Chairman's Message

Dear Members,

It is once again a great honor for all of us in the IEEE community in India that **Mr. Sampathkumar Veeraraghavan**, IEEE Gold Member, from the Madras Section has been granted IEEE Foundation funding of up to $ 13,420 for his project "Novel Screening System for Development Disorders". His work on screening and detection of social developmental disorders in young children and provide home-based intervention has been recognized by the IEEE. The main goal of his work is to develop technological aids, which will help autistic individuals to be identified earlier and initiate early intervention for the management of autism. We need to identify such projects in diverse fields and set a challenge to the young engineers to contribute towards developing Technologies for Humanitarian Challenge.

'Technologies for Human Challenges' is the theme of the IEEE conference being organized by the IEEE India Ad Hoc Committee on 28th August preceding the IEEE 125th anniversary celebration in Bangalore on August 29th. This conference will be a full-day meeting on the application of technologies for addressing societal challenges. The major focus will be on the challenges faced in the Indian sub-continent, including, but not limited to, health care, education, agriculture, rural connectivity, disaster management, and energy. The meeting will cover the use of electrical and electronics engineering, computer engineering and science, information and communications technologies, and related disciplines to such challenges.

The preparations for IEEE 125th anniversary celebrations on 29th August at Hotel Lalit, Bangalore is proceeding on course. The IEEE Madras Section is planning "IEEE's 125th Anniversary Celebrations" on August 27, 2009. The aim of these celebrations is to call attention to the contributions and impact of IEEE, its members and the engineering/technology industries on society.

With warm regards

Kasi Rajgopal
Bangalore
01 August '09
Chairman, IEEE India Council
kasi.rajgopal@ieee.org

IEEE CODE OF ETHICS

We, the members of the IEEE, in recognition of the importance of our technologies in affecting the quality of life throughout the world, and in accepting a personal obligation to our profession, its members and the communities we serve, do hereby commit ourselves to the highest ethical and professional conduct and agree:

..... 8. To treat fairly all persons regardless of such factors as race, religion, gender, disability, age, or national origin;

Editorial

Lithium Wars on the Cards?

All eyes are on Bolivia - in South America - now. Why a hitherto little known, partly desertified country should resist moves by the developed nations to have better trade relations with them?

As the market for electric and hybrid cars expand, the demand for lithium-ion batteries (little ones are in our mobile phones, lap tops, watches etc) for transportation - keeping oil off the road - would jump levels. And more than half of world's Lithium is found in Bolivia, under the sands of Salar de Uyuni, the world's largest salt flat. Currently Peru is the largest supplier, even though USA has substantial deposits, China has a lot in Qinghai plateau in Tibet, and Zimbabwe has some. Accordingly, global car makers have been queuing up to La Paz to strike deals to tap the resource. Japan, USA, Korea, all have their eyes fixed on Bolivian Lithium. Lithium (Atomic number 3, the third element) is considered superior to nickel, in view of its lightness and its ability to store more energy, enabling electric cars to be driven longer distances.

What complicates the situation is the President of The Country, Mr. Evo Morales, a socialist, who has already nationalized the country's oil and natural gas industries, and has grandiose plans for the utilization of lithium, and the fact that the mines of which are located within indigenous tribal territories. The President looks at "lithium as their ticket out of poverty" and foresees the possibility of "Bolivia becoming the Saudi Arabia of lithium". Bolivian government recently insisted that before mining the lithium, the car companies and battery makers will need to set up manufacturing plants in Bolivia before even one gram of their lithium is used in an EV.

Some observers feel that there is nothing wrong in having large Lithium Battery manufacturing plants in Bolivia. The local labour cost is very reasonable and lithium supply problems would be solved for many decades. With a battery factory built close to maritime shipping lines, batteries could be shipped world-wide at a reasonable cost. Bolivia, they say, is not that far from the California market! But, it is certain that the water problem in the vast mining areas will worsen and various other environmental problems are also likely in this fragile region.

According to Nikkei, Hitachi Ltd. has developed a high-power lithium-ion battery for hybrid-electric vehicles. The battery reportedly has specific power of 4,500 W/kg— a power increase of 70% over its current models. The Li battery also has a 20% longer life - at 10 years – which is about the same as the life of a car. In 2000, Hitachi became the first company to mass produce large lithium-ion batteries for cars; sold 600,000 units so far and is targeting for the year 2015, to sell 100 billion yen worth of vehicle-use lithium-ion batteries.

Whether USA would again open its closed Lithium mines or whether other nations like China, and some in Africa are going to be in the trade of Lithium, it is certain that Bolivian supplies will be crucial for the increased use of Li-batteries and as Copper and other scarce elements and oil had created sustained tensions in other regions of the world (Zambia still the largest supplier of Copper, Nigeria is still clash ridden), it is certain that moving towards a more greener option for keeping off from fossil fuels, is not going to be easy or without costs. Whatever be the geopolitics of it, EE professionals will be working in this area in large numbers in the coming years.

