



**KOLKATA SECTION- GEO CODE R0 01 37  
2013**

**PART A – SECTION SUMMARY**

**A.1 Executive Summary**

Some of the important events of IEEE Kolkata Section and its Chapters/AGs in the year 2013 IEEE are summarized below.

- **Accomplishments of Section Members:** Members are always the pillar strength of the Section. The Section is very proud for the accomplishments of several members.
- **Felicitation Program:** IEEE Kolkata Section felicitated its **eminent member Prof. Sankar Pal**, former Director of Indian Statistical Institute in the evening of March 27, 2007 on the occasion of being **bestowed with the Padma Shri Award 2013**. This was arranged at Dakshin Kalikata Samsad, Deshapriya Park, Kolkata. About 45 Section, Chapter and GA officers were present in that evening.
- IEEE Kolkata **Section felicitated Dr. Amiya Kr. Chatterjee**, an eminent Electrical Engineer and Educator of the country, in the evening of May 3, 2013 on the occasion of his Birth Centenary being celebrated this year. Prof. Chatterjee was born on March 29, 1914 and graduated with diploma in electrical engineering in 1935 from National Council of Education, Jadavpur. He received his MS degree from Cornell University and PhD degree from University of Illinois in 1946 and 1948, respectively. Apart from various Industries in India, UK, and USA, Prof. Chatterjee served Jadavpur University, Birla College of Engineering, Pilani and Birla Institute of Technology, Mesra in different capacities.
- **Prof. Soumitro Banerjee**, Professor, Indian Institute of Science, Education & Research Kolkata, West Bengal, India has been **elevated to IEEE fellow** for his outstanding contributions to the understanding of nonlinear phenomena in power electronic circuits, and to the theory of border collision bifurcation. Kolkata Section felicitates Prof. Banerjee in this AGM-2014.
- **Prof. Ujjwal Maulik**, Professor, Department of Computer Science & Engineering, Jadavpur University and present chairman of the IEEE CIS Chapter of Kolkata Section has been elected a Fellow of Indian National Academy of Engineering (FNAE) this year.
- **Prof. Sivaji Chakravorti**, immediate past Chair of the section and Professor of Electrical Engineering at Jadavpur University has received the "Technical University Munich Ambassador" Award in 2013. He has been selected '**Chapter Secretary**' of IEEE Power & Energy Society for the year 2013.
- **Prof. Chandan Kumar Sarkar**, Chairman-Elect of the section and Professor of Jadavpur University, has been appointed a member of the Regions & Chapters Committee of IEEE Electron Devices Society for three years term commencing from January 2013.
- **Prof. Gananath Dash**, Professor, Sambalpur University has been appointed a Distinguished Lecturer of IEEE Electron Devices Society.

- **Prof. U.K.Siddhanta** and **Prof. S. K. Roy** of our Section have achieved IEEE Life membership.
- **Prof. Sushmita Mitra**, ISI-Kolkata has been selected as a Distinguished Lecturer (DL) of the IEEE Computational Intelligence Society for the term 2014-2016.
- **Chapter's Achievements:** Chapter and Affinity Group activities are the reflection of the Section. In the year 2013 two prestigious achievements are obtained. **IEEE AP-MTT Kolkata Chapter** has received **Outstanding Chapter recognition** for 2013 from the IEEE MTT Society and **IEEE Photonics Society (IPS) Calcutta Chapter** has been chosen as **2013 IPS Chapter Grant Recipient**. This Chapter will receive a grant award of \$2,120 to support chapter activities.
- **Advancing Technology for Humanity:** Present focus of IEEE is Advancing Technology for Humanity. IEEE's **Special Interest Group on Humanitarian Technology (SIGHT)** has been formed **in the last year** and successfully completed the second year project with the sanctioned grant from HQ.
- **Section Representation:** Prof. Debatosh Guha, Section Chair has attended many meeting such as R10 Meeting, March 2-3, 2013 held at Chaing Mai, Thailand. He inaugurated Workshop organized by IITG Student Branch during April 5-6, 2013 and had a general general meet with IEEE Members of the North-Eastern part of India, attended India Council Meeting held in Nagpur, September 21, 2013, and India Council Meeting at Bangalore, October 26, 2013. Prof. Iti Saha Misra represented R10 Student/WIE/GOLD meeting held at Hyderabad, India, during 11-14 July as a SIGHT Kolkata Section representative. Mr. Sanjay Kar Chowdhury and Prof. Suparna Kar Chowdhury attended the R10 South Asia Conference Leadership Program' held in Mumbai during INDICON 2013, 11-12 Dec 2013.
- **Growth of the Section forming new Student Branches and Chapter Student Branches:** Students are the promising future members of the section. Several new student branches have been formed in the year 2013 under different academic institutions as follows:
  - **New Student Branch: Academy** of Technology ( Geo code STB 13681), JIS College of Engineering (Geo Code STB 13701), National Institute of Technology (NIT) Patna (Geo Code STB 13191), NIT Arunachal Pradesh (STB 13521), Jagannath Inst Of Technology and Management (STB14291), Institute of Engineering & Management Student Branch (STB14301), Indian Institute of Technology - Patna Student Branch (STB14591)
  - **Student Branch Chapter:** Robotics and Automation Society Student Branch Chapter in International Institute of IT – Bhubaneswar (SBC 28561A), Computational Intelligence Society Student Branch Chapter (SBC 64611A) in Heritage Inst of Technology, Electron Devices Society Student Branch Chapter in University of Calcutta (SBC28561A), Electron Devices Society Student Branch Chapter in National Institute of Technology ,Silchar, Electron Devices Society Student Branch Chapter in National Institute of Science & Technology (NIST), Berhampur.
  - **New Women in Engineering Student Affinity Group** (SBA 61571) is formed at Indian Inst of Technology, Guwahati.
  - **The AP-MTT Chapter** continued to be one of the active chapters of the Kolkata section in the year 2013. The IEEE MTT Society recognized AP-MTT chapter as the **Outstanding Chapter**. Various technical activities of this chapter include **Electromagnetic Olympiad, India Antenna Week** and the **IEEE Flagship Conference AEMC 2013**. There have been few technical lectures, including one by a former IEEE AP-S Distinguished Lecturer.
  - **AP-MTT Chapter** has successfully conducted weeklong workshop of 4<sup>th</sup> **India Antenna Week** during 3-7 June, 2013 at Hotel Rama International, Aurangabad. Marathwada Institute of Technology (MIT),

Aurangabad was the local organizer. The purpose of the program was to make aware about the field of antenna research.

- **CAS Chapter** has collaborated in organizing National Seminar on “**Embedded Systems**” at Swami Vivekananda Institute of Science & Technology, Sonarpur on October 5, 2013 where Four Invited Technical papers were presented on several aspects of Embedded Systems. This chapter also conducted 11 lectures throughout the year.
- **CIS chapter** apart from several lecture meetings, has organized **National Workshop on Computational Intelligence: Theories, Applications and Future Directions** on July 12, 2013 at Siksha O Anusandhan University, Khandagiri, Bhubaneswar, Odissa, where eminent speakers like Prof. Hisao Ishibuchi, Prof. Nikhil R. Pal, Vice-President for Technical Activities, IEEE CIS Society, Vice-President for Publication IEEE CIS Society and Prof. Chin-Teng Lin, Editor IEEE Transaction on Fuzzy System have delivered lecture. **CIS also organized two days seminar on “Pattern Analysis and Machine Intelligence (PAMI-2013)”** 8th and 9th October, 2013 at St. Thomas’ College of Engineering and Technology, Kolkata, India where IEEE Fellow Prof. S.K. Pal delivered his speech.
- **ComSoc Chapter** is always a vibrant one conducted several activities apart from lecture meetings. In 02 Feb 2013 this chapter organized one day Educational Activity Program at Jadavpur University on Emerging Topics on Communication Systems and Distinguish Lecturer Program on 10, 2013 at Wipro Limited, Salt Lake City, Kolkata where Dr. K. K. Ramakrishnan, **Fellow, AT & T Labs - Research, Florham Park, NJ, USA** as Distinguished Lecturer delivered the Lecture on **Networking the Cloud: Enabling Enterprise Computing and Storage**.
- **Computer Chapter** co-sponsored one International Conference on **Computing and Systems ICCS- 2013** , **during 21-22 Sep, organized by** Department of Computer Science and Technology, Burdwan University, 4 technical lectures and a technical workshop on “Ubiquitous Computing on Cloud” was also organized by the chapter on 5th April 2013.
- **DEIS Chapter** is only two years old and vibrant with several activities. This year DEIS very successfully organized International Conference on **Condition Assessment Techniques in Electrical Systems (IEEE CATCON 2013)** technically co-sponsored by the IEEE Dielectrics and Electrical Insulation Society (DEIS) and organized by Dielectrics and Electrical Insulation Society Chapter of IEEE Kolkata Section held at Jadavpur University during Dec 6-8 2013. The technical program of IEEE CATCON 2013 consisted of tutorials, plenary talks, and oral research paper presentations. Eminent Professors from abroad and country along with industry participation was the attraction of CATCON 2013. DEIS also conducted Distinguish Lecturer Program at EE department of Jadavpur University on 03 Jan 2013 where Prof. **Prof. Markus Zahn MIT, USA delivered** his lecture on Ferrohydrodynamic and Electrohydrodynamic Flow Phenomena.
- **EDS chapter organized** Mini-Colloquium on “**Past, Present and Future of Nano CMOS Technologies**” in collaboration with EDS Madras Chapter during 27-28 Dec 2013 at Thiagarajar College of Engineering, Madurai ,Tamilnadu, India. Eminent professors from Japan, Taiwan and India have spoken on the various aspects of CMOS Nano Technologies. **TECHNOPHIL 2013: A workshop** on CMOS & Beyond CMOS Circuits & System Design was organized during 18-21 Mar 2013 at ETCE Department, Jadavpur University. EDS also organized **DLP program** on 14<sup>th</sup> Aug 2013, at Heritage Institute of Technology, Kolkata. Prof. Durga Misra, New Jersey Institute of Technology, NJ delivered DLP on Convergence of Nanoelectronics, Nanotechnology and Information Technology: Future Challenges.
- **GRSS Chapter** also steps into its second year organized **Educational Activity** on a very significant issue of **Global Warming, Solar Activity and Ozone Hole** on April 2013 at B. R. Nag Auditorium, Institute of Radio Physics and Electronics. GRSS also organized student activity program and several lectures programs.

