Dear Members,

It is a great privilege for me to reach to you again through this issue of 'Monitor', which intends to cover the activity report and accomplishments of our section.

From the very beginning of this year, we have been trying to reach out to members and students who are located away from Kolkata, especially in view of extending Section’s activities over its whole jurisdiction.

I visited Tezpur University in January 2014 for an official meeting and met about 40 students along with 10 faculty members in their campus. It was a wonderful interaction and I am happy to note that, they have been successful in opening a student branch soon after that.

During February-May 2014, I had attended several meetings and IEEE sponsored conferences, organized by different units of the IEEE and Institutes under our Section's geographical jurisdiction. I met few members in Odisha at Berhampur University; National Institute of Science and Technology Berhampur; and KIIT University Bhubaneshwar during March 18-19 and had also separately addressed the student members.

On the occasion of another official visit to NIT, Meghalaya in June, 2014, I could manage time to meet and spend time with some young IEEE members in the
North-East. About 20 of them gathered in a dinner meeting at Shillong on June 21, 2014 and discussed about their issues and future planning. I am really impressed to see their enthusiasm and professional motivation. IEEE student branch at Gauhati University organized their inaugural session on June 23 and it was my privilege and honour to formally inaugurate the same.

I attended 5th Indian Antenna Week, an annual international event of IEEE AP/MTT Kolkata Chapter held in JW Marriott Chandigarh during May 26-30, 2014. This year, NITTTR Chandigarh was the host and the event was exclusive in nature having single focused session being consistently attended by the participants from 9AM to 9PM everyday for the whole week.

Overall, I will be really happy to receive your comment, suggestion, and guidance aiming to improve our Section activities.
At the onset I would thank all the members of IEEE Kolkata Section for extending their valuable support. We tried to reach the members and students who are located far away from Kolkata. Our chair Prof. Guha has met members and students from North Eastern States and Bhubaneswar, which come under the jurisdiction of Kolkata Section. We will try to reach out more in the future. I would request all of you to encourage young professionals and students to join IEEE and I would appeal to all my fellow members to continue their memberships in the years to come and to come forward and volunteer to lead Kolkata Section. I would request all of you to give your suggestions for improving the Kolkata Section Newsletter.

With fraternal greeting

Suparna Kar Chowdhury
Secretary, IEEE Kolkata Section
suparna1964@yahoo.com

Section Program

Like every year, the annual social event of IEEE Kolkata Section was held on 19 Jan 2014 at Bharat Scouts & Guides, Ganganagar Training Campus, Kolkata, West Bengal. About 50 IEEE members and Guests attended the event.

Three ExeCom meetings were arranged during January 2014 to June 2014. The third meeting was a half day event, arranged in Calcutta Rowing club followed by lunch. The members interact over lunch and it was decided that section will organize CALCON 2014 in November.

1st Technical Lecture Meeting was arranged by IEEE Kolkata Section at Seminar Room of Electrical Engineering Dept. of Jadavpur University, on 26th March 2014. Prof. N. Vedachalam of Vikram Sarabhai Space Centre, Thiruvananthapuram delivered a lecture on “Challenges in Cryogenic Rocket Propulsion System”. The lecture was attended by 41 guests and 6 IEEE members.

IEEE Kolkata Section Chair Prof. D. Guha met the IEEE members at Shillong over a dinner on 21st June 2014. The meeting was attended by 14 members.

Prof. S.S. Pattnaik, NITTTR, Chandigarh and Prof. S. Raghavan, National Institute of Technology, Trichy served as the Organizing Chairs of this event. In the pre-workshop tutorials, Professors K.T. Selvan, Ramesh Garg and R.K. Mishra presented tutorials. Prior to these tutorials, the organizing chairs gave preamble to this weeklong workshop whereas Chapter’s founding chair Prof. Debatosh Guha, Immediate Past Chair Prof. R. K. Mishra and the Present Chair Dr. S. Sankaralingam offered felicitations.

The workshop was formally inaugurated by Dr. A. L. Das, Director, SAMEER in the presence of Prof. M.P. Poonia, Director, NITTR, Chandigarh. Around 110 Research Papers were presented by the participants in various technical sessions. Apart from these technical sessions, the workshop was also comprised of invited talks by Professors A. Alphones, Tzyh-Ghuang Ma, K. J. Vinoy, Sanjoy Das, S. Raghavan, Bhaskar Gupta, Mr. Arvind Chauhan (Bharti Airtel) and Mr. Vishal Gupta (Agilent).

There was a Panel Discussions on Future Antennas with Panel experts Dr. A L Das, Dr. S Pal, Professors A Alphonse, Tzyh-Ghuang Ma, Ramesh Garg, Mr. Arvind Chauhan and the organizing chairs Professors S. S. Pattnaik and S. Raghavan. There were exhibition stalls installed by the sponsors and some of the commercial EM software companies. The weeklong technical programme, IAW 2014, was concluded successfully on 30th May 2014. This report is based on the information provided by the organizing chairs.