Trivandrum
12 August 2009
V K Damodaran
Editor, vkd@ieee.org

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S L N Murthy	– Member

visit: *http://www.ewh.ieee.org/r10/india_council*

To improve is to change; to be perfect is to change often - *Winston Churchill*

From India Council Secretary

Dear All,

Besides being the Secretary of IEEE India Council, as Chairman of IEEE Bangalore Section, I have the privilege of informing you all about various activities undertaken by our Section in the context of 125th Anniversary celebrations at Bangalore, one of the eight places chosen by IEEE Headquarters.

(a) IEEE Bangalore Section Annual Symposium from 0900 to 1600 hrs. on 29/8/2009.

(b) IEEE Global Event Series function from 1800 to 2200 hrs on 29/08/2009.

(c) Workshop on 'Human Values in Technology & Management' from 0900 to 17.00 hrs on 30/08/2009.

(d) IEEE Special Evening Function exclusively meant for the IEEE Bangalore Section Members from 1800 to 2100 hrs. on 30/08/2009.

(e) IEEE Women Engineering Congress from 23rd to 24th October 2009.

(f) IEEE Gold Congress on 5th and 6th December 2009.

More information on the above activities can be found in the IEEE Bangalore Section Web Site www.ieeebangalore.org . Let me also inform you that as per the broadcast of previous two issues of IC Newsletter a full day conference on "Technologies for Humanitarian Challenge" is also being held on 28th August 2009 at Bangalore as part of major IEEE India Initiative in India to focus on Humanitarian Activity.

The URL for this conference is http://ewh.ieee.org/r10/gujarat/htcon/

While IEEE Special Evening session is exclusively meant for the IEEE Bangalore Section Members, the Global Event Series is hosted by IEEE Headquarters for which registration is made through invitation organized by the Headquarters. For all other activities interested IEEE members and non members may attend as per details given in the web site.

You may be aware that our Indian IEEE membership as on July 2009 is around 25,000 which means about 20% reduction (from the 31,000 strength posted as on 31st December, 2008). I strongly believe that IEEE gives every member an opportunity and platform to do service to the Technical Society for the benefit of humanity. In view of this, I request all the members to look into the variety of activities and contributions made by IEEE in India and accordingly opt & spread a word to many for becoming the privileged member of IEEE to be a part of the proud IEEE India family. For information on the activities held by Sections of India it is requested that the respective Sections' Web Sites may be visited and details obtained.

With all Best Wishes,

K Ramakrishna
Secretary
Email: kramakrishna@ieee.org

**Flatter me, and I may not believe you
Criticize me, and I may not like you
Ignore me, and I may not forgive you
Encourage me, and I will not forget you
Love me and I may be forced to love you**
- William Arthur Ward

MGA Board Award to Kerala Section

For Sustained Membership Growth

Congratulations to the IEEE Kerala Section for being selected as the recipient of the 2008 MGA Section Sustained Membership Growth Award for Region 10! In late August, the Section will receive an animated graphic banner noting this achievement to be displayed on Kerala Section's web site. For deciding on this Award, the MGA Board looks at the membership growth for the past 4 years of all Sections in the region.

The IC team urges Kerala Section to keep up the achievement in coming years too and request other Sections to sustain the growth of membership, especially in the wake of the revelations made by IC Secretary in his column this month of membership loss to the extent of about 6,000 in just 7 months. - ***Based on Message from Joe Lillie, MGA Board Chair***

Congrats Sampathkumar V !

We are pleased to report that Mr. Sampathkumar Veeraraghavan, a GOLD member from the Madras Section has been granted IEEE Foundation funding of $ 13,420 for his project "Novel Screening System for Development Disorders". The funds will be released in 2009. The activities will be posted on the R10 Newsletter and website, and we hope to have more IEEE Foundation Grants to Region 10 members and especially for those from India in the coming years.

Congrats Dr A K Saxena!

Dr A K Saxena, SMIEEE (41618427), Professor in Solid State Devices and VLSI Technology, Indian Institute of Technology, Roorkee has been elected Fellow and Chartered Physicist of Institute of Physics (London) and also a Fellow of Institute of Engineering and Technology (UK)". *Contact: aksaxena1950@gmail.com*

2 New IEEE Transactions

IEEE Transactions on Smart Grid

The Transactions will publish original contributions on research and development of smart grid technologies. The Transactions will also welcome manuscripts on design, implementation, and evaluation of energy systems that are affected by smart grid. Surveys of existing work on smart grid may also be considered for publication when they propose a new viewpoint on history and a challenging perspective on the future of smart grid. This journal is technically co-sponsored by eight different IEEE societies.