- **IAS Chapter** has organized five technical lecture meetings and has co-hosted a training course on 'Power Electronics Applications in Industries'.
- **PES Chapter** is also a very vibrant and performing chapter. Over the years this chapter organized 5 lecture meetings, a half day student career workshop on "**Career challenges and opportunities of a graduate electrical engineer beyond 2020**", a **Distinguished Lecturer program** by **Prof. (Dr.) Katsuhiko Naito**, Consultant LF, Japan and IEEE PES on "**Insulator Contamination – Basics**" at **Jadavpur University, two seminars and social gathering meeting with the family members**. The speakers of the meeting are drawn from various reputed & longstanding academic institutions both at national & international arena like University of Applied Sciences, Augsburg, Germany and NGK Insulators, Japan & CESC Ltd, Kolkata.
- The PES chapter has nominated **Sri. Arijit Basuray** for Outstanding Chapter Engineer Award, in recognition to his outstanding contribution in electrical power engineering and **Ms. Konika Das** (Bhattacharya) has been nominated for "Chapter Engineer Award" for her active participation in advancement of PES Chapter.
- **Photonic Society Chapter** has already bagged 3 'Most Improved Chapter Award' since 2004. This year it has been awarded the '**2013 IPS Chapter Grant Recipient**'. Like every year this chapter celebrated National Science Day in collaboration with Calcutta University Student Branch on 17 May at a village School, Ulludanga Sadhanpur Tulsi Ram High School, Aamdanga, 24 Parganas, West Bengal. Students from some other school also participated in the program. Such type of program in remote area definitely helps to spread science and technology awareness to the students. PS also celebrated **IEEE day on Oct 01**, at Tezpur University, Assam.
- **GOLD AG** organized 5 lecture programs in 2013.
- **The Women In Engineering** Affinity Group of the Section is continuously growing with the increased number of members and various types of innovative activities keeping an eye with WIE mission and vision. In 2013, WIE organized a program on March 19, 2013, for "**Free-Hand Self-Defence**" at Indian Statistical Institute, Kolkata, to spread the awareness for learning some basic self defence strategies among young students to counteract unwanted hazards. WIE AG of the Section engages **underprivileged school students** from various places to make them aware of the science and engineering. It celebrated **World Water day** on March 22, 2013 along with AP-MTT chapter involving 40 underserved students from an organization of "PARIBAR" and Gabberia Childhood KG School, Howrah to visit Industrial & Technological Museum, BITM, organized a puppet show and drawing competition on the use of water to understand the importance of water. In the remote rural areas at Masjidbati **Parbati Vidyalay, Basanti, sundarban, West Bengal, WIE organized a one-day outreach** program in collaboration with Birla Industrial and Technical Museum (BITM), Kolkata on June 15, 2013, demonstrated simple daily life scientific experiments that one can perform even at their home, collecting common and easily available local ingredients. "**A glimpse of the e-world**" workshop was organized on 7th August 2013, to cater to home makers, teachers and other professionals who found themselves difficult in operating computers and became confused by their "Tech – savvy" children.
- **Educational activity:** The one-day Educational/Tutorial program on: **Emerging Topics on Communication Systems**" ETCOMS 2013 was organized by ComSoC Chapter in collaboration with ETC Department, Jadavpur University on **02 Feb 2013**. PES Chapter in collaboration with Technical Education Quality Improvement Program (TEQIP, Phase-II) of Jadavpur University organized one day Seminar on "**Insulator Contamination, Transmission Arrester and EMF around Power Facilities**" on **14th May 2013**.
- **International Conference:** As an event co-sponsored by our section the **4th International** Conference on Technical and Managerial Innovation in Computing and Communications in Industry and Academia held during 23-24 August, at Science City Auditorium, Kolkata in Technical Sponsorship of IEEE Kolkata

Section and organized by Institute of Engineering and Management, Saltlake. A **Two-day International Conference on Emerging Trends and Applications held on 12-13 Sep** at **Siloam, Barapani**, the **extension centre** of St. Anthony's **College**, Shillong. The **2nd International** Conference on computing and systems, 2013 (ICCS- 2013) was held on September 21-22, at the University of Burdwan, WB, India technically co-sponsored by IEEE Computer Soc. Chapter of the Section.

- **Two big International Conferences are organized by two chapters of the Section.** One is the very well known **IEEE Flagship Conference IEEE AEMC-2013** and second one is new **IEEE CATCON-2013**. The 4th edition of IEEE Applied Electromagnetics Conference AEMC 2013 was organized by IEEE AP- MTT Kolkata Chapter and was hosted by the KIIT, Bhubaneswar. AEMC is financially co-sponsored by the IEEE AP Society and technically co-sponsored by IEEE MTT Society. **The 1<sup>st</sup> International Conference on Condition Assessment Techniques in Electrical Systems (IEEE CATCON 2013)** is technically co-sponsored by the IEEE Dielectrics and Electrical Insulation Society (DEIS) and organized by Dielectrics and Electrical Insulation Society Chapter of IEEE Kolkata Section, held on December 06 - 08, 2013, in Kolkata, India at Jadavpur University Main Campus.
- **Outreach activity: The 4<sup>th</sup> edition of IEEE Indian Antenna Week (IAW) organized by AP-MTT chapter** at Rama International, Aurangabad in collaboration with Marathwada Institute of Technology (MIT), Aurangabad **on 3-7 June 2013. CIS chapter** organized National Workshop on **“Computational Intelligence: Theories, Applications and Future Directions”** on 12th July, 2013 at Siksha O Anusandhan University, Khandagiri, Bhubaneswar, Odissa.
- **IEEE Student Branch Activities of the Section:** SB NIT Arunachal Pradesh organized Website design competition on 12 August 2013. Students showed their designing skills. Winners got free hosting for a year.
- **IEEE-EDS Student Branch Chapter** at National Institute of Technology, Silchar organized One Day Seminar on **“Interdisciplinary Research on Biomedical Engineering”** under TEQIP-II on 26 Aug 2013 at Department of Electronics and Communication Engineering, NIT Silchar. Prof. Sneha Anand, Centre for Biomedical Engineering, IIT Delhi, Prof. Ajit Kumar Banthia, IIT Kharagpur and Dr. Santanu Dhara, Biomaterials and Regenerative Medicine Group, School of Medical Science and Technology, IIT, Kharagpur, delivered lectures on Biomedical Engineering, Biomaterials and Biosensors.
- This SB also Organized Distinguished Lecturer (DL) Talk on 10 Sept 2013 at NIT Silchar. Prof. Ramgopal Rao, IIT Bombay (IEEE-EDS DL) and Prof. Richard Pinto, IIT Bombay delivered talks on **“Nanoelectronics”** and **“Pulsed Laser Deposition-25 Years Young”** respectively.
- **IEEE Student Branch of Silicon Institute of Technology, Bhubaneswar** organized several programs like Half Day training program on **“Energy Conservation”** under Ministry of Petroleum & Natural gas, Govt of India conducted by Petroleum Conservation Research Association on 6th September, Intra college Technical Quizzard 2013 was held on 11th of September. Intra college quiz on energy and environment and poster competition on the theme E-waste management was held on 3rd October. Energy and Environment awareness week was celebrated from 30th September to 5th October. Lecture by Dr L.N.Bhuyan Prof California state University on 3rd August 2013.
- **JIS College of Engineering - Kalyani SB:** On 1<sup>st</sup> October, 2013 the IEEE day, the branch has organized a National Seminar on Applications of Control System in Science and Engineering with the Department of Electrical Engineering, JIS College of Engineering. Kalyani Student Branch will take a vital role in organizing the International Conference on Non Convention Energy (ICONCE) during January 16-17, 2014.
- **IEEE EDS University of Calcutta Student Branch Chapter** inaugurated on 26<sup>th</sup> September 2013. On that day a technical lecture meeting was arranged on the topic of **Electronic Design Automation: Its**

**Importance and Challenges, delivered by Prof. Susmita Sur Kolay**, ISI, Kolkata. This SB jointly with ED Kolkata Chapter organized another technical lecture on 18 Dec 2013 at Heritage Institute of Technology, on the topic “Resistance Random Access Memory (RRAM)-Devices (Memory and Selection Device) to Cross Point Array Based Circuits” delivered by Prof. Udayan Ganguly, IIT Bombay. They also organized a program on Industry Academia Meet with Students on 30 th Sep 2013, at the Institute of Radio Physics and Electronics where SoC Design Implementation Flow and IEEE Standards were discussed.

- **Birla Institute of Technology - Patna SB organized** 3 technical lecture meetings.
- **Student Branch of IIT Guwahati** conducted a workshop on Compressive Sensing and Technical Writing on the 6th and 7th of April, 2013. The inauguration function was attended by Prof Debatosh Guha, Chairman, IEEE Kolkata section. This workshop is the first ever workshop conducted by the IEEE in the north east region. Over 150 participants attended the workshop with students coming from NIT Nagaland, NIT Meghalaya, Tezpur University, Assam Engg College, Royal Engineering College, Gauhati University, GIST-Guwahati and NEHU Shillong and many more. Tousif Khan Nizami, Chairman IEEE Student Branch at his inaugural address emphasized on the importance of learning and updating the communication and presentation skills.
- **Annual Social Event of the Section** was organized on Sunday Jan 27 2013 at “Select Store’s Bagan Bari”, Garia, Narendrapur.