You will find us at: www.antweek.org
IEEE Computational Intelligence Society Kolkata Chapter on 5th February, 2014 organized the following Lecture in Indian Statistical Institute, Kolkata

**Title:** Mining statistically significant substrings using the chi-square statistic

**Speaker:** Dr. Arnab Bhattacharyya, Department of Computer Science and Engineering, Indian Institute of Technology (IIT), Kanpur.

**Venue:** NAB - 1, Kolmogorov Bhavan, Indian Statistical Institute, Kolkata

**Activity:** An audience of about forty students, research fellows and faculties from Jadavpur University and ISI attended the lecture. Dr. Bhattacharyya opened his lecture by emphasizing the need of mining the statistically significant substrings, given the vast reservoir of sequence data stored worldwide. He subsequently introduced the relevant concepts of statistics including p-value test and chi-square measure. He then discussed how the statistical tools along with heuristic search techniques have been used in identifying the unusual patterns within long strings of data. He also highlighted several area of application where mining statistically significant data is important. The session was concluded with an open question-answer session.

IEEE Computational Intelligence Society Kolkata Chapter on 10th March, 2014 organized the following Lecture Department of Computer Science and Engineering, Jadavpur University, Kolkata, India.

**Title:** Collaborative Representation based Biometrics using Palm Dorsa Vein Patterns

**Speaker:** Dr. Amitava Chatterjee, SMIEEE, Electrical Engineering Department Jadavpur University

**Venue:** Amitava Dey Lecture Hall (ADM), Department of Computer Science and Engineering, Jadavpur University, Kolkata, India.

**Activity:** Forty audience including faculty and undergraduate, master and doctoral students from Jadavpur University attended the IEEE CIS Lecture. Dr. Chatterjee initially discussed the fundamentals of pattern recognition and digital signal processing. Subsequently he described the importance of vein patterns recognition in Biometry. He also talked about the methodologies used. Students asked lot of questions which make
the session interactive.

IEEE Computational Intelligence Society Kolkata Chapter on 21st March, 2014 organized a workshop in the Department of Computer Science and Engineering, University of Kalyani on "Computational Methodologies and Applications". In the workshop the following lecture was delivered

**Title:** Computational Intelligence aspects of Distributed Algorithms

**Speaker:** Dr. Ansuman Banerjee, Advanced Computing and Microelectronics Unit, Indian Statistical Institute, Kolkata, India.

**Venue:** Department of Computer Science and Engineering, University of Kalyani, Kalyani, India.

**Activity:** A total of 85 participants from different colleges and universities of West Bengal attended the workshop. Dr. Banerjee initially talked about the fundamentals of computational intelligence and distributed computing. He subsequently emphasized the role of distributed computing in solving large complex problems. He discussed in detail how computational Intelligence aspects of distributed algorithms can further enrich the area. The session was made interactive as Dr. Bannerjee addressed several interesting questions from the audience.

IEEE Computational Intelligence Society Kolkata Chapter on 5th April, 2014 organized the following lecture in the Department of Computer Science and Engineering, Murshidabad College of Engineering and Technology, Murshidabad, India

**Title:** Basic Microarray Analysis and its Role in Cancer Study

**Speaker:** Professor Sanghamitra Bandyopadhyay, SMIEEE, Machine Intelligence Unit, Indian Statistical Institute, Kolkata, India

**Venue:** Department of Computer Science and Engineering, Murshidabad College of Engineering and Technology, Murshidabad, India.

**Activity:** Sixty audience including faculty and doctoral students from Murshidabad College of Engineering and Technology, Murshidabad as well as other institutions from West Bengal attended the IEEE CIS Lecture. The lecture initially covered the basic issues and challenges of Computational Biology and Bioinformatics. Subsequently the current research trends in Microarray analysis and its role in cancer study has been discussed in detail. In this regard, many open research issues were discussed by Professor Badyopadhyay.

IEEE Computational Intelligence Society Kolkata Chapter on 14th April, 2014 organized
the following Distinguished Lecturer in Institute for Technical Education and Research (ITER), Bhubaneswar, India.

**Title:** Learning in non-stationary environments

**Speaker:** Professor Cesare Alippi, FIEEE, Information Processing Systems, Dipartimento di Elettronica e Informazione, Politecnico di Milano, Milano, Italy

**Venue:** Bansuri Guru Auditorium, Institute for Technical Education and Research (ITER), Bhubaneswar, India.

**DLP Activity:** Prior to his scheduled lecture, Prof. Alippi had a discussion with the Dr. Ujjwal Maulik, Chair IEEE CIS, Kolkata Chapter, Dr. Swagatam Das, Secretary, IEEE CIS Kolkata chapter and Dr. Sanghamitra Bandyopadhyay, Member IEEE CIS Kolkata Chapter regarding how to popularize IEEE CIS activities in India. There was also a discussion regarding the new research trends in computational intelligence along with how to encourage young researchers to pursue new challenges.