IEEE Transactions on Sustainable Energy

The Transactions will publish original contributions focusing on theories, technologies, design, policies, and developments in sustainable energy, as well as surveys of existing work on sustainable energy. These will include papers on the evaluation of electric power systems affected by sustainable energy. Papers will also focus on issues like carbon capture, global warming, greenhouse gas emissions, and mitigations of fossil energy use in electricity generation. This journal is financially co-sponsored by three IEEE societies, in addition to PES, which is the sponsoring society and is technically co-sponsored by seven different IEEE societies.

Events Ahead

WIE'CON-09
Bangalore, India
23 – 24 October 2009
International Conference on
Meeting the Global Challenges of the Next Generation

Organized by the IEEE Women in Engineering Society (WIE), Bangalore Chapter in cooperation with the IEEE Bangalore section, WIE'CON 2009 will be devoted to understanding the global challenges we face in various domains, technical, managerial and entrepreneurial. At least one IEEE WIE /girl student member or woman (non-IEEE member/non-IEEE student member) should be an author/co-author. Please go to Website of IEEE Bangalore for details.

ISWC'09
4-7 September 2009
13th Annual Symposium in Linz, Austria
International Symposium on Wearable Computers (ISWC'09)
http://www.iswc.net/register.php. .
General Co-Chairs: A. Ferscha and G. Stocker

ICWCSC 2010

02-04 January 2010

The departments of Electronics and Communication Engineering and Information Technology of SSN College of Engineering have planned to conduct an International Conference on Wireless Communication and Sensor Computing (ICWCSC 2010) SSN College of Engineering, Chennai, in association with IEEE Madras Section, IEEE Communication Society, Madras Chapter and IEEE Computer Society, Madras Chapter. The cosponsors of the conference are IGCAR, Kalpakkam, Cognizant, Infosys, and HCL Technologies in Chennai. For more details please visit the conference website www.ssnicwcsc 2010.in or contact **Dr. S. Radha**, Professor & Head (EC Dept).

IEEE Volunteer Nominations

Every day, we see firsthand the people who are making a difference in technology and the profession. Your insight and perspective in nominating such individuals—your colleagues or yourself—to serve on one or more IEEE volunteer committees will be most welcome to IEEE Nominations & Appointments Committee (Chair 2009: Leah H. Jamieson. From operations, to governance, to historic preservation, and much more, these committees provide an excellent opportunity to help IEEE further its mission. Visit www.ieee.org/nominations to find out more about these opportunities.

The Grand essentials of happiness are:
Something to do, something to love,
And something to hope for!

- Allan K Chalmers

Tech Notes

Printed Electronics turns Organic

One of the many applications for printed electronics is smart labels that are equipped with sensors. These transponders, which can be printed together with an antenna on films, can be used to measure temperature and atmospheric humidity, an important aspect for the shipment and storage of goods. Conductive organic molecules - have to be printed in just nanometer-thick, defect-free and very homogeneous layers on top of each other onto flexible plastic or paper substrates. These requirements far exceed those of graphic printing.

Organic electronics is based on conductive polymers or even smaller molecules from organic chemistry and is regarded as one of the key technologies of the future. Its uses range from organic circuits and chips through Photo voltaics to organic LEDs (light emitting diodes).

BASF SE, Heidelberger Druckmaschinen AG (Heidelberg) and Darmstadt Technical University are revolutionizing printing technology using nano-particulate functional materials and innovative printing processes. Organic electronic products of future potential, such as photovoltaic films or bendable light-emitting diodes, head their list of achievements. They are planning to present the first printed results within three years. The 27 companies, universities and research institutes are cooperating in the research projects for the technology of the future - organic electronics - which is being sponsored by the BMBF to the amount of •40 million.

*- **Compiled by SLN Murthy from "Flex007 News Letter – July 29, 2009"***

High Tech for Clean Kitchen

Half the world relies on highly inefficient indoor stoves, which also emits noxious gases into the kitchen. This poisons lethally 1.6 million people every year. At the Engines and Energy Conversion Laboratory at Colorado State University, Prof. Bryan Willson and his team have now solved the problem and in India, Philippines etc, a device costing from Rs 500 to Rs 2000 (different models) can be bought by the families to have the following Benefits:

Save Money and Time
- Reduce fuel consumption by up to 50%
- Requires less cooking time

Improve Family Health
- Improve family health by reducing toxic emissions

Easy
- Easy to use
- Use existing pots and cooking tools
- No blow pipe required
- Easy to clean and maintain
- Portable while remaining stable

Go to www.envirofitcookstoves.org for more details.

To

IEEE India Info
AUGUST 2009

Rs.4/-

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