## A.2 Financial Report

**Opening Balance:** Rs.35,70,254.24/-

**Income:** Rs.29,66,132.28/-

**Expenses:** Rs. 23, 14,715.76/-

**Closing Balance:** Rs.42,21,670.76/-

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## A.3 List of Section Officer and Executive Committee Members

Prof. Debotosh Guha	-	Chairman
Prof. Chandan Kumar Sarkar	-	Chairman –Elect & Chair EDS Chapter
Prof. Sujit Kumar Biswas	-	Vice Chair and Chair of IA Chapter
Prof. (Mrs) Iti Saha Misra	-	Secretary
Prof. (Mrs) Suparna Kar Chowdhury	-	Treasurer
Prof. Sivaji Chakravorti	-	Immediate Past Chair and Chair of DEIS
Prof. Ashok Kumar Tripathi	-	Member
Prof. Bhaskar Gupta	-	Member
Dr. Chinmay Saha	-	Member
Dr. Debangshu Dey	-	Member & Chair Student Activities Committee
Dr. Gargi Keeni	-	Member & Chairperson Professional Activities
Dr. Jamuna K. Sing	-	Member
Prof. Kesab Bhattacharya	-	Member
Prof. Mita Nasipuri	-	Member
Prof. Prasanta Kumar Basu	-	Member & Chair Newsletter
Prof. Rana Dutta Gupta	-	Member
Mr. Sanjay Kar Chowdhury	-	Member & Chair PES

Prof. Sujoy Basu	-	Member
Prof. Susmita Sur Kolay	-	Member
Prof. Sanjay Basu	-	Member
Prof. Rabindra K Mishra	-	Ex –Officio Member & Chair AP-MTT
Prof. Salil Kumar Sanyal	-	Ex-Officio Member and Chair of CAS Chapter
Prof. Ujjwal Moulik	-	Ex-Officio Member & Chair CIS
Prof. Rabindranath Nandi	-	Ex-Officio Member and Chair of ComSoc Chapter
Prof. Nandini Mukherjee	-	Ex –Officio Member & Chair Comp. Soc Chapter
Prof. Animesh Maitra	-	Ex- officio Member & Chair GRSS
Prof. J.B. Roy/ N.R.Das	-	Ex-officio Member & Chair Photonics Society
Prof. Gopa Sen	-	Ex-Officio Member & Chair WIE/AG
Mr. Sandip Rakshit	-	Ex-officio Member & GOLD/AG Chair

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### Section Advisory Committee:

Mr. Kalyan Kumar Das Gupta	-	Permanent Invited Members
Prof. Dipak Kumar Basu	-	Permanent Invited Members
Prof. Kalyan Kumar Mallik	-	Permanent Invited Members
Prof. Manish Mukherjee	-	Permanent Invited Members
Prof. Nirmalendu Chatterjee	-	Permanent Invited Members
Prof. Rabindranath Nandi	-	Permanent Invited Members
Prof. Salil Kumar Sanyal	-	Permanent Invited Members

## PART B – ORGANIZATIONAL ACTIVITIES

### B.1 MEMBERSHIP DEVELOPMENT PROGRAMS

#### TOTAL MEMBER: 2412

**Effort in membership development:** As a part of the Membership Development Activity of the section, IEEE Kolkata Section constantly generates awareness to the target members in different IEEE programs whether a Lecture meeting, seminar, workshop or conference highlighting the benefits to joining IEEE and to have the membership of such professional body. As a result of such concerted efforts by the section, our section is having a steady growth of its membership. Besides that as a part of membership development program, **award is given** to the Chapter/AG with highest membership growth and the Chapter with highest percentage of member in the industry. This year many new student branches are formed at different institutions under Kolkata Section. This is because of the required help the Section Student Activity Committee provides to open the new SBs.

**Kolkata Section has registered 18.28% rise in membership- up from 1971 to 2412 in 2013.**

Student membership at different branches is also growing. Out of 2412 members there are Total Active Student Member: 546 and Total Active Graduate Student Member: 446

**Evidence of retention of members:** Each default member is contacted through email/mobile phone and persuaded to renew his/her membership. Attrition rate has come down corresponding to last year. There is a steady growth of membership observed.

### B.2 Professional and Continuing Educational Activities

Continuing Educational activities including conferences, technical event, training courses:

### Technical Lecture Meeting organized by the Section

IEEE Kolkata Section has organized the following lecture meetings in various fields in the year 2013. The lectures were well attended and organized at various institutes with very good interactions among the members of industry and academia including students.

#### a. Technical Lecture

Sl. No.	Speaker & Affiliation	Topic	Venue	Attendees	Date
1.	Prof. Magdalena Salazar-Palma, Dpto. Teoría de la Señal Comunicaciones, Universidad Carlos III de Madrid, Madrid, Spain	The Father of Radio: A Brief Chronology of the origin and Developments of Wireless Communication and Supporting Electronics	Triguna Sen Auditorium, Jadavpur University	90	29 July 2013
2	<b>Prof. Tapan K Sarkar</b> Dept. Electrical Engineering & Computer Science, Syracuse University, Syracuse, NY, USA	Human Migration, Nature and Sources of Indian Traditions	Triguna Sen Auditorium, Jadavpur University	90	29 July 2013
3	Prof. Sujit K. Biswas, EE Dept. Jadavpur University	Management of VAR and Power Factor in Power System through Power Electronics	Seminar Hall of Department of Applied Physics, Calcutta University Kolkata 700032	52	16th Aug 2013
4	Professor B. pal, Fellow IEEE, Professor of Power System, Imperial College, London, UK	Advanced Control of Power System through FACTS: Existing Practice and Emerging Trends - Part-1	Seminar Hall of Department of Applied Physics, Calcutta University	46	16 Aug 2013
5	Professor B. pal, Fellow IEEE, Professor of Power System, Imperial College, London, UK	Advanced Control of Power System through FACTS: Existing Practice and Emerging Trends - Part-2	Seminar Room, Electrical Engineering Department, Jadavpur University	46	16 Aug 2013
6	Dr. Debasis Dawn, Asst. Professor of Electrical and Computer Engineering department of North Dakota State University USA.	Silicon-based Microelectronic Circuits: Radio Frequency (RF) and Beyond	ETCE Department, Room No: T-3-7 Jadavpur University, Kolkata-700032	50	17 Dec 2013
7	Dr. A. K. Iyer of University of Alberta, Edmonton, Canada	Art of Designing Metamaterial and Metamaterial Based Devices	Committee Room ETCE Department, Jadavpur University	30	23 Dec 2013
8	Dr. Pushpak Bhattacharyya, Professor, Department of Computer Science and Engineering, IIT Mumbai	Determining the exact relationship between Natural Language Processing and Machine Learning.	<i>Siloam</i> , St. Anthony College, Shilong	55	12 Sep 2013



9	Dr. Brian Subirana, Affiliate Professor, MIT Field Laboratory	Future of Software Applications	<i>Siloam</i> , St. Anthony College, Shilong	55	12 Sep 2013
10	Dr. Raghu Krishnapuram, Associate Director, IBM Research, India.	Global Trends in Information Technology and their Implication.	<i>Siloam</i> , St. Anthony College, Shilong	50	13 Sep 2013
11	Dr. SandhyaChintala, Executive Director, NASSCOM through a pre-recorded video sent ahead by her to the organizers	Acquisition and Transformation – A New paradigm.	<i>Siloam</i> , the extension centre of the St. Anthony College, Shilong Barapani	50	13 Sep 2013
12	Prof. (Dr.) B.N.Biswas, President Supreme Knowledge Foundation, West Bengal	Laser Induced Microwave Oscillations	Seminar Room, ADAMAS Institute of Technology	200	25 Oct 2013
13	Prof. (Dr.) Chandan Kumar Sarkar, Professor, Dept. of Electronics and Telecommunication Engineering, Jadavpur Univeristy, Kolkata	Advanced Heterostructure Based Nano Scale MOSFETs	Seminar Room, ADAMAS Institute of Technology	150	25 Oct 2013
14	Prof. (Dr.) Susmita Sur- Kolay, Professor, Advanced Computing & Microelectronics Unit, ISI , Kolkata	Design Automation for FPGAs	Seminar Room, ADAMAS Institute of Technology	150	25 Oct 2013
15	Prof. (Dr.) Goutam Saha, Professor, Dept. of Electronics and Communication, IIT,	Signal Processing For Appreciation of Heart and Lung Sound	Seminar Room, ADAMAS Institute of Technology	160	26 Oct 2013
16	Prof. (Dr.) N.R.Das, Institute of Radio Physics and Electronics, University of Calcutta	Infrared Photo detectors at Medium and Long Wavelengths	Seminar Room, ADAMAS Institute of Technology	150	26 Oct 2013
17	Prof. (Dr.) Arijit Roy, Dept. of Electronics, West Bengal State University, Kolkata	Beyond the Limits of Traditional Photolithography in IC manufacturing: Design and Application of Special Alternating Phase Shift Mask	Seminar Room, ADAMAS Institute of Technology	100	26 Oct 2013
18	Prof. (Dr.) Sivaji Chakravorti, EE Dept, Jadavpur University, Kolkata-700032	A New Educational Perspective based on Power Quality Research	A. N. Khosla Conference Centre, National Institute of Technology, Rourkela-769008	60	16 Mar 2013

19	S.R.Samantaray, School of Electrical Science, Indian Institute of Technology Bhubaneswar	Protection of Distributed Generation Systems	A. N.Khosla Conference Centre, National Institute of Technology, Rourkela-769008	60	16 Mar 2013
20	Sasitharan S, Grid Systems R & D, ABB Chennai	VSC Based HVDC Light: ABB's Experience	A. N.Khosla Conference Centre, National Institute of Technology, Rourkela-769008	55	16 Mar 2013
21	Prof. V. V. Rao, IIT KHARAGPUR	Superconducting Power Grid	A. N.Khosla Conference Centre, National Institute of Technology, Rourkela-769008	50	17 Mar 2013
22	Prof. H. M. Suryawanshi, Department of Electrical Engineering, Visvesvaraya National Institute of Technology, Nagpur	Different Design steps for Converters	A. N.Khosla Conference Centre, National Institute of Technology, Rourkela-769008	50	17 Mar 2013
23	Prof. Asok Ray Distinguished Professor of Mechanical Engineering Graduate Faculty of Electrical Engineering The Pennsylvania State University, PA 16802, USA	Autonomous perception and decision-making in cyber-physical systems	Seminar Room, Electrical Engineering Department Jadavpur University, Kolkata 700032	40	17 May 2013
24	Prof. Shashi Phoha Professor, EE Dept. and Director, Information Sciences & Technology Division/ARL, The Pennsylvania State University, PA 16802, USA	Big data to decision automation: Algorithms for contextual semantic interpretation	Seminar Room, Electrical Engineering Department Jadavpur University, Kolkata 700032	40	17 May 2013

## b. Technical Co-Sponsorship

IEEE Kolkata Section extended technical Co-Sponsorships to the following conferences falling under the jurisdiction of Kolkata Section.

- **1st National Conference** on Power Electronics Systems & Applications (PESA 2013) was organized by Department of Electrical Engineering, NIT Rourkela during 16-17 Mar 2013, technically Co-sponsored by IEEE Kolkata Section, the two days event has five technical keynote speeches and 73 paper presentations in 6 technical sessions.
- **National Conference** on Applied Electronics, **Organized by** Electronics and Communication Department (ADAMAS INSTITUTE OF TECHNOLOGY), during 25-26<sup>th</sup> OCTOBER, 2013. Section Chair inaugurated the

conference. There were 7 technical lectures and several papers presentation in two parallel sessions. About 10 IEEE members and 190 guest members were present to the conference.