Prof. Alippi's IEEE Distinguished Lecture was attended by ninety students and faculty members including 16 IEEE members. Students and faculty members from other institutions of Bhubaneswar also participated. In his lecture Prof. Alippi addressed the challenging issue of Learning in dynamic environments. He discussed how computational intelligence techniques can be used for evolving dynamic fitness functions. During his excellent presentation, he demonstrated several real-life examples. He also provided insightful ideas on how learning in non-stationary environments can be used to design efficient embedded systems. The last part of the lecture was mostly interactive. Many interesting questions were raised by the participants and answered by Prof. Alippi.

Post lecture Prof. Alippi spent some more time with the audience to explain how young researchers can be benefitted from different IEEE activities.

There was a panel discussion regarding the new challenges and issues of computational intelligence research. Prof. Alippi, Prof. Maulik along with the Director and Dean of ITER, Bhubaneswar, India took part in the discussion. All the members provided their thoughtful comments. Subsequently there was an interactive session as well as exchange of ideas. Finally it was concluded that computational intelligence is becoming more and more popular and the research is becoming more multidiscipline.
Introduction:
The geographic area under the jurisdiction of IEEE Kolkata Section has several groups active in the area of Dielectrics and Insulation Engineering. Quite a few of these group members are IEEE members and some of them publish regularly in IEEE Transactions on DEI. This chapter provides a platform for close interaction between academicians, researchers and practicing engineers.

Student Activity

<table>
<thead>
<tr>
<th>Title of the Activity</th>
<th>Organized by</th>
<th>Date</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circuiistic of Convolution 2014</td>
<td>Students of the Department of Electrical Engineering, Jadavpur University in Collaboration with DEIS Kolkata Chapter</td>
<td>15 Feb 2014</td>
<td>Electrical Engineering Department Jadavpur University</td>
</tr>
</tbody>
</table>

This activity, organized by the Students of the Department of Electrical Engineering, Jadavpur University, Kolkata, India, in collaboration with DEIS Kolkata Chapter, was a competition where students from various institutions in groups took part in making circuit solutions related to practical engineering problems. Design competition part lasted for six hours. The Jury comprised of eminent academicians and technologists to judge the award winners of the competition. Accordingly prizes and certificates were given to the participants holding the first, second and the third positions. There were in total 101 participants in this event, of which there were 7 IEEE members.
Technical Lecture Meeting

<table>
<thead>
<tr>
<th>Title of the Talk</th>
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<th>Date</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition Monitoring of Oil-Paper Insulation of Transformers</td>
<td>Prof. Sivaji Chakravorti Department of Electrical Engineering Jadavpur University, Kolkata, India</td>
<td>Mar 31, 2014</td>
<td>Senate Hall, NIT Rourkela, Odisha</td>
</tr>
</tbody>
</table>

There were 65 participants in this lecture meeting out of which 9 were IEEE members. A large number of interested students took part in this lecture.

Educational Activity

<table>
<thead>
<tr>
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<tr>
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<td>Mar 31, 2014</td>
<td>Senate Hall, NIT Rourkela, Odisha</td>
</tr>
</tbody>
</table>

There were 29 participants in this lecture meeting out of which 5 were IEEE members. Interested students took part in this lecture.
<table>
<thead>
<tr>
<th>Title of the Talk</th>
<th>Speaker</th>
<th>Date</th>
<th>Venue</th>
</tr>
</thead>
</table>
| Smart Grid        | Dr. J. N. Bera  
*Department of Applied Physics*  
*University of Calcutta* | Apr 04, 2014 | Seminar Hall, Murshidabad  
*College of Engineering and Technology Berhampore*  
*Murshidabad 742102* |

There were 93 participants in this lecture meeting out of which 5 were IEEE members. A large number of interested students took part in this lecture.

<table>
<thead>
<tr>
<th>Title of the Talk</th>
<th>Speaker</th>
<th>Date</th>
<th>Venue</th>
</tr>
</thead>
</table>
| Control System Engineering | Dr. K. Das Sharma  
*University of Calcutta* | Apr 04, 2014 | Seminar Hall, Murshidabad  
*College of Engineering and Technology Berhampore*  
*Murshidabad 742102* |

There were 93 participants in this lecture meeting out of which 5 were IEEE members. Students attended in large numbers and actively interacted with the speaker.

