Kolkata - **Mathematical Sciences**
  - ◆ K N Balaji of IISc Bangalore - **Medical Sciences**
  - ◆ Shiraz Minwalla of TIFR, Mumbai - **Physical Sciences**

### **People**

- ◆ Infosys Founder Chairman N R Narayana Murthy makes way for K V Kamath as the new Chairman on turning 65 on August 20, 2011
- ◆ Srinivasa Ramanujan's 125th Birthday celebrated on December 22, 2011 with the Prime Minister declaring December 22 as "Mathematics Day" and the year 2012 as the "Year of Mathematics"
- ◆ Steve Jobs is the Man of the Year 2011
- ◆ IBM names Virginia Rometty as CEO effective January 1, 2012
- ◆ Former US President Bush, US Secretary of State Hillary Clinton, German Chancellor, New Zealand PM, Slovenian PM, Vietnamese President, Afghan President visit India in 2011
- ◆ India-born Nobel Laureate Venky Ramakrishnan, Apple Founder Steve Wozniak, Investor Warren Buffet, HP CEO Leo Apotheker, GE CEO Jeffrey Immelt, Microsoft CEO Steve Ballmer, Cisco CEO John Chambers and CEO's
- ◆ Apple founder Steve Jobs, Bharat Ratna award winner Bhimsen Joshi, CD pioneer of Sony Ohga , c language inventor Dennis Ritchie, Artificial Intelligence pioneer John McCarthy, India-born Nobel Laureate Har Gobind Khorana died in 2011

### **Interesting numbers**

- ◆ Indian IT industry expected to hire 225,000 people in 2011
- ◆ SBI launched 25,000<sup>th</sup> ATM on March 31, 2011
- ◆ India's total telephone subscribers stood at 914.6 million (881.4 million mobile subscribers) as of October 31, 2011
- ◆ Indian mobile handsets sales stood at 213 million in 2011 (231 million in 2012 projected)
- ◆ Indian Internet population touches 101 million in December 2011
- ◆ Rupee stood at 51.79 on Nov 30, 2011
- ◆ Forex at \$ 307 billion on Dec 2, 2011
- ◆ Mobile game "Angry Birds" saw 500 million downloads in 2011
- ◆ Apple iPhone 4S sold 4 million over the weekend of launch
- ◆ Facebook had 750 million subscribers on July 6, 2011
- ◆ Every week 100 movies, 250 books and 15,000 Mobile Apps get released! (543 each day for Android and 745 for iOS)
- ◆ Percentage of Poor in India dropped from 37% to 32% over 2005 to 2011
- ◆ World population touched 7 billion on October 31, 2011 (6 billion in 1999, 5 billion in 1987, 4 billion in 1974, 3 billion in 1959, 2 billion in 1927 and 1 billion in 1805)

Professor Sowmyanarayanan Sadagopan is the Director of IIIT-Bangalore. These are his personal views. He can be reached at [ss@iiitb.ac.in](mailto:ss@iiitb.ac.in)

# Call For Participation

## IEEE 1908.1™ Working Group

### Virtual Keyboard Standard for Indic Languages

IEEE 1908.1™ Working Group is seeking participants to develop IEEE P1908.1™. Sponsored by IEEE Communications Society, the standard is for Indic virtual keyboards. Individuals working independently, and/or supported by their employers from industry/ government/ academia/ non-governmental organizations, with interest in Indic (Indian) languages and their computing needs, are invited to participate in this new working group. The objective of the working group is to deliberate the virtual keyboard technologies and issues for modern phones/tablet computing device, with touch screen interface, and compose and shape the standard.

This standard will contain a conceptual model applicable to all Indian languages with appropriate customization for each language.

**Need for the Standard:** A large majority of Indians are not comfortable using computing devices with an English keyboard interface. INSCRIPT layout was standardized by the Indian government in 1986 for QWERTY physical keyboards, with the aim of interoperability and touch typing for all Indian languages. Due to limitations in accommodating the preferences of languages other than Hindi, the high learning curve because of lack of phonetic mapping between English and Indian language characters, and the lack of availability of physical keyboards with Indian language characters, alternate layouts, and transliteration based input methods as per the preferences of vendors and users proliferated.

Phones/Tablets with touch user interface can display characters on keyboard dynamically for each language. This can help people easily use their phones for data needs in their native language. INSCRIPT cannot be adopted easily for the following reasons: it uses the top row (the row above QWERTY) of the conventional keyboard and punctuation keys for Hindi alphabet. With the smaller screen size and resolution on mobile phones, the virtual keyboards are limited to only four rows, covering the basic English alphabet needs. Therefore INSCRIPT is not usable readily even for Hindi. The proposed standard will help in taking the benefits of computing and communication technologies to everyone.