- The **First International Conference on Emerging Trends and Applications in Computer Science (ICETACS) 2013 technically cosponsored by IEEE Kolkata Section** began with two back-to-back Tutorial Sessions held on 12 September at the College Auditorium for the participants and the students of the Department of Computer Science. Dr. Pushpak Bhattacharyya, Professor, Department of Computer Science and Engineering, IIT Mumbai gave two presentations on Sentiment Analysis. The Conference was formally inaugurated on 13th September. The Chief Guest at the Inauguration was Prof. P. Shukla, Vice Chancellor, North-Eastern Hill University. There were about 50 papers selected out of 300 submissions and were presented in the conference in four sessions.
- The National Conference on **Energy Engineering, Analysis, Audit and Management** technically co-sponsored by IEEE Kolkata Section held during July 8-10, 2013 at JIS College of Engineering. The Conference was successfully organized with 58 participants. There were 6 technical keynote, and 5 industry speakers.
- **National conference on Computational Intelligence: Modelling, Techniques and Applications (CIMTA)** held during 27-28, Sep-2013, organized by the Department of Computer Sc., Kalyani University with the technical sponsorship of IEEE Kolkata Section.
- National Conference on **Recent Development in Engineering & Science (RDES-2013)** held during 24-25 Aug 2013 by MCKV Institute of Engineering with technical sponsorship of the Section.
- Conference on **Automation, Control, Energy and Systems (ACES-2013)** organized on December 26-28, 2013 by Academy of Technology, Adisaptagram with technical sponsorship of the Section.
- The **Computer Soc Chapter** of Kolkata Section co-sponsored second **International Conference on Computing and Systems ICCS- 2013, 21-22 Sep, organized by** Department of Computer Science and Technology, Burdwan University.

## Educational Activities:

- **IEEE WIE AG, Kolkata Section and IEEE AP-MTT Kolkata chapter** conducted educational program to celebrate **World Water Day in collaboration with Birla Industrial & Technological Museum (BITM)**, Kolkata organized a program for underprivileged children on 22 March 2013. 57 students from PARIBAR, a unit of Bijon Banerjee Memorial Charitable Trust and Twenty one from Gabberia Childhood KG School, Gabberia, Howrah, participated in the program. They first visited different galleries in BITM Science gallery. BITM organized a puppet show, through which they taught the children about the importance of water. Then a drawing competition on the use of water was organized. Five children from Paribar group won prizes.
- WIE Kolkata Section also conducted an Educational program on 21 May 2013 arranging a **visit to the Sensor Hub facilities and Fiber Optics Laboratory at Central Glass and Ceramic Research Institute (CGCRI )** for B.Tech students of Electronics and Telecommunication Engineering. About 21 students from Jadavpur University and Bengal Engineering and Science University participated in the visit in sensor hub, the students were exposed to the class 10000 clean room facilities housing the oxidation, diffusion furnace, clean bench and the photolithography setup. In the Fiber Optics Laboratory, the students were introduced to the basic concepts related to the development of high speed optical fibers.
- **EDS Chapter organized The TECHNOPHIL 2013 Educational workshop** where along with several lectures by renowned academicians, namely, Prof. M. S. Baghini from Indian Institute of Technology, Bombay, Prof. Santanu Mahapatra from Indian Institute of Science, Bangalore and Prof. Debaprasad Das from Meghnad Saha Institute of Technology, Kolkata. Hands- on training on IC Compiler using Synopsys EDA

tool was also there in the curriculum of the workshop. Mr. Gurmeet Singh, Physical Design Engineer from Synopsys (India) EDA Software Pvt. Ltd., Bangalore, has conducted all the Lab Sessions.

- **IPS Kolkata Chapter has been celebrating the National Science Day** on 28 June 2012 at Ashokenagar Banipith Girls'(H.S) School Ashokenagar, 24 Parganas (N), West Bengal. 74 students have attended the programs along with 15 IEEE members. Students are encouraged for taking the science as the subject of interest and this type of program helps them to increase the awareness.

### **Outreach Activities:**

This year section's Chapters and AGs have organized many technically sponsored programs outside Kolkata to spread outreach activities of IEEE and increase awareness regarding the IEEE activities in various fields. These are given under.

- **The 4<sup>th</sup> edition of IEEE Indian Antenna Week (IAW) organized by AP-MTT chapter at Rama International, Aurangabad in collaboration with Marathwada Institute of Technology (MIT), Aurangabad, on 3-7 June 2013.**
- **CIS chapter** organized National Workshop on “**Computational Intelligence: Theories, Applications and Future Directions**” on 12th July, 2013 at Siksha O Anusandhan University, Khandagiri, Bhubaneswar, Odissa.
- **EDS chapter organized** Mini-Colloquium on the topic “Past, Present and Future of Nano CMOS Technologies” in collaboration with EDS Madras Chapter during 27-28 Dec 2013 at Thiagarajar College of Engineering, Madurai, Tamilnadu, India.
- **WIE AG organized a one-day outreach program** at Masjidbati Parbati Vidyalay, Basanti, sundarban, a remote place in West Bengal, in collaboration with Birla Industrial and Technical Museum (BITM), Kolkata on June 15, 2013. Mr. T. K. Sengupta and his colleague from BITM demonstrated a set of very interesting, yet simple, experiments that one can perform even at their home, collecting common and easily available local ingredients. About 50 Girl Students from this School and few Teachers attended the program.
- **EDS Chapter and ComSoc Chapter organized three days seminar on VLSI, Embedded System & Modern Communication System Design Techniques** during 21-23 Oct 2013 at ECE Department of Bengal Institute of Technology & Management, Santiniketan, West Bengal.

### **National Science Day:**

- **IPS Kolkata Chapter has been celebrating the National Science Day** uninterruptedly since its inception and has become a yearly event (and integral part). **Photonic Society Chapter in collaboration with Calcutta University Student Branch** celebrated National Science Day in collaboration with Calcutta University Student on 17 May at a village School, at the Ulludanga Sadhanpur Tulsi Ram High School, Aamdanga, 24 Parganas, West Bengal. About 92 students and teachers have attended the program.
- The student members of IEEE Calcutta University Student Branch demonstrated some simple experiments illustrating the topics which were taught in their class, and also some interesting model which could be used in our daily life with available raw material. Such experiments grew interests among students and are expected to help to understand the theory easily and interestingly. The models were primarily based on Basic laws of Electricity, Magnetism, Optics, and Chemistry. Some advanced models were also shown based on Photonics, along with that they were given opportunity to view some basic components like resistor, capacitor, diode, LEDs available today.

### **Summer/Winter Workshop if any:**

**IEEE Women in Engineering Affinity Group, Kolkata Section** organized two days workshop on “Electronics: Basic Applications” in the Department of Instrumentation & Electronics Engineering,

Jadavpur University, Salt Lake Campus, Kolkata on 30th and 31st October, 2013. The workshop was aimed for the 2nd year students of the Polytechnic colleges so that they can polish their knowledge by theoretical discussions and have an experimental experience by the followed relevant hands-on laboratory sessions. Nineteen girls and boys students participated in the workshop. Each day was divided in two sessions: pre- and post- lunch session. Dr. B. Goswami and Dr. Soma Mandal of WIE AG acted as the mentor for this program.

### **International/National Conference / Seminar**

- In this year two International Conferences have been organized under Kolkata Section. One is the **IEEE Flagship Conference AEMC-2013** and second one is **IEEE CATCON-2013**. The 4th IEEE AEMC 2013 organized by IEEE AP and MTT Chapter of IEEE Kolkata Section and hosted by KIIT, Bhubaneswar, Odisha, India.
- **The 1<sup>st</sup> International Conference on Condition Assessment Techniques in Electrical Systems** (IEEE CATCON 2013) is technically co-sponsored by the IEEE Dielectrics and Electrical Insulation Society (DEIS) and organized by Dielectrics and Electrical Insulation Society Chapter of IEEE Kolkata Section, held on December 06 - 08, 2013, in Kolkata, India at Jadavpur University Main Campus.

### **B.3 Students Activities**

Number of Active Student Branches: 29

Number of Student Branches Formed in the year: 11

Total Active Student Member: 546

Total Active Graduate Student Member: 446

#### **Active Student Branch Activity:**

##### **SB Arunachal Pradesh:**

On 12 August 2013 organized Website design competition for the judgment of students in web designing skills. Winners got free hosting for a year.

##### **IEEE EDS Student Branch Chapter at NIT Silchar, Assam**

Organized One Day Seminar on “Interdisciplinary Research on Biomedical Engineering” on 26 Aug 2013 under TEQIP-II at Department of Electronics and Communication Engineering, NIT Silchar. Prof. Sneha Anand, Centre for Biomedical Engineering, IIT Delhi, Prof. Ajit Kumar Banthia, IIT Kharagpur and Dr. Santanu Dhara, Biomaterials and Regenerative Medicine Group, School of Medical Science and Technology, IIT, Kharagpur, delivered lectures on Biomedical Engineering, Biomaterials and Biosensors.

NIT Silchar SB also organized Distinguished Lecturer (DL) Talk on 10 Sept 2013 at NIT Silchar. **Prof. Ramgopal Rao**, IIT Bombay (IEEE-EDS DL) and **Prof. Richard Pinto**, IIT Bombay delivered talks on “*Nanoelectronics*” and “*Pulsed Laser Deposition-25 Years Young*” respectively. M.Tech and PhD scholars of Department of Electronics and Communication Engineering, NIT Silchar attended the DL talk.

**Two-Days Workshop on “MEMS and SENSORS” during 11-12 Sept 2013** under TEQIP-II during 11-12 Sept 2013 at Department of Electronics and Communication Engineering, NIT Silchar was organized.

**Prof. Ramgopal Rao** (Institute Chair Professor and Chief Investigator, Center of Excellence in Nanoelectronics, IIT Bombay), **Prof. Richard Pinto**, Department of Electrical Engineering, IIT Bombay and **Prof. Soumyo Mukherji**, Department of Biosciences and Bioengineering, IIT Bombay had delivered excellent talks on “*MEMS and Sensors*” in the first day of this workshop. In the 2<sup>nd</sup> day of this workshop, **Dr. Soumen Das** (School of Medical Science and Technology, IIT Kharagpur), **Dr. Sheetal J. Patil** (Department of Electrical Engineering, IIT Bombay), **Dr. Nitin S. Kale**, (CTO, Nanosniff Technologies Pvt. Ltd. IIT Bombay), **Dr. Niranjana Ramgir** (Bhabha Atomic

Research Center, Mumbai) had presented latest trends on R & D of “MEMS and Sensors” along with demonstration of Sensors for Micro-heaters by Nanosniff Technologies Pvt. Ltd.