<table>
<thead>
<tr>
<th>Title of the Talk</th>
<th>Speaker</th>
<th>Date</th>
<th>Venue</th>
</tr>
</thead>
</table>
| Energy Efficient Building | Prof. S. Neogi  
*School of Energy Studies*  
*Jadavpur University* | Apr 04, 2014 | Seminar Hall, Murshidabad  
*College of Engineering and Technology Berhampore*  
*Murshidabad 742102* |

There were 93 participants in this lecture meeting out of which 5 were IEEE members. A large number of interested students and faculty members took part in this lecture.
<table>
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<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Voltage Transmission Line and Underground Cable</td>
<td>Prof. S. Chakravorti Department of Electrical Engineering Jadavpur University</td>
<td>Apr 05, 2014</td>
<td>Seminar Hall, Murshidabad College of Engineering and Technology Berhampore Murshidabad 742102</td>
</tr>
<tr>
<td>Smart phones as new platform for condition/health monitoring</td>
<td>Dr. D. Dey Department of Electrical Engineering Jadavpur University</td>
<td>Apr 05, 2014</td>
<td>Seminar Hall, Murshidabad College of Engineering and Technology, Berhampore Murshidabad 742102</td>
</tr>
<tr>
<td>Capacitive sensor and signal conditioning</td>
<td>Prof. S. Munshi Department of Electrical Engineering Jadavpur University</td>
<td>Apr 05, 2014</td>
<td>Seminar Hall, Murshidabad College of Engineering and Technology, Berhampore Murshidabad 742102</td>
</tr>
</tbody>
</table>

There were 93 participants in this lecture meeting out of which 5 were IEEE members. A large number of interested students took part in this lecture. The students took active interest in the topic and the talk ended with an extensive question-answer session.
A technical talk on “Beyond Charge-Based Computing” was presented by Prof. Kaushik Roy, Edward G. Tiedemann Jr. Distinguished Professor, Purdue University, School of Electrical and Computer Engineering. In this talk the advantages of using spin as state variable for both memory and logic was discussed. Finally, the recent advances in other non-charge based computing paradigm such as magnetic quantum cellular automata were considered. The talk was attended by more than 80 students and 20 faculties. The student members as well as the faculties were largely benefited from the talk.

A technical talk on “Approximate Computing for Energy-efficient Error-resilient Multimedia Systems” was presented by Prof. Kaushik Roy, Edward G. Tiedemann Jr. Distinguished Professor, Purdue University, School of Electrical and Computer Engineering. The general topic of “Approximate Computing” was the main focus of the talk on “Approximate Computing for Energy-efficient Error-resilient Multimedia Systems”. The talk was attended by more than 80 students and 20 faculties. The student members as well as the faculties were largely benefited from the talk.
IEEE EDS Calcutta Chapter organized Technical seminar on Master of Engineering / Technology thesis 2014 on “PERFORMANCE ENHANCEMENT OF TUNNEL FIELD EFFECT TRANSISTOR: A MODELING AND SIMULATION STUDY” BY SAYANI GHOSH, “IMPLEMENTATION OF DIFFERENT CIRCUIT LEVEL DESIGN TECHNIQUES FOR REDUCING THE LEAKAGE POWER” BY DEBABRATA NADU and “DESIGN AND SIMULATION OF RF CIRCUITS USING LDMOS” BY SWARNIL ROY on 12th June 2014 at SMDP –II Laboratory, Electronics and Telecommunication Engineering Department, Jadavpur University. The seminar was attended by more than 50 students and 5 faculties. All of them benefited immensely from the talks.

A technical talk on “Nanoelectronics: A bottom-up Approach” was presented by Prof. Kaushik Roy, Edward G. Tiedemann Jr. Distinguished Professor, Purdue University, School of Electrical and Computer Engineering. The talk was attended by more than 130 students and over 20 faculties. All of them benefited immensely from the talk.
The two day workshop presented comprehensive details of the state of the art VLSI devices and its applications in integrated circuit design. There were 3 tutorial sessions, conducted by Dr. Soumya Pandit, Prof. Chandan K. Sarkar and Dr. Angsuman Sarkar. Apart from theoretical lectures, hands-on-training on TCAD simulation was provided to the participants. The workshop was attended by nearly 150 students, 10 research scholars and 8 professors. The workshop also consisted of interactive discussions between the ED members and students of the host institute for awareness development. The student members as well the faculties of the host institute were largely benefited from this workshop.
A Lecture meeting was organized on "Association of Ionospheric Parameter with major earthquake", by Prof. Subrata Kumar Midya, University of Calcutta on 28 March 2014. It was attended by 30 participants out of whom 10 were IEEE members. Ionospheric radiations also vary with time and place and it highly depend on different ionospheric parameters. With time, ionospheric variation analysis is gaining over lithospheric monitoring in serving precursors for earthquake forecast. The association of major (Ms ≥ 6.0) and medium (4.0 ≤ Ms < 6.0) earthquake occurrence throughout the world in different ranges of the Ionospheric Earthquake Parameter where 'Ms' is earthquake magnitude in Richter scale. From statistical and graphical analysis, it is concluded that the probability of earthquake occurrence is maximum when the defined parameter lies within the range of 0 – 75 (lower range). In the higher ranges, earthquake occurrence probability gradually decreases. Probable explanation is also suggested.

