



Message from Chairman



Dear Members,

Greetings from IEEE INDIA COUNCIL. It is time to celebrate. Awards results are pouring in. We are privilege and pound to be named in the first two awards announce so far.

1. 2011 R10 Distinguished Large and Small Section Awards.

The R10 has selected Hyderabad Section as the 2011 R10 Distinguished Large Section.

2. Region 10 GOLD Announcement

Two GOLD Affinity Groups in Region 10, namely, Kerala GOLD and New Zealand North GOLD Affinity Group are recipients of the MGA IEEE GOLD Hall of Fame Award.

Heartiest Congratulations.

I am further Happy to announce that India Council Chapter on Computer Society and Education Activities have been actively revived and will be giving information related to these areas. Heartiest Congratulations to Mr. Deepak Garg of Thapar University for taking necessary initiatives.

Here is opportunity:

Call for Nominations: 2013 IEEE Leadership Positions: Deadline July 1

IEEE is looking for people with the skills, passion, and perspective to volunteer and serve in 2013 as IEEE officers or on committees of the IEEE Board of Directors. The deadline is 1 July for select Standing Committee Members and IEEE officers (IEEE Secretary, IEEE Treasurer, 2014 IEEE President-Elect). [View the list of positions and nominate yourself or a colleague](#)

[<http://www.ieee.org/about/corporate/nominations/index.html>](http://www.ieee.org/about/corporate/nominations/index.html)

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

Dr. Ram Gopal Gupta

General Chair, ICTEE 2012
Chair, IEEE Education Society Chapter, India

IT in May 2012

Prof. S. Sadagopan



General

- Viswanathan Anand was crowned Chess Champion for the fifth time on May 29, 2012
- Tagore Centenary celebrations start on May 8, 2012
- Multi-level TDS on software to go from June 2012 as per Government directive
- Adani completes 500 KV HVDC transmission line (the first private sector project) with 2,500 MW transmission capacity in record 24 months between Gujarat and Haryana on May 17, 2012.
- Economic growth grinds down to its lowest number of 5.3% in January - March 2012; with growth stopping, Sensex crashing, FDIC down, and, corporate top lines and bottom lines slowing down, the India story is ending, according to media; with Euro crisis, US unemployment, Japan shrinking and Chinese slowdown the world will witness the worst economic crisis in the years
- The controversial Indian Army Chief V K Singh hands over charge on May 31, 2012
- The world's largest tower opens in Tokyo on May 28, 2012
- Multiple train accidents in May - Hampi express on May 22, 2012 & Doon express on May 31, 2012

Technology

- HP launches "net zero energy" Data Center in Bangalore on May 30, 2012 (the second such data Center after Palo Alto, USA)
- The European Telecommunications Standards Institute selects Apple "nano" SIM card as the fourth form factor for SIM cards on May 31, 2012

Products

- Samsung launches Galaxy S III Smart phone in London on May 4, 2012 and in India on May 31, 2012
- Google Knowledge Graph and Microsoft Bing Sidebar announced in May 2012
- BSNL launches Pentax Tablet for Rs 3,499 in Bangalore on May 14, 2012

Markets

- Facebook IPO makes both positive and negative news throughout May 2012; sets \$ 28-38 as price range for its IPO on May 4, 2012; on the day of IPO, it got fixed at the high range of \$ 38; the historic IPO gets into trouble with FB share tumbling by 30% within 15 days of launch.
- India-born Rashmi Sinha founded Slideshare sold to LinkedIn for \$ 119 million on May 4, 2012
- Google completes Motorola Mobility acquisition on May 23, 2012
- SAP decides to buy Ariba (e-commerce engine) for \$ 4.3 billion on May 23, 2012

Indian IT Company

- TCS valued 4th most valued IT Services company as per "Brand Finance" (May 8, 2012)
- Bharti Airtel acquires 49% of QualComm BWA Business in India for \$ 165 million on May 23, 2012

MNC IT Companies

- E-Bay to recruit 1,000 engineers in Bangalore
- Goldman Sachs signs up office space of 1.6 million sq ft over in Sarjapur Road in Bangalore (in two stages) - the largest space contract in India - on May 23, 2012
- HP announces its intent to axe 27,000 jobs globally over the next 18 months on May 23, 2012