#### **SB Silicon Institute, Bhubaneswar:**

- **2013** IEEE student branch SIT organized Half Day training program on “**Energy Conservation**” under Ministry of Petroleum & Natural gas, Govt of India conducted by **Petroleum Conservation Research Association** on **6<sup>th</sup> September**,
- Event Intra college Technical quizzard 2013 was held on **11<sup>th</sup> of September** . Around 180 students participated from all departments.
- Intra college quiz on energy and environment and poster competition on the theme E-waste management was held on **3<sup>rd</sup> October**
- Energy and Environment awareness week was celebrated from 30<sup>th</sup> September to **5<sup>th</sup> October**.
- Talk on Electrical Power Quality by S.Muthukumaran on **26<sup>th</sup> Oct 2013**
- Lecture by Dr L.N.Bhuyan Prof California state Univ to IEEE students on **3<sup>rd</sup> August 2013**

#### **SB JIS College of Engineering - Kalyani**

- On 1st October, 2013 in the IEEE day the branch has organized a Nation Seminar on Applications of Control System in Science and Engineering with the Department of Electrical Engineering, JIS College of Engineering.
- On January 16-17, 2014, JIS College of Engineering will organize an International Conference on Non Convention Energy (ICONCE). JIS College of Engineering - Kalyani Student Branch will take a vital role in organizing the conference.

#### **IEEE EDS Student Branch Chapter**

- **IEEE EDS University of Calcutta Student Branch Chapter** formally inaugurated on 26<sup>th</sup> September 2013. This program was jointly organized by IEEE EDS University of Calcutta Student Branch Chapter, IEEE EDS Kolkata Chapter and IEEE EDS Heritage Institute of Technology Student Branch Chapter. The branch chapter SBC28561A was inaugurated by distinguished guests through lighting of lamp. Prof. D.Guha, Chairman, IEEE Kolkata Section, Prof. N.R.Das, Student Branch Counselor, University of Calcutta, Prof. C.K.Sarkar, Chairman IEEE EDS Kolkata Section, Prof. Susmita Sur-Kolay, Professor, Indian Statistical Institute, Kolkata and Shri AtanuKundu, Branch Counselor, IEEE EDS Heritage Institute of Technology, Kolkata Student Branch Chapter was present on the program.
- Prof. Susmita Sur-Kolay ISI Kolkata delivered a lecture on “Electronic Design Automation: Its Importance and Challenges” on that day at A.K.Choudhury Auditorium, Institute of Radio Physics and Electronics, University of Calcutta.

#### **Technical Lecture**

- Prof. Udayan Ganguly, IIT, Bombay delivered technical lecture on 18 Dec 2013 at HIT, Kolkata on “Resistance Random Access Memory (RRAM)-Devices (Memory and Selection Device) to Cross Point Array Based Circuits”.

**This SB also organized Industry-Academia Meet with Students on 30<sup>th</sup> September 2013** at Institute of Institute of Radio Physics and Electronics, University of Calcutta where two technical lectures were arranged on:

- “SoC Design Implementation Flow” by Shri Parvez Zaman, Technology Solutions, Freescale Semiconductor, India and
- “IEEE Standards” by Sri Chandrasekharan, Sr. Regional Program Manager, IEEE Standards Association , About 55 participants were there.

#### **IIT Guwahati**

Student Branch of IIT Guwahati conducted a workshop on Compressive Sensing and Technical Writing on the 6th and 7th of April,2013. The inauguration function was attended by Prof Debatosh Guha, Chairman, IEEE Kolkata section. This workshop is the first ever workshop conducted by the IEEE in the north east region.

Over 150 participants attended the workshop with students coming from NIT Nagaland, NIT Meghalaya, Tezpur University, AssamEngg College, Royal Engineering College, Gauhati University, GIST-Guwahati and NEHU Shillong and many more. The workshop was well received by the participants who requested the organizers to conduct more such workshops on a regular basis.

#### **IEEE Workshop on MATALB 2013 :**

IEEE MATLAB Workshop was a grand success with the inaugural ceremony by Prof. Sukumar Nandi, Prof. S.K. Bose, Prof. R. Bhattacharjee and Dr. R.K Sonkar. Followed by workshop sessions on Signal processing, Image processing, Communication Engg, Control & Power Engg. We attracted participants from different parts of nation. Some of them were from IIT-Madras, IIT-Indore, IIT-Basar, NIT-Manipur, NIT-Meghalay, NIT-Jaipur, NIT-Raipur, NIT-Silchar, NITS-Mirza, NIT-Nagaland, MNIT-Bhopal, NERIM, Gawhati University, MIT-Manipur, SRM University, Erode science college TamilNadu, GIMT Guwahati, Assam Engg College-Guwahati, Tezpur University, Jaypee University of Engg, Jorhat Engg College, Assam Engg college, Annamalai University Tamilnadu, Don Bosco University, RGUKT Hyderabad, SCSVMV University chennai, Haldia Institute of Technology West Bengal and Amritsar College of Engg. Annamalai etc.

SB of IIT Guwahati organized a two day **national level workshop on Graphics and Presentation** on 5th and 6th October, 2013 at the conference center of the institute.

The workshop aimed at providing hands-on experience with some of the popular Adobe Creative Suite. It intended to teach audience, the modern day tools for enhancing presentations and interaction skills with applicability in various engineering disciplines.

#### **SB BIT Patna:**

SB Patna Organized three lecture meeting and several administrative meetings.

#### **SB of University of Calcutta:**

**IEEE Calcutta University student Branch has been involved in several activities by organizing lectures, meeting including some big events.**

The Branch celebrated the “**Indian National Science Day**” on (17 May 2013) as a joint organiser with the IEEE Photonics Society Kolkata Chapter. 28<sup>th</sup> February is celebrated as the National Science Day in India every year. Such outreach programs in schools help to spread the knowledge on science and technology to students residing in remote villages.

### **B.4 E-mail and Newsletter Activities, Home Page**

Number of hard print newsletter: None, it is discontinued.

Number of electronic Newsletter: 0.

#### **Section, Chapters and Student Branches Web Pages:**

- IEEE Kolkata Section website has been actively updated throughout the year. Its URL is – [www.ewh.ieee.org/r10/kolkata](http://www.ewh.ieee.org/r10/kolkata).
- All the Chapters and Affinity Groups website are linked to the Section.
- All e-notices and activity reports are regularly updated in the website.

### **B.5 Awards & Accolades:**

- As recognition of the activities of Photonic Socity Chapter, it has already bagged 3 ‘**Most Improved Chapter Award**’ since 2004. This year it has been awarded the ‘**2013 IPS Chapter Grant Recipient**’.
- The IEEE MTT Society recognized AP-MTT Kolkata Chapter as the Outstanding Chapter for 2013.

- PES Chapter received has received US \$ 690.00 (Six hundred and ninety only) as HPCP grant for the year 2012. This is eleventh consecutive year for the chapter.
- SIGHT “Low Cost Low BW” project of Kolkata Section received the grant from IEEE HQ for two consecutive years of 2012 and 2013.

## B.6 Chapter Activities

**Total Active Chapter: 11**

**Total Affinity Groups: 02**

### **AP-MTT Chapter organized the following programs:**

The IEEE MTT Society recognized it as the Outstanding Chapter. The technical activities started with the Electromagnetic Olympiad and the AEMC 2013 being the last major event.

The Chapter, since its inception, is trying to reverse this unhealthy trend of avoiding the subject of Electromagnetic and Antenna by the young generation. It has started two flagship programs, so that a window can be opened in this region for International exposure. In the year 2007 it organized its first technical event of International character, the IEEE Applied Electromagnetic Conference (AEMC) 2007. Since then this is being organized as a biennial conference regularly. It was followed by the launch of Indian Antenna Week (IAW) in 2010, which is a workshop primarily for young scientists. These efforts have been useful in attracting entry level and mid level scientists and professionals. At the same time, few students have also been attracted to the area of electromagnetic.

- **The Electromagnetic Olympiad** : The Olympiad was scheduled to be conducted in two phases. The first phase being a preliminary test based on objective type multiple choice questions to test the overall knowledge of a student in electromagnetic and other related topics.

The preliminary test consisted of 50 objective type (multiple choices) questions. The test was conducted at 7 centers (3 in Odisha, 2 in west Bengal, 1 each in Jharkhand and Assam). The Ministry of Information and Technology in the Government of India has established “Society for Applied Microwave Electronics Engineering and Research (SAMEER)” which has three centers. The Director of SAMEER happily agreed to provide facilities of the Centre at Kolkata for conduct of the Olympiad Camp during 11 – 15 Feb’13.

After the end of the camp, the Olympians were ranked based on their performance in the tests held during the camp. Mr. Abhinav Akash (Birla Institute of Technology, Mesra, Jharkhand) topped the list. Ms. Avantika (Birla Institute of Technology, Mesra, Jharkhand) and Mr. Bishnu Prasad Patra (IIIT, Bhubaneswar, Odisha) were jointly at the second position. To encourage them, they were given prize money of INR 30000 for the 1st position and INR 20000 each for the 2nd position.

The IEEE Kolkata Section AP/MTT Chapter acknowledges the support received from the IEEE AP Society and IEEE MTT Society. In particular, it is thankful to the Society Presidents Prof. Nick N. Kalias and Dr. Steve R. Best as well as Dr. Ross Stone, Prof. Shiban Koul, Dr. Vijay K. Nair, Prof. Zhongxiang Shen, and Dr. Michael Shield for their support and useful tips, to Prof. David Jackson, Prof. Tatsu Itoh, Dr. Ed Niehenke, Prof. Cynthia Furse, Prof. Karl Warnick, for their help in setting the question papers and all volunteers for successful organization of the Olympiad.

**Outreach Program for India Antenna Week:** The 4th edition of IEEE Indian Antenna Week (IAW) concluded on 7 June, 2013 at Aurangabad, one of the most prominent cities in India for tourists’ attraction. The venue was Rama International, most elegant five star hotel of the city. The weeklong Event (3-7 June 2013), jointly organized by IEEE AP-MTT Kolkata Chapter and Marathwada Institute of Technology (MIT), Aurangabad, received a Grant and was technically sponsored by IEEE AP-Society. The event was inaugurated by Prof. V. M. Pandharipande, Vice-Chancellor of Dr. Babasaheb Ambedkar Marathwada University. Prof. Trevor Bird,



President, IEEE Antennas and Propagation Society conveyed his welcome to the participants and best wishes for IAW 2013 through his recorded Video speech.