Sign up for membership in the working group (prior to the group's inaugural meeting, which is tentatively set for **January 25, 2012**) by visiting the [working group wiki page](#) and following the instructions. Information for attending the first meeting will be sent to all the registered people prior to the meeting.

For any further clarifications, please contact **Arjuna Rao Chavala, IEEE P1908.1 Working Group Chair**, at [arjunaraoc@ieee.org](mailto:arjunaraoc@ieee.org).

IEEE Standards Association

445 Hoes Lane

Piscataway, NJ 08854

## Summer School on Advanced Algorithms

First ever high valued summer school/refresher course is being held on Advanced algorithms on 4-15th June at Thapar University, Patiala. Event is sponsored by Sponsored by ACM SIGACT North India, Technical Sponsorship by IEEE India Council, IEEE Computer Society Delhi Section, In cooperation with IEEE AESS ( Aerospace Electronic System Society) and IEEE Student Chapter, Thapar University

Objective of this workshop/ training course is to promote high quality teaching and research in theoretical computer science and computational algorithms.

Are you fascinated by algorithms and curious about what algorithmists do?  
Do you like to solve challenging and puzzling computational problems?

If your answer is yes, then join us with other motivated teachers and researchers from across the world.

Contents of the Workshop: <http://www.gdeepak.com/work.php>

Guidelines for applying and attending the workshop :

<http://www.gdeepak.com/adsa/guidelines.pdf>

Candidates will be given free boarding/Lodging and ACIII Tier travel reimbursement.

Convener and resource person,

Dr Deepak Garg

Computer Science and Engineering Department, Thapar University, Patiala, Punjab, India -147004

Chair, ACM SIGACT North India, Secretary IEEE CS Delhi Section

[www.gdeepak.com](http://www.gdeepak.com)

I would like to inform that the MGA Board, at its meeting held on 19 November 2011, has approved the motion to change our Section name from "Calcutta Section" to "Kolkata Section", which has been ratified in our section Annual General Meeting held on 19th Jan 2012.

So now our section name stands as "IEEE KOLKATA SECTION".

This for your kind information.

Regards,

Sivaji Chakravorti

Chair, IEEE Kolkata Section

# JED -i Project Challenge

**Dr. Swami Manohar**

(former Professor, IISc)

Managing Director,

LimberLink Technologies Pvt. Ltd.,

First national level final year engineering project event, the JED-i project Challenge, with a request to forward the call for participation to all your student chapters. JED-I stands for the Joy of Engineering, Design, and Innovation.

Quick facts:

The JED-I project challenge is a national event conducted in academic collaboration with IISc. The final exhibition and Award ceremony was held at the J.N. Tata Auditorium last June (Please see <http://jed-i.in/challenge/2011> for details) The inaugural event attracted participation from 150 teams from nearly 75 colleges from around the country and 70 teams were invited for the final demo and evaluation - The eminent jury was from IISc and industry (see <http://jed-i.in/challenge/2011/jury>)- Attractive cash prizes and trophies are awarded to the top teams - Prof. Roddam Narasimha, FRS, gave away the prizes in the inaugural event.

The event is sponsored by industry This year we expect a much larger participation. Students and teachers attending the last year event were uniform in their appreciation of the value of participation in the event.

Please contact me if you have any questions.

## Conference

Mr FC Kohli, who was there at the Indicon Conference inaugural, has been conferred the prestigious IEEE Founders Medal for 2012. See IEEE announcement below:

**IEEE FOUNDERS MEDAL**, for outstanding contributions in the leadership, planning, and administration of affairs of great value to the electrical and electronics engineering profession, sponsored by the *IEEE Foundation*, to **FAQIR CHAND KOHLI** (LFIEEE) – Former Director, Deputy Chairman, Tata Consultancy Services, Mumbai, India

"For early vision and pioneering contributions to the development of the IT industry in India."

# Inaugural Function

## IEEE Student Branch IIT Bhubaneswar

Adding a fresh vision to its arena IIT Bhubaneswar organised a one-day function to inaugurate its student branch of IEEE society. The whole celebration started with a very awe-inspiring aura, an enlightening speech by the Dean Prof. Ajit Kumar Das and Guest of Honour, Prof.



Sudarsan Padhy. Our honourable chief guest Dr. Sivaji Chakravorti paramounted his words of wisdom and his solemn remarks towards students, and his indelible respect for the bond between a teacher and a disciple. His tranquil and proficient persona amazed everyone.



Prof. Chakravorti laid down a strong foundation of the branch and gave a brief introduction to 'What it means to be an IEEE member'. He delivered a talk labelled "LAB TO MATLAB", which highlighted the steps to be a perfect



professional engineer throwing light on PBL (Problem Based Learning). He also launched our first newsletter "NleeeWS". Prizes were awarded to the winners of various events like technical paper presentation, quiz and TechnoHunt held by IEEE student branch. Amidst everything

no one can alter the fact that the function was a great success.