Telecom

- Airtel launched 4G LTE service in Bangalore on May 10, 2012
- Airtel and Reliance cut 3G tariff significantly in May 2012
- Former Telecom Minister Raja - the key accused in the 2G scam - released on bail on May 15, 2012

Education & Research

- Faridabad boy Arpit Agarwal tops JEE 2012 (results out on May 18, 2012); 4,79,651 candidates appeared in the exam at 1,067 centers for admission to 9,647 undergraduate seats in 17 IITs
- Common Entrance Exam for admission to all engineering colleges (including IIT's) getting Government approval on May 30, 2012

People

- Anand Viswanathan crowned Chess Champion for the fifth time on May 29, 2012
- India-born Pradeep Khosla named Chancellor of UC San Diego on May 12, 2012
- India-born Anshu Jain joins Deutsche Bank as co-CEO on March 31, 2012
- Jharkhand collector freed on May 3, 2012
- Francois Hollande was elected French President on May 6, 2012
- US Secretary of State Hillary Clinton visits India during May 6-8, 2012
- Bill Gates visits India in May 2012; visits UP Chief Minister and meets with Wipro Chairman Azim Premji in Bangalore
- Ross Levinson named Yahoo intermediate CEO on May 14, 2012
- Eugene Polly, the inventor of TV remote control (in 1955) passed away on May 24, 2012

Some Interesting numbers

- Indian telecom subscriber base touches 951 million (919 million wireless and 31 million wire-line) with net addition of 8 million wireless and -0.75 million of wire-line subscribers in March (latest available TRAI data as per May 3, 2012 Press Release)
- India's foreign exchange reserves at \$ 286 billion as of May 31, 2012 (RBI Database)
- ₹ at the lowest at 56.24 against USD on May 31, 2012
- SAIL sales touch ₹ 50,000 Crores in the year 2011-12 for the first time
- Economic growth grinds down to its lowest number of 5.3% in January - March 2012
- Steepest petrol price hike of ₹ 8.49 on May 23, 2012 causes quite a protest across India

WOMEN'S DAY CELEBRATIONS AT Dr NGPIT

Dr. NGPIT IEEE and WIE Affiliation Group of Dr.N.G.P. Institute of Technology celebrated **INTERNATIONAL WOMEN'S DAY** on March 8th 2012 in its campus with great pomp and splendor. The guests of honor were four women legends who had redefined womanhood and had reset boundaries in their respective fields with their dedication and hard work. They were **Tmt.Hema Karunakaran, Deputy Commissioner of Police, Law and Order, Coimbatore, Smt. N.V.Sreejaya**, Advocate, India Solicitor, England & Wales, **Smt.J. Mohanasundari**, Managing Director, Sharp Electrodes and Private Ltd & Kay Jay Sharp Trendys and our honorable secretary madam, **Dr. Thavamani D. Palaniswami**, **Dr.S.Dhandapani** Principal, DrNGPIT, **Dr.K.Porkumaran** ,Vice-principal & **IEEE Student Branch counselor**, Dr.N.G.P.IT also joined the celebration of womanhood. The theme of the day was **“Connecting Girls and Inspiring Future”**. Ms. V. Priyadarshini, Assistant Professor ECE Dept and WIE Coordinator welcomed the gathering.

Tmt.Hema Karunakaran had thrown light upon the key issues and hurdles faced by women especially young college going teens. She stressed on the importance of women being alert every time, to safe guard themselves from any miserable situations. She insisted the women to sculpt themselves like a sculpture with remarkable traits. She also stated that engineering graduates have wide opportunities in civil services besides information technology. Our Honorable Chief Minister is persistent in immediate actions against women abuse cases through Women Police Station all over Tamil Nadu. She commented that women have marvelous power which utilized in right way leads to tremendous empowerment. She advised the girls to be proper in dress code & to obey traffic rule while driving.

This was followed by another encouraging and empowering speech by **Smt. Sreejaya, Advocate**. She informed the audience on the various issues and crimes against women with instances she came across in her career. She inspired the girls to be strong and to understand that change comes from within. She added that Shying away from things will never bring the empowerment that we dream of. She also briefed the girls about work etiquettes and how to maintain a dignified stance in the workplace. She addressed on sexual harassment and the measures to prevent women from such immorality.