IEEE representatives and officers Prof. Ramesh Garg, Prof. R. K. Mishra, and Prof. Debatosh Guha were present and encouraged the young participants to be active and productive in the areas of Antennas and Propagation through their high quality technical contributions and leadership. An antenna expert, Prof. Pandharipande also delivered the Keynote speech followed by the welcome session, which was highly appreciated by the audience. Out of total 120 participants, about 15 were the resource persons cum technical experts from different institute and organizations.

**The AEMC 2013:** The 4th IEEE AEMC 2013 organized by IEEE AP and MTT Chapter of IEEE Kolkata Section and hosted by KIIT, Bhubaneswar, Odisha, India. Biennial AEMC was held in 2007, 2009 and 2011 in Kolkata, West Bengal, India. This is the first time it was held outside Kolkata in a historic and beautify capital city of Odisha. The general chair was Prof. R. K. Mishra, Berhampur University and local organizing chair was Prof. A.K. Sen, KIIT. The unique aspect of the conference was the presence of dignitaries of both IEEE and KIIT. Prof. Raj Mitra was the honorary chair. He tirelessly patronized the conference from the beginning to the end attending almost each and every session. Prof. Madhu Gupta, President of IEEE MTT Society delivered plenary speech on Indian Nobel laureate in Physics Dr. C. V. Raman (2013 being 125th birth anniversary of Sir C. V. Raman). Prof. Gupta with his usual pedagogical presentation style highlighted Raman's biography, his contributions in optics in the beginning of 20th century and modern applications of his contributions to optics.

Dr. N. C. Karmakar gave an evening pre-dinner talk on Tributes to past and present Indian educationists and Impact of attending international conferences on a research active academic.

The third day was opportune with two solicited talks by Prof. M. S. Palma and T.K. Sarkar, who made big efforts to join the conference on the same day. The third day was also will full on interesting talks in three parallel sessions. The conference venue KIIT is a modern campus with all state-of-the-art facilities.

92 papers were presented orally in three (3) parallel sessions. All together there were 120 papers in various forms were presented.

**Technical Lectures:** Modern Topics in Antenna Measurements, Diagnostics and Optimizations: From Fundamentals to Recent Advances, by Prof. Yahya Rahmat-Samii, Past President of AP-S, 11 Feb 2013, Pride Hotel Kolkata, 120 participants.

- "RCS Ranges: Basics of Absorber Layout Design and Operation & Calibration", Dr. Vince Rodriguez, Antenna Product Manager, ETS – Lindgren, 11 Feb 2013, Pride Hotel Kolkata, 120 participants.
- "Opportunities in Electromagnetics", Dr. Goutam Chattopadhyay, Jet Propulsion Laboratory, California Institute of Technology, 12 Feb 2013, SAMEER Kolkata, 20 Participants.
- "Electromagnetic Compatibility (EMC): Reducing Radiation from Unintentional Antennas, Electromagnetic Interference (EMI) Standards/Limits Nature Inspired " Dr. John Norgard, Chief Engineer for Electromagnetic Environmental Effects, NASA Huston, USA, 12 Feb 2013, SAMEER Kolkata, 20 Participants.
- "Optimization Techniques in Engineering", Prof. Yahya Rahmat-Samii, Past President of AP-S, 12 Feb 2013, SAMEER Kolkata, 20 Participants.
- "How Science is driving new technology developments", Dr. Goutam Chattopadhyay, Jet Propulsion Laboratory, California Institute of Technology, 13 Feb 2013, BESU, Kolkata.
- "Electrically Short Antenna: Passive & Active Antenna for general applications", Dr. Ulrich L. Rohde, IEEE Fellow, 18 Dec 2013, Jadavpur University, Kolkata, 20 Participants
- "Low Noise Signal Generation and Verification Techniques", Dr. Michael Driscoll, IEEE Fellow, 18 Dec 2013, Jadavpur University, Kolkata, 20 Participants

- “Latest technology and technological challenges in oscillator design: Oscillator’s Applications in Security and Threat Detections” , Dr. Ajay K. Poddar, IEEE Senior Member, 18 Dec 2013, Jadavpur University, Kolkata, 20 Participants

**The Circuits and Systems (CAS) Chapter** is probably the smallest Chapter under IEEE Kolkata Section. This Chapter organizes several activities like:

- **The CAS Chapter extended** collaborative hand in organizing National Seminar on “Embedded Systems” at Swami Vivekananda Institute of Science & Technology, Sonarpur on October 5, 2013. Prof. S. K. Sanyal, Chairman of the CAS Chapter, inaugurated the Seminar where Four Invited Technical papers were presented on several aspects of Embedded Systems.
- **CAS organized 11 Technical Lecture Meetings** in different areas as outlined:
- FPGA Implementation of CORDIC Algorithm, Ms. S. Banerjee, 11 June 2013, at ETCE JU.
- Design and Implementation of Some Turbo Code Based Wireless Communication Systems, Mr. D. Ghosh, 12 June 2013, at ETCE JU.
- Design of Low Power Precision Multiplier using Cadence Software, Ms. Vivekvati, 14 June 2013, at ETCE JU.
- Vehicular Accelerometry Enables Intelligent Sensing Systems, Dr. T. Chakravarty, 27 Sep 2013, at UIT, University of Burdwan.
- Use of Embedded System for Distributed control, Dr. S. Pal, 05 October 2013 at Swami Viveka-nanda Inst. of Sc. & Tech
- Embedded Systems: Concepts And Applications, Prof. A. Sinha, 05 October 2013, at Swami Viveka-nanda Inst. of Sc. & Tech
- Embedded Systems: Some Case Studies, Mr. A. Ghosh, 05 October 2013 at at Swami Viveka-nanda Inst. of Sc. & Tech
- Fault Diagnostic System, Mr. S. Karan, , 05 October 2013 at at Swami Viveka-nanda Inst. of Sc. & Tech
- Fundamentals of Digital Modulations, Prof. S.K.Sanyal, 08 November 2013, Tripura Inst. Of Tech. Narshingarh
- Estimation of Probability of Symbol error in PSK system, Mr.B.K.Upadhyay, 09 November 2013, Tripura Inst. Of Tech. Narshingarh
- Design of RC Coupled Amplifier and Measurement of, Prof. S.K.Sanyal, 27 November 2013, School of Education Tech. Jadavpur University.

**CIS Chapter organized the following programs in 2013:**

**Technical Meetings:**

- The first IEEE CIS Chapter lecture meeting was held in April 05, 2013 on Learning from Multiple Models from Multiple Domains by Ayan Acharya, University of Texas at Austin, USA at Department of Computer Science and Engineering, Jadavpur University, Kolkata, India.
- “Supervised Learning: Application to Date Mining and Bioinformatics”, by Prof. Sanghamitra Bandyopadhyay, Machine Intelligence Unit, Indian Statistical Institute, Kolkata, India on April 23, 2013 at Department of Computer Science and Engineering, Kalyani University, Kolkata
- “ Multi-Scale Opening of Conjoined Objects in shared intensity space” by Dr. Subhadip Basu, Dept. of Comp. Sc. and Engg., Jadavpur University, Kolkata, India at Electronics and Communication Science Unit, Indian Statistical Institute, Kolkata, India, on 23 Aug 2013.
- “Development of Fuzzy Reasoning Schemes of Decision Making Problems under Imprecise Environment” by Dr. Debashree Guha Adhya, Department of Mathematics, Indian Institute of Technology, Patna, India, on 19 Sep 2013, at Department of Computer Science and Engineering, Jadavpur University, Kolkata.

- **Seminar and Workshops:** During Oct 8-9 2013 a two days Seminar on Pattern Analysis and Machine Intelligence (PAMI-2013) was organized by CIS chapter at St. Thomas' College of Engineering and Technology, Kolkata, India. Several eminent Professors and researchers delivered lectures. Prof. Sankar K. Pal, Machine Intelligence Unit, Kolkata, India , Prof Shivshankar Nair , Department of Computer Science and Engineering, Indian Institute of Technology, Gauhati, India, Prof. Amit Konar, Electronics and Tele-Communication Engineering, Jadavpur University. Kolkata, India, Prof. C. A. Murthy, , Machine Intelligence Unit, Kolkata, India graced the occasion.
- **Outreach Program:** National Workshop on Computational Intelligence: Theories, Applications and Future Directions organized on 12 July 2013 at Siksha O Anusandhan University, Khandagiri, Bhubaneswar, Odisha, India, where Prof. Hisao Ishibuchi, Vice-President for Technical Activities, IEEE CIS Society, Prof. Chin-Teng Lin, Editor IEEE Transaction on Fuzzy System and Prof. Nikhil R. Pal, Vice-President for Publication IEEE CIS Society were present in the workshop to deliver their lectures.

**ComSoc Chapter Organized three technical lecture, one educational program, one Distinguish Lecturer Program in 2013:**

- **One Day Educational Program:** On Feb 02, 2013 ComSoc Organized One day Educational program Emerging Topics on Communication Systems (IEEE ETCOMS 2013) at Dr. K. P. Basu Hall, Jadavpur University (JU), Kolkata -700032 in Collaboration with: Dept. of Electronics & Tele-Comm. Engg., Jadavpur University – JU. Section Chair Prof. D. Guha and the then ETCE HoD Prof. Subir Sarkar were present in the inaugural program. There were four Technical Lectures for this educational program divided into pre and post lunch sessions.
  - “A Dynamic Agreement Framework for Trading of Wireless Services”, by Mr. Ayan Paul, Sub Divisional Engineer (SDE) BSNL, Kolkata.
  - “Green Wireless Communication” Dr. Aniruddha Chandra, Asst. Prof., Dept. of ECE NIT Durgapur
  - “Learning and Experiences from Practical RFID Implementations”, by Mr. Jayanta Nandy, RFID & SENSORS Division TCS, Kolkata.
  - “Intelligent Networks – an Overview” by Mr. Satyajit Brahma, Specialist Support – Intelligent Networks, Ericsson India
- **Among 3 Technical Lecture meetings,** two were organized atJadavpur University on May 20 and June 13, and the third one was organized on Oct 21 at BITM, Santiniketan, West Bengal.
- **Distinguish Lecturer Program:** The Lecture was organized on August 10, 2013 (Saturday) at Wipro Limited, Salt Lake City, Kolkata between 11am and 1pm. In his welcome address, Prof. R. Nandi, Chairman, IEEE ComSoc Kolkata Chapter has highlighted the activities of the Chapter, especially the Membership Recruitment drive initiated by the Chapter. Then, Dr. K. K. Ramakrishnan delivered the DLP on “Networking the Cloud: Enabling Enterprise Computing and Storage”. He started the Lecture with the brief introduction on Cloud Computing. He has proposed a Virtual Cloud Pool abstraction to logically unify cloud and enterprise data center resources, and presented the vision behind CloudNet, a cloud platform architecture which utilizes Virtual Private Networks to securely and seamlessly link cloud and enterprise sites. Dr. Ramakrishnan explained how WAN latency between a cloud site and an enterprise can become a major performance bottleneck when synchronously replicating an application’s data into the cloud and then described their proposal called ‘Pipelined synchrony’ to address this problem.