Speaker: Prof S K Midya
Group photo of the Participants
A Lecture meeting was organized on “Climate Uncertainties”, by Prof. Gautam Kumar Sen, Department of Oceanographic Studies, Jadavpur University, Kolkata on 22 May 2014. It was attended by 25 participants out of whom 10 were IEEE members. Uncertainties in climate change analysis are often incorporated using probabilistic methods. In climate change analysis uncertainties associated with GHG emission inventories, various atmospheric and oceanic measurements need to be carefully incorporated before any vital policy decision can be taken. Traditional sources of uncertainty have included imprecision in measured model input parameters, model numerical error and inaccuracies, demographic projections, technological advances and performance, and human operational decision making. Uncertainty analysis should play a diagnostic role in any integrated assessment efforts, highlighting factors whose uncertainty is pivotal in policy considerations.

This meeting was attended by 25 participants out of whom 10 were IEEE members. Prof Calla addressed some emerging aspects of Electromagnetic spectrum ranging from 0.1-10THz.
The first technical lecture meeting of IEEE IAS Kolkata was organized on 6\textsuperscript{th} January 2014 in the Department of Electrical Engineering of Jadavpur University on the topic of 'Resonant DC-DC Power Conversion for UPS Systems'. The talk was delivered by Dr. Rajesh Ghosh, of American Power Conversion (APC) by Schneider Electric, Bangalore, India. Thirty people including two IEEE members attended the programme. The lecture started with a typical UPS systems top level block diagram, need for DC-DC power conversion in UPS system, traditional DC-DC converters used in UPS systems and their drawbacks. Subsequently it addressed the need for soft-switching DC-DC power conversion, different soft-switching DC-DC converters and their drawbacks, selected resonant DC-DC converter for present application, design and development of components to be used, experimental prototype, digital control, integration with UPS and test results.

This meeting was organized on 08-01-2014 in Bengal Engineering and Science University, Shibpur, Howrah, India and comprised of three lectures. The first two lectures were by Ms. Xiaomin Lu, University of Windsor, Canada and the third lecture was by Dr. Soumitra Das of Indian Institute of Science, Bangalore, India. The first lecture talked about the surge in popularity of different types of electrified vehicles (EV). It presented various aspects of electrified transportation including EV motor design, drive development, architecture, energy management, storage devices and charging infrastructure and testing. The second lecture talked about a novel approach towards parameter estimation of a line-start permanent magnet synchronous machine validated with experiments on a laboratory prototype. The third lecture was on novel pulsewidth modulation techniques for a neutral-point-clamped three-level inverter to reduce line current distortion and improved performance over a two-level counterpart. The meeting was attended by 60 people including 8 IEEE members.
Convolution 2014 was organized by the Students of the Department of Electrical Engineering, Jadavpur University, Kolkata, India, in collaboration with PES Kolkata Chapter, was a competition where students from various institutions in groups took part in various activities like quiz, circuit design and making and solving practical engineering problems. The Jury comprised of eminent academicians and technologists to judge the award winners of the competition in various activities. Accordingly prizes and certificates were given to the participants holding the first, second and the third positions. There were in total 101 participants in this event, of which there were 7 IEEE members.