Smt. Mohanasundari, Managing Director, Sharp industries and Kay Jay sharp Industries, a homely woman narrated that she was born and brought up at kalappatti, had managed to become a successful entrepreneur



TRANSFORMER- THE HEART OF AC POWER SYSTEM

Dr.S.Thiruvengadam, Professor of Eminence

Department of Electrical Engineering

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Introduction:

A century ago, the distribution of electric power had been made possible by this device called “TRANSFORMER”. This is a device that does not move, is almost totally silent and is often hidden in underground vaults or hidden behind screens. This was developed during the end of 19th century. It is a vital component of modern electric power systems. It converts electricity at high voltage and low current into power at low voltage and high current with low loss. This is what makes it very useful in transmission and distribution of power. Besides the above use, the transformer constitutes an integral component of many devices that work with electric power. Transformer is a device that transfers electrical energy from a circuit to another through inductively coupled conductors – namely the transformer coils. There are transformer all over in any house. It is a static device, has a high efficiency ranging from 90 to 95%. Transformers are inside even the black plastic case that is plucked into the wall to recharge your cell phone or work other electronic devices.

Basic principle of operation:

Transformer works on the principle of electromagnetic induction. Induction can be understood in terms of lines of force. The current in a loop of wire sets up a magnetic field which in turn generates lines of force. If a second independent loop of wire is embedded in this field and if the field changes with time, a voltage will be induced in the loop that is proportional to the time rate change of the number of force lines enclosed by the loop.

Development of transformer:

Year	Inventors	Year
1830	Joseph Henry Michael Faraday	Independently discovered property of induction.
1876	Pavel Yablochtrov	Uses induction coils in lighting system
1878- 1883	Ganz (company), Hungary	Uses toroidal shaped transformer in their lighting systems.
1880- 1882	Ziani de Ferrante Gaulard ,Gibbs	Designed a transformer
1885	William Stanley	Makes the transformer more practical by design changes.
1889	Michael Dolivo Dobrovisky	Developed first three phase transformer.

Future:

Transformer is now in the second century of service. Now one might ask “ Is the transformer here to stay? What is its future?”. Research on amorphous metals (metals having no crystal structure) has indicated some very promising magnetic properties, but economical methods of producing such materials for use in transformers have yet to be developed. Superconducting transformers whose coils have no electrical resistance are still impractical since they have to be operated at cryogenic temperatures. Solid state circuitry has greatly reduced or eliminated the need for transformers, the small electronic apparatus. The availability of much larger solid state devices has made it feasible in some cases, to transmit high voltage electric power as DC rather than AC although transformers are still required in the conversion process. Such developments throw hints that solid state devices may take over some of the jobs of transformers in power systems.

Acknowledgement:

The help rendered by Mrs. N.Priya and Mrs. R. Vijayapriya in preparing this article is gratefully acknowledged.

Reference:

IEEE Industry applications Magazines – Jan/ Feb 2002.

MESSAGE FROM R10 AWARDS CHAIR

Dear R10 Committee Members,

It is my great pleasure and honor to announce the winners of the 2011 R10 Distinguished Large and Small Section Awards.

The R10 has selected Hyderabad Section as the 2011 R10 Distinguished Large Section and Hiroshima Section as the 2011 R10 Distinguished Small Section.

The selection of the two awards was based on the performances summarized in the 2011 Annual Report submitted by R10 Sections.

Award certificate will be presented to these winning sections at the 2013 R10 Annual Meeting to be held early next year, and the cash bonus of USD1,000 will be sent to each of them after the meeting.

Congratulations on the job well done by Hyderabad and Hiroshima Sections!!

Taka

Takatoshi Minami

2011-2012 IEEE R10 Awards & Recognition Committee Chair

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Dear Valued IEEE Member,

Warm Greetings! Hope you are enjoying the IEEE member services. I feel that you should not limit to merely be a member enjoying the benefits of the World's largest Professional Association IEEE.

I wish and request you also to become instrumental in giving back to the society through IEEE. Yes! It is possible for you to become part of IEEE AiyeHum 2012 to mentor the young minds for developing innovative technologies for the benefit of Humanity.