**Computer Chapter Organized several Programs throughout 2013 as given under:**

**Technical Lectures:**

- On the topics, “Designing Energy Efficient Wireless Sensor Networks” by Prof. Sajal Das, University of Texas at Arlington, USA, 25 June 2013, at Amitava Dey Memorial Hall, CSE, Jadavpur University. 4 IEEE members and 26 non IEEE members attended the lecture.

- The Technical Lectures were organized on 09 Dec 2013, at the Seminar Hall of Civil Engineering Department, Jadavpur University as outlined , there were total 75 participants among which 10 were IEEE members:
  - "Automatic Anatomy Detection" by Prof. Jayram K. Udupa , University of Pennsylvania USA.
  - "Digital Topology and Geometry and Their Applications" by Prof. Punam Kr. Saha, University of Iowa, USA
  - "Formal Methods for Embedded System Design" by Dr. Soumyajit Dey, IIT Kharagpur, India
- **Technical Workshop:** A technical workshop on “Ubiquitous Computing on Cloud” was organized by the Comp Soc. chapter on 5th April 2013. The workshop was organized at School of Mobile Computing and Communication, Jadavpur University. Experts from academia and industry were invited in the seminar for delivering lectures. Around 80 participants attended the workshop. Following are the details about speakers in the workshop:
  - "Application-centric Cloud Computing" by Mr. Sunirmal Khatua, University of Calcutta
  - "RIPSAC - A Cloud Computing Platform for Sensor Based Applications" by Dr. Prateep Misra, TCS Innovation Lab
  - "Techno-socio perspective of Cloud Computing in India" by Dr. Amitava Maulik, Applied Research Works
  - “Cloud Computing at IBM” by Dr. Sourav Dutta, IBM, India

**DEIS Kolkata Chapter organized the following programs in 2013:**

**Technical Lecture Meeting:** On the topic “Virtual High Voltage Laboratory” delivered by Prof. N.K.Kishore, Electrical Engg Dept, IIT Kharagpur, on 31 July 2013 Electrical Engineering Department, Jadavpur University, Kolkata. There were 53 participants in this lecture meeting out of which 21 were IEEE members.

**Distinguished Lecturer Programme:** Prof. Markus Zahn, Massachusetts Institute of Technology, Department of Electrical Engineering and Computer Science, Research Laboratory of Electronics, Laboratory for Electromagnetic and Electronic Systems, Cambridge, Massachusetts 02139, USA, delivered a talk on “Ferrohydrodynamic and Electrohydrodynamic Flow Phenomena” on 03 Jan 2013 at Electrical Engineering Department, Jadavpur University, Kolkata. There were 108 participants in this lecture meeting

**Conference Activity:** The First International Conference on Condition Assessment Techniques in Electrical Systems (IEEE CATCON 2013) technically co-sponsored by the IEEE Dielectrics and Electrical Insulation Society (DEIS) and organized by Dielectrics and Electrical Insulation Society Chapter of IEEE Kolkata Section was held on December 06 to 08, 2013, in Kolkata, India. The venue of the conference was Jadavpur University Main Campus, Kolkata.

This is the flagship event of the chapter, which is in line with the present day requirements in the global scenario of various condition assessment techniques for a variety of electrical systems. Its goal is to provide a broad coverage and dissemination of foundational research in condition monitoring and assessment among researchers, academics, industry and practitioners. The technical program of IEEE CATCON 2013 consisted of tutorials, plenary talks, and oral paper presentations. Research papers describing original work on theories, methodologies, abstractions, algorithms, industry applications and case studies were presented.

Prof. G. C. Montanari, University of Bolgna, Italy, delivered keynote speech for CATCON and Mr. R.P.Sasmal, Director (Operations), Powergrid India Co Ltd was the Chief Guest of the Conference.

**Tutorial of the Conference:**

1. “ Gas Insulated Transmission Lines”, Dr. Hermann Koch, Siemens, Germany, on 06 Dec 2013 at K. P. Basu Memorial Hall, Jadavpur University, Kolkata. There were 96 participants in total from both academia and power utilities.

2. “Transformer Condition Monitoring Using Dielectric Response Measurement”, Prof. Tapan K. Saha, University of Queensland, Brisbane, Australia, 06 Dec 2013, at TEQIP Hall-I, Jadavpur University, Kolkata. There were 60 participants.

3. “Condition Monitoring of Motors and Generators”, Mr. Cajetan Pinto, Global R&D Head, ABB Motors and Generators, Service and Vice President for ABB in Mumbai, India, 06 Dec 2013, at TEQIP Hall-II, Jadavpur University, Kolkata. Large section of the audience was from industry. The attendees were from India, Germany, Poland, America and Australia. There were 73 participants in total.

**Plenary Talk-1:** “Insulation Issues Related To Smart Grid And Industry Applications”, Prof. Sheshakamal Jayaram, University of Waterloo, 07 Dec 2013, at K. P. Basu Memorial Hall, Jadavpur University, Kolkata. The topic was in the current field of research interest related to condition monitoring and smart grid. There were 60 participants in total from both academia and power utilities.

2. “1200kV Transmission and Smart Grid”, Dr. Subir Sen, General Manager (Smart Grid), Power Grid Corporation of India Ltd., 08 Dec 2013, K. P. Basu Memorial Hall, Jadavpur University, Kolkata. There were 54 participants.

3. “Partial Discharge Detection in Transformers during Lightning Impulses”, Dr. Rodolfo Garcia-Colon, Electricity and Power Systems, Mexico and IEEE DEIS Chapters’ Chair, 08 Dec 2013, K. P. Basu Memorial Hall, Jadavpur University, Kolkata.

**Laboratory Visit:** High Tension Laboratory, Electrical Engineering Department, Jadavpur University, was the local host of the First International Conference on Condition Assessment Techniques in Electrical Systems (IEEE CATCON 2013). In this context a visit to High Tension Laboratory of Electrical Engineering Department, Jadavpur University, had been organized for the conference delegates.

In IEEE CATCON 2013 **an industry meet** was arranged to discuss the current topics related to condition monitoring of power equipment. Dr. Hermann Koch, Siemens, Germany, and Mr. Jerry Michaelson, ABB, USA, addressed the participants.

#### **EDS Chapter organized the following technical talks:**

- Two lectures on “Short channel effects in MOSFETs” and “Challenges of VLSI Interconnects” by Prof. Swapnadip De, MSIT, Kolkata, and Prof. Debaprasad Das, MSIT, Kolkata, on 11th. March, 2013 at Heritage Institute of Technology, Kolkata.
- “Next Generation 2D Channel Material based MOSFETs: Overview and Simulation Tools”, by Dr. Amretashis Sengupta, IISc, Bangalore, on 4th September, 2013 at Heritage Institute of Technology, Kolkata.
- “Resistance Random Access Memory (RRAM)-Devices (Memory and Selection Device) to Cross Point Array Based Circuits” by Prof. UdayanGanguly, IIT, Bombay, on 18th December, 2013 at Heritage Institute of Technology, Kolkata.
- **DL Talk on :** “ Past Convergence of Nanoelectronics, Nanotechnology and Information Technology: Future Challenges ” by Prof. Durga Misra, New Jersey Institute of Technology, NJ, on 14 Aug 2013, at Heritage Institute of Technology, Kolkata.
- Four ME/MTech thesis Seminar during 14-15 June at ETCE Department , Jadavpur University.
- **Workshop on** “TECHNOPHIL 2013: A workshop on CMOS & Beyond CMOS Circuits & System Design” during 18th-21st March, 2013, at ETCE Dept., JU with the involvement of Synopsys (India) EDA Software Pvt.Ltd., Bangalore.
- “VLSI, Embedded System & Modern Communication System Design Techniques”, 21st-23rd October, 2013 at Bengal Institute of Technology & Management, Santiniketan, West Bengal along with IEEE ComSoc, Kolkata Chapter.

- “National Conference on Recent Development in Electrical Electronics & Engineering Physics” , 26th – 27th October, 2013, at MCKV Institute of Engineering, Liluah.
- **Formation of a new student Chapter of IEEE EDS University of Calcutta Student Branch Chapter (SBC28561A), formal inauguration was held on 26th September 2013.** This program was jointly organized by IEEE EDS University of Calcutta Student Branch Chapter, IEEE EDS Kolkata Chapter and IEEE EDS Heritage Institute of Technology Student Branch Chapter. The inauguration program was followed by IEEE Technical Talk on ‘Electronic Design Automation: Its Importance and Challenges’, delivered by Prof. Susmita Sur-Kolay. The talk was attended by 50 students and 8 professors.
- **Mini Colloquium jointly organized by IEEE EDS Calcutta and IEEE EDS Madras**, on “Past, Present and Future of Nano CMOS Technologies “ held during 27-28 Dec at Thiagarajar College of Engineering, Madurai 625015 Tamilnadu India where eminent professors Prof. H. Hiroshi Iwai , Tokyo Institute of Technology, Japan, Prof. Edward Yi Chang, Department of Materials Science and Engineering, National Chiao Tung University, Hsichu, Taiwan, Prof. Subramanian S. Iyer , IBM Fellow and Chief Technologist at the Microelectronics Division, IBM Systems & Technology Group, USA, Prof. Chandan K. Sarkar, Dept. of Electronics & Telecommunication Engineering, Jadavpur University, Kolkata, India, Prof. N. Mohankumar, Prof. S. Rajaram and Prof. N. B. Balamurugan, Thiagarajar College of Engineering, Madurai, Tamilnadu, India delivered technical lectures.

**GRSS Chapter of the section** conducted technical lecture meeting on “Radio and Radar Sensing of Atmosphere” on 27 Feb 2013 at RCC Institute of Information Technology, Kolkata where Prof. Animesh Maitra, Dr. S.K.Sarkar and Mr. D. Pradhan delivered technical lectures. There were 75 participants in this lecture meeting, out of which 15 were IEEE members.