Technical Lecture Meeting and Membership Drive
May 3, 2014

A lecture meeting was organized at Electrical Engineering Department, MCKV Institute of Engineering, Liluah, Howrah, West Bengal, India. Welcome address was given by Prof. Debatosh Guha, Chair, IEEE Kolkata Section. A talk on “Benefits of IEEE Membership” was given by Dr. Debangshu Dey, Secretary, IEEE PES Chapter, Kolkata. A technical lecture on “Indian Power Scenario - Adoption of new Technology” was delivered by Mr. Sanjay Kar Chowdhury, Chair, IEEE PES Chapter, Kolkata. There were in total 54 participants in this event including students and teacher, of which there were 3 IEEE members.
Late Prof. J.K. Chaudhury Memorial Lecture was organized at R.N. Mukherjee Hall of The Institution of Engineers, WBSC, Gokhale Road, Kolkata. Life sketch of Late Prof. J.K. Chaudhury was presented by Mr. Sanjay Kar Chowdhury, Chair, IEEE PES Chapter, Kolkata. Introduction of Speaker, Dr. Amitava Chatterjee, Associate Professor, Electrical Engineering Department, Jadavpur University to the audience was done by Dr. Debangshu Dey, Secretary, IEEE PES Chapter, Kolkata. The lecture titled, “Autonomous Navigation of Mobile Robots using Computer Vision” by Dr. Amitava Chatterjee was highly appreciated by the audience. The lecture session was attended by 45 members from IE(I) & IEEE PES.
IEEE Student Branch of Gauhati University was formally inaugurated on 23rd June, 2014 by Prof. Debatosh Guha, Chairman, IEEE Kolkata section in presence of Prof. K. C. Sarma, Dean Faculty of Technology, Gauhati University, Dr. Kandarpa Kumar Sarma, HoD i/c., students and faculty members of Dept. of Electronics and Communication Engineering, Gauhati University. In connection with the opening event of the IEEE student branch a 7-day National Level Workshop on LabVIEW was also organized which was hosted by the Dept, of ECE, GU and supported by the Resonics- Society for Promotion of Education and Research in Electronics and Related Areas. In his inaugural speech Prof. Guha highlighted the importance of the IEEE student branch and the benefits that the members can derive. Prof. Guha also spoke briefly about the early stages of IEEE, its formation and its present state. Prof. Kanak Chandra Sarma, Dean, Faculty of Technology, Gauhati University opined that with the IEEE student branch student and researchers of this region will get an opportunity to be connected to the rest of the world. In his welcome speech Dr. K. K. Sarma, HoD i/c, ECE, GU stressed on the importance of sharing of knowledge through IEEE and the necessity of workshops and training programmes as means of continuous education. Manash P. Sarma, Asst. Prof., ECE, GU and Branch Counsellor, IEEE Student Branch, GU spoke about the initiatives that lead to its formation.

IEEE has provided a unique branch code of STB15701 and a School Code of 60058914 to the GU branch. It is worthwhile to mention that the formation of this branch is expected to create a platform for the students and researchers to become a part of this largest professional body in the world and enhance the teaching-learning activities. The branch is formed with Manash P. Sarma, Assistant Professor, ECE, GU as the Branch Counselor and Abhijit Roy as the Chairman.

The meeting started with the national anthem of Assam O Mor Aponar Desh (sang to coincide with the 150th birthday celebrations of Rasaraj Lakhminath Bezbaruah- the doyen of Assamese literature and the creator of the song) and came to an end with the vote of thanks given by Apurba Bikash Kalita, Assistant Professor, ECE, GU and Coordinator of the workshop. About 35 participants of the workshop from different parts of the state, students, faculty members and staffs of the Department of ECE took part in the event.
IEEE Student Branch IIT Guwahati organized its 4th National Level Workshop on the topic of Micro-Electro-Mechanical Systems (MEMS) and Very-Large-Scale Integration (VLSI) Digital Design Flow on 8th and 9th of February 2014 at Conference Center, IIT Guwahati. Various tutorials and hands-on experience along with the knowledge of different optimizations required in the field of MEMS and VLSI digital design using globally used computer aided tools such as CoventorWare, Synopsis and Cadence were being presented to the participants.

The 2-day event was inaugurated by Prof. S. C. Srivastava, Dy. Director of IIT Kanpur, Prof. Ajoy Chakraborty, Professor, IIT Kharagpur and former Vice-Chancellor, BITS Ranchi, Dr. Sunil Sherlekar, Director of PCRIL, Bengaluru, Dr. A.L. Das, Director, SAMEER, Mumbai, Prof. R. Bhattacharjee, Head, Dept. of Electronics & Electrical Engineering, IIT Guwahati, Dr. R. K. Sonkar, Assistant Professor, Dept. of Electronics & Electrical Engineering, IIT Guwahati and Mr. Sandeep R., Chairman IEEE Student Branch. Prof. Shrivastava, congratulated the student branch for having indulged in imparting tutorials and workshops on emerging technical fields for students and faculty for the country in general and north-east India in specific. He urged IIT Guwahati to start its own IEEE Section, which would be the first section in entire north-eastern region.

Dr. A.L. Das, expressed his profound happiness over the initiative said such activity of IEEE student branch IIT Guwahati justifies one of the prime motives of an IIT in the region.

Senior Research Scholars, Mr. Gaurav Saxena and Mr. Rahul Shrestha at IIT Guwahati were the speakers at the event. Participants came from Assam Engineering College, Don Bosco Institutions, Guwahati University, NITS Mirza, West Bengal Technical University, Tezpur University, NIT Meghalaya, NIT Silchar, IIT Guwahati and many more colleges. The speakers and the organizing team were felicitated and participants were distributed with certificates.
IEEE Student Branch in association with Women in Engineering wing of IIT Guwahati organized a 2-day workshop “praGYaanaM”, for girls on the 5th and 6th of April, 2014. The workshop was free-of-cost for all the 49 participants from Northern Guwahati. Being the first of its kind from an IEEE Student Branch, the workshop aimed at motivating girls towards basic and higher education. The entire event was held solely on donations from IIT Guwahati Community. The workshop was inaugurated by Sandeep R., Chairman IEEE Student Branch and Swayamsampanna Padhi, Chairperson WIE. 19 basic science experiments were demonstrated to and then performed by the participants. Day-1 concluded with a quiz by Mr. Ganji Sreeram.