You might be aware that All India Young Engineers' Humanitarian Challenge is a program to fund, mentor and nurture the ideas of young engineers towards solving humanitarian challenges. This program was started in 2009, and since then every year we try to provide mentoring support for the students participating in this program.

This year for AiyeHum, IEEE Bangalore Section has funded Rs. 2 lakhs to around 25 projects and EPICS about 10 projects each with 75K INR towards their projects and the list can be found on the program website: www.youngengineers.ieeebangalore.org

I am writing to see if you are interested in mentoring any of the teams for this year. In case you are interested, please let our teams know. We will try to match the projects with your area of expertise/interest and geographical closeness.

As a part of mentoring, you can guide the students technically in their projects and help them achieve better results and impact with your expertise.

Historically, the mentoring has led the student projects to manifest into publications, patents and entrepreneurial ventures. It will be a great contribution to the student community if you can be such a mentor!

Waiting eagerly to receive a positive note of response from you!

With Best Regards,

Ramakrishna Kappagantu,

Chair, IEEE All India Young Engineers' Humanitarian Challenge 2012

www.kramakrishna.com

CALL FOR PAPERS

You are cordially invited to submit your research paper to the upcoming Special Session on **Nature Inspired Algorithms for Routing in Intelligent Networks** on behalf of the **18th IEEE International Conference on Networks (ICON2012)** to be held in Singapore from December 12th-14th 2012.

The focus of this session is to identify the role that bio-inspired computing can play in the progress of computing models and routing techniques and highlight the productive areas of research as well as creating more thrust in developing applications and engineering the intelligent Internet.

This session seeks high-quality, original and unpublished papers addressing topics relevant to the issues

- Autonomic computing and networks
- Adaptive network design
- Bio-inspired communications protocols
- Biological fault tolerance, self-healing systems in networks
- Bio-inspired mathematical methods
- Bio-inspired routing and P2P algorithms
- Computational intelligence and network management
- Collaborative self-organizing systems in communications
- Computational optimization in routing
- Cognitive and computational models
- Dependable, reliable computing
- Evolution and self-healing aspects of network architectures and protocols
- Evolutionary algorithms, genetic algorithms and programming challenges
- High performance computing for bio-inspired algorithms and systems
- Immune and self-healing network defence and information security
- Knowledge Representation, Expert system and reasoning
- Network and communication algorithms and protocols
- Nature Inspired algorithms for routing
- Parallel and distributed techniques for bio-inspired algorithms
- Parallel and distributed techniques of swarm intelligence
- Routing, resource discovery, and scheduling in distributed systems
- Reasoning techniques, constraint satisfaction and Machine learning
- Self-organizing systems
- Simulation of bio-inspired systems
- Self-healing networks

All accepted and registered papers will be included in the conference proceedings to be published by the IEEE. Once again, we would like to invite you to submit your qualified technical papers to this Special Session.

The Login ID and Password to submit your paper is as follows:

Login ID – 2012SS01

Password – EC4FC9FA

Special Session Information Link : <http://www.ieee-icon.org/2012/>

Call for papers: <http://www.ieee-icon.org/2012/cms/download/ICON2012-CFP.pdf>

Submit your papers at <http://www.ieee-icon.org/2012/>

Important Dates

Full paper due for Session submission: 1st August 2012

Region 10 GOLD Announcement

I am pleased to announce that two GOLD Affinity Groups in Region 10, namely, Kerala GOLD and New Zealand North GOLD Affinity Group are recipients of the MGA IEEE GOLD Hall of Fame Award. The other recipient of this award was the Egypt GOLD Affinity Group in Region 8. The IEEE MGA GOLD Hall of Fame Award recognises outstanding GOLD Affinity groups from around the world. There are three awards issued annually.

In 2011, the two of the recipients of this award from Region 10 were Malaysia and Lahore GOLD Affinity Group.

This is a great achievement and testament to the good work performed by the Region 10 GOLD Affinity Groups. Congratulations the winners of the GOLD Affinity Group Hall of Fame Award and all the best for the remainder of 2012.

Timothy Wong

Region 10 GOLD Coordinator