Elementary self-defence techniques were imparted by Mr. Pranjal Buragohain. A session on basic computer skills and internet was presented by Mr. Mrinmoy Bharadwaj. An Art-of-Living session by Ms. Atreyi Ghosh concluded the workshop.
SIT IEEE Student Branch
Initiatives Towards Energy and Social Issues

Expansion of intellect and heart both can lead to a perfect man and a perfect society

IEEE student branch at Silicon Institute of Technology (SIT), BBSR, ORISSA, INDIA has been trying to give the intellectual ‘to be engineers’ a platform to develop their intellect with exposure to latest technologies and trends and fill their heart with compassion with socially relevant issues. The main agenda for SIT, IEEE student branch 2013-14 is Socially relevant themes. Two such mega events were organised.

The event was a great success as around 1500 people inside the campus were sensitized about the energy conservation issue.
Go MAD (Go Make A Difference) - An IEEE Event in NOESIS 2K14

IEEE student chapter of Silicon Institute of Technology, Bhubaneswar had organized an event “GO MAD–Go Make A Difference” in Technical Festival of the college NOESIS 2K14. This event was first of its kind where efforts were made to engage students in some social cause. This event was of one month duration starting from January 6, 2014 to February 7, 2014. It was conducted in two phases. Participants were given a month to complete a set of 20 tasks. Nine groups participated in this event. Finally, a presentation for top six groups was held on February 8, 2014. The results were declared on the same day.

Nine Groups that participated in this event were:

1. Blazing Heptad
2. Nonnets Nine
3. Ummid Ekasha
4. Rise
5. Youth Revolution
6. Pioneer
7. Reform’n’ation
8. Phoenix
9. Impeccable

**PHASE I – Task Completion**

20 tasks were broadly classified into five categories. They are as follows:

1. **Child Education**
   
   Since children are the future of the nation, so it is very important to educate them. This area mainly focused on education provided by the government. Participants were required to look into the prevailing conditions and suggest some methods for improvement. Task was also designed to help the less privileged children to develop a competitive attitude.

2. **Environment**
   
   The tasks in this area were designed to make the participants aware of the amount of waste generated each day and what steps can be taken to reduce and reuse them. This was done to help students understand their responsibilities towards mother Earth.

Electronic wastes and product made from such wastes
3. **Women Empowerment**
The objective of the tasks here were to highlight the present condition of women in society. It aimed to create awareness of literacy rate among women. Participants were required to study laws relating to women welfare and suggest measures for women empowerment.

A group performing 'NukkadNatak' to create awareness about present atrocities on women

4. **Health Hygiene and Sanitation**
The task here highlighted the importance of keeping our surrounding clean and healthy. It also made the participants aware about the generic medicines available in government hospitals. Participants were given the task to make the public aware of harmful effects of consumption of tobacco and alcohol.

A group explaining slum dwellers about ill effects of tobacco/alcohol consumption

5. **Miscellaneous**
This section dealt with the tasks such as rain water harvesting, classroom cleaning drive, electricity audit report and survey of the college mess.

Students cleaning their classroom
PHASE – II

After final evaluation of their work, six teams were qualified for the presentation round. They had to give a power point presentation showing the details of their work. The jury panel consisted of three members - Miss Sharada Bharaty, founder and head of SPARSH Foundation, a Non profit Organisation, Miss Silvia Gonell and Sir A.K. Tripathy. Miss Bharaty is an active member in this field for past thirty years. Miss Gonell from Barcelona, Spain is an active social worker in the field of women empowerment. Sir A.K. Tripathy is a branch chair of IEEE student chapter, Silicon Institute of Technology, Bhubaneswar.

The presentation round started with a welcoming speech given by the Vice President, IEEE students chapter, Silicon Institute of Technology, Bhubaneswar.

All six teams presented their work enthusiastically and received high appreciation from the judges. This event attracted a large number of audience.
Teams presenting their work in front of the judges and audience

The event ended with prize distributions and a vote of thanks given by the secretary of IEEE student chapter, Silicon Institute of Technology.

Team Impeccable 10 Declared as a winner

A vote of thanks by Secretary of IEEE, Students Chapter

Through this event IEEE has taken up a social initiative in generating awareness and developing an inclination of youth populace towards current social problems and providing them a platform to take up social issues. This event was designed with a vision for the betterment of the society by these students who are the future of the country.
Dr. Paul El Khoury is a research scientist at SAP Research Lab; Germany. SAP (Systems, Applications & Products in Data Processing) is one of the world’s largest software companies. About 60 participants attended this talk from Tezpur University. Prof. S.K. Sinha, Department of CSE, SOE, Tezpur University, was also present in the talk. Dr. Paul addressed the audience and introduced concepts of security engineering and developments in the same at SAP Labs. Dr. Paul also enlightened the paths to pursue career in Security Engineering. The lecture was followed by an interactive session with the audience. This report is based on the information provided by Mr. Shourya Munim, Student Vice Chairperson of IEEE Student Branch of Tezpur University.
About 65 participants attended this Orientation session from different departments of School of Engineering Tezpur University. Prof. Sahu, Branch Mentor of IEEE Student Branch of Tezpur University was present in the Orientation session and addressed the audience indicating the rich heritage of IEEE and its impact on the professional engineers. Senior Student Members discussed with other student Members the Empowerment of Women in Engineering (WIE) and how IEEE will help students in improving their skills. Also the Core Team Members gave a presentation on what events and competition IEEE Student Branch Tezpur University has planned to hold by the end of year 2014. The junior student members, Tezpur University shared their experiences with IEEE Student Branch of Tezpur University for the past four months. A few Demonstrations were also held in order to give the students an idea about the technologies (embedded systems, Linux systems) they were going to deal with in near future. This report is based on the information provided by Mr. Puneet Sharma, Student Chairperson of IEEE Student Branch of Tezpur University.
These for students by students workshops were organized every weekend on a regular basis for the IEEE members of Tezpur University. More than 50 IEEE members of different engineering branches like Electronics and Communication Engineering, Computer Science Engineering and Mechanical Engineering attended these seminars. In the seminar on MATLAB, members were taught how to carry out mathematical computations using MATLAB and also about the basics of MATLAB software. The workshop on Circuit Designing trained the members in circuit designing and simulation techniques using software and other resources whereas the seminar on Image Processing helped the members to understand the basics of Image Processing. The members were also given tutorials on Robotics and Embedded Systems through the workshops. The Student workshop on Python covered the basics of python programming language and the workshop on Linux taught the members about Linux installation process and basic Linux commands. It not only introduced the students to some newer concepts but also boosted their confidence. This report is based on the information provided by Mr. Bhupendra Gupta, Student Secretary of IEEE Student Branch of Tezpur University.
Sixteen women participated in the workshop. In the pre lunch session, one member of IEEE WIE Kolkata Chapter demonstrated a power point presentation on how to get started with Power Point. Every participant was able to execute the instructions simultaneously on the computers provided to them. They were delighted to learn how to insert a table, charts and add animations by their own. Sufficient volunteers were present to help them.

In the second half, a student member of IEEE WIE Kolkata Chapter gave a presentation on getting started with EXCEL. She showed how to open Excel file., how to type in Excel sheet, how to save Excel file, how to see out put in Excel sheet, how to insert function, how to draw a table, plot in Excel sheet and how to go to the next sheet.

Since one day is not sufficient the participants were provided with hard copy documents for their future help.

The program was concluded with a valedictory session where participants were given participation certificates. The participants praised the volunteers whole heartedly and thanked the organizers for the program. They also showed interest on such program in future.
The conference was organized to commemorate centenary celebration of University College of Science, University of Calcutta and 90th anniversary of the Department of Applied Physics. The conference received technical collaborations from IEEE Kolkata Chapter, IET-UK Kolkata Network, CSI Kolkata Section, IETE India, CPRI, Government of India, IEEE EMBS and IMS Delhi Section. The conference obtained financial support of Technical Education Quality Improvement Programme (TEQIP) Phase II, UCT, University of Calcutta, Department of Science & Technology, Govt. of India, Department of Science & Technology, Govt. of West Bengal, IET-UK Kolkata Network, All India Council of technical Education; Landis + Gyr, Matix Fertilizers and Chemicals Ltd, Dahn India Pvt. Ltd. and Century Transformers Pvt. Ltd.

The initial call for paper received a total submission of 364 manuscripts. After initial screening, 356 of it were sent for blind review process. From these, 217 submissions were provisionally accepted. After review compliance check, only 172 manuscripts were given final acceptance in 'Oral' and 'Poster' category. Ultimately 163 papers were presented in the conference under five major tracks, (a) Control and Automation, (b) Instrumentation and Measurement, (c) Power and Energy, (d) Communication and Networking, (e) Computational Techniques and Expert Systems. The conference thus had a rejection rate of 55%.

The technical programme consisted of five plenary lectures, 15 invited lectures by senior professors and industry experts all around India and 20 technical sessions one single combined Poster Session. There were adequate interactions amongst the participants and experts. The conference proceeding was published with an ISBN No. of 978-1-4799-2043-3. All the presented research papers are now available in IEEE Xplore digital library.
We hope to reach you with the July-December 2014 issue by January 2015.