GRSS also conducted Educational activity on the topic of “ Global Warming, Solar Activity and Ozone Hole” at B. R. Nag Auditorium, Institute of Radio Physics and Electronics, 92, A. P. C. Road, Kolkata 700009 , **on 12 April 2013 where Prof. Dr. D K. Chakraborty spoke about the topic “Global Warming, Solar Activity and Ozone Hole”**. Solar energetic particles and cosmic rays could reduce ozone levels in the stratosphere. This in turn alters the behavior of the atmosphere below it. In the lower stratosphere, the presence of ozone causes a local warming because of the breakup of ozone molecules by ultraviolet light.

The second technical lecture delivered by **Md. Tosicul Wara on IRNSS-Indian Regional Navigation Satellite System**. IRNSS -the Indian Regional Navigation Satellite System is the space-based navigation system which is expected to provide position accuracy better than 10 m over India and a region extending about 1500 Km around India with the help of ground stations working together with spacecrafts. There were 46 participants.

**Student Activity of GRSS:** on 26 Sep 2013 at B. R. Nag Auditorium, Student Activity program was held where Dr. Prabhat Koner spoke on A Theoretical aspect of Data to Information: Remote Sensing Applications, in front of 37 participants.

Technical Seminar on : Study of wave activities in the low and mid latitude middle atmosphere using ground-based observations” delivered by Dr. Amitava Guharay, on 23 Oct 2013 at B. R. Nag Auditorium.

Second Technical Seminar on “Atmospheric remote sensing at visible and infrared wavelengths” by Dr. Barun Ray Chaudhuri organized on 06 Dec 2013 at B. R. Nag Auditorium.

**The Industry Applications Kolkata Chapter (IAS Kolkata) has organized five technical** lecture meetings and has co-hosted a training course on ‘Power Electronics Applications in Industries’ in the year 2013. The details of the events are summarized below:

- “Novel Scheme for a Fast High Voltage Power Supply and Engineering Challenges in High Current Fast DC power supplies” delivered by Mr. Varunesh Kumar, Chairman and Managing Director, M/S Veeral Controls, Gandhinagar, Gujarat, India on 21 Jan 2013 at Dept. of Electrical Engineering, Bengal Engg. & Sc. University, Shibpur, Howrah-711103 with 33 participants.

- “HVDC Growth in the United States of America”, by Mr. Tapan K. Manna, Senior Electrical Engineer, Transmission & Distribution, Burns & McDonnell, USA, on 18th February, 2013 at Dept. of Electrical Engineering, Bengal Engg. & Sc. University, Shibpur, Howrah-711103 with 23 participants.
- “New Challenges in Power Electronic Converters for UPS Systems”, by Mr. Rajesh Ghosh, American Power Conversion (APC) by Schneider Electric, India, on 05 April 2013 at Dept. of Electrical Engineering, Jadavpur University, Kolkata, India-700032 with 31 participants.
- “Issues and Challenges in Managing Thermal Power Projects in India”, by Mr. Sanjoy Mukherjee, Calcutta Electric Supply Corporation (CESC) Ltd., Kolkata, India on 7th August, 2013 at Dept. of Electrical Engineering, Bengal Engg. & Sc. University, Shibpur, Howrah-711103 with 68 participants.
- “High Switching Frequency Device Technology (GaN HEMT), Applications and Challenges” by Mr. Rajesh Ghosh, American Power Conversion (APC) by Schneider Electric, India, on 18th September, 2013 at Dept. of Electrical Engineering, Bengal Engg. & Sc. University, Shibpur, Howrah-711103 with 48 participants.
- A training course during the period 4-6 Jan 2013 was conducted by IA chapter at Dept. of Electrical Engineering, Bengal Engg. & Sc. University, Shibpur, Howrah-711103 where 14 regular professionals from industry and academic organizations and 20 students participated.
- IA Kolkata Chapter has also organized a **short-term course** on ‘Power Electronics Applications in Industry’ jointly with the Department of Electrical Engineering, Bengal Engineering & Science University (B.E.S.U), Shibpur, Howrah, India-711103 during June 19-23, 2012.

**The PES Chapter of Kolkata section** has organized five technical lecture meetings, one student activity program, 2 seminars and one DLP in the year 2013.

#### **Technical Meeting:**

- **First lecture meeting** was organized at Seminar Room of High Tension Laboratory, Jadavpur University, Kolkata-32 on 30th January, 2013 on the topic of “The research works at the University of Applied Sciences, Augsburg, Germany” delivered by Dipl. Ing. (FH) Anton Gerblinger, Research Assistant, Faculty of Electrical Engineering, (Electrical Energy Systems), University of Applied Sciences, Augsburg, Germany. There were 34 participants.
- **On 27 Feb 2013, the second lecture meeting** was organized at the seminar room of Seminar Room of Electrical Engineering Department, Jadavpur University, Kolkata- 32 , “Modern Trends in Design of HT & LT Power Distribution network of large Thermal Power Plants” Mr. Jiban Kr. Chaudhury, Director, Development Consultants Private Limited, Kolkata. There were 57 attendees.
- **Third lecture meeting** “Capactive Sensors” delivered by Prof. Sugata Munshi, Dept. of Electrical Engg. Jadavpur University, Kolkata -32 on 26th March, 2013 at R.N. Mukherjee Hall, The Institution of Engineers (India), WBSC, Kolkata.
- Fourth lecture on “Issues & Challenges of Thermal Power Project in India”, by Mr. Sanjoy Mukherjee, Dy. General Manager (Proj.) CESC Ltd. , on 07th August, 2013 at Seminar Room of EE Department, Bengal Engineering and Science University, Howrah. 68 Participants.
- 5th Lecture meeting on “Innovations and Start-up ideas around machine learning and predictive analytics, Mr. Suvankar Ray, VP Platform Development, Boston Predictive Analytics, Cambridge Innovation Center, Massachusetts, USA, on 16th August, 2013 at Seminar Room of Electrical Engineering Department, Jadavpur University, Kolkata- 32.

- **Student Activity Workshop by PES** held On 04th December, 2013, a half day student career workshop on “Career challenges and opportunities of a graduate electrical engineer beyond 2020” was organized. Mr. Aniruddha Basu, Managing Director, CESC Ltd, Kolkata delivered his talk in the seminar room of electrical engineering department. This program was jointly organized with Electrical Engineering Department of Jadavpur University, Kolkata. There were 62 participants out of which 12 are IEEE members.
- **Distinguished Lecture Programme** delivered by Prof. (Dr.) Katsuhiko Naito, Consultant LF, Japan and IEEE PES - Distinguished Lecturer delivered his lecture on “Insulator Contamination – Basics” in K.P.Basu Memorial Hall of Jadavpur University, Kolkata on 14th May, 2013.
- **The PES Chapter** organized **one day national seminar on** “Insulator Contamination, Transmission Arrester and EMF around Power Facilities” on 14th May 2013 at K. P. Basu Memorial Hall of Jadavpur University. This seminar was co-sponsored by Technical Education Quality Improvement Program (TEQIP, Phase-II) of Jadavpur University. The speakers are from NGK Insulators and Nagoya Institute of Technology, Japan. Speakers were delivered talk on four different topics as mentioned below (including DLP)
  - 1. Prof. K. Naito, Consultant LF, Japan and IEEE PES - Distinguished Lecturer has delivered lecture on “Insulator Contamination – Basics.”
  - 2. Mr. Tomohiro Hayashi, Manager, Transmission Engineering Section, NGK Insulators Ltd, Japan has delivered technical lecture on two different topics, viz. “Insulator Contamination – Consideration for Service” and “Transmission Line Arresters” on morning and afternoon session respectively.
  - 3. Prof. Dr. Yukio Mizuno, Head of Electrical Engg. Nagoya Institute of Technology, Japan has delivered his lecture on “Electric and Magnetic field around power facilities”.
  - In total 92 participants attended the seminar, of which 08 are IEEE members.
- **The second seminar by PES chapter** in technical collaboration with Bureau of Indian Standards (BIS) and The Institution of Engineers (India), West Bengal State Centre, organized one day technical seminar on “National Electrical Code of India 2011” at Sir. R. N. Mukherjee Auditorium, The Institution of Engineers (India), 8, Gokhale Road, Kolkata on 27th November, 2013.
- Stalls were put up by 3 sponsors including Bureau of Indian Standards. There were nine technical lectures including one panel discussion on “**In spite of Good Standards existing in India, where do we go wrong and face high loss of lives and properties**” are organized during the seminar to familiarize the National Electrical Code.
- PES Chapter Nominates Sri. Arijit Basuray, for Outstanding Chapter Engineer Award, in recognition to his outstanding contribution in electrical power engineering, Ms. Konika Das (Bhattacharya), Associate Professor, Electrical Engineering Department, Bengal Engineering and Science University, Shibpur, Howrah has been nominated for “Chapter Engineer Award” for her active participation in advancement of PES Chapter and The chapter also nominated two of its members for elevation to Senior Member grade Dr. Abhijit Lahiri, Director Supreme Foundations & Dr. Saibal Chatterjee, Associate Professor, NERIST, Arunachal Pradesh were elevated to Senior Member Grade in 2013.

#### **Social Meeting:**

- A one day social programme was organized at Mainland China where family members of the PES members were invited. The half day programme was thoroughly enjoyed by all present. 10 guests and 8 PES members attended the annual social.

**Photonics Society** has organized 05 technical lecture meetings on different topics those are given under



- “Recent developments in numerical simulation of photonic devices and integrated optic structures” by – Dr. Debjani Bhattacharya University of Calcutta, on 12 Feb 2013 at Institute of Radio Physics and Electronics, Participants: 15
- “Cold Atom Gyroscope: Towards Extreme Sensitivity”, by Indranil Dutta, PhD Scholar, SYRTE Observatory of Paris, France, on 19 Mar 2013, at Radio Physics and Electronics, Participants: 12
- “Wave Wireless NoC as Interconnection Backbone for Multicore Chips: Promises and Challenges”, by Partha Pratim Pande, Associate Professor Boeing Centennial Chair in Computer Engineering School of EECS, Washington State University, on 16 July 2013, Radio Physics and Electronics, Participants: 31
- “IEEE Day Lecture”, by Prof. N.R. Das on 01 Oct 2013, at Tezpur University Assam.
- “Design of low-loss THz waveguides and some basic devices”, by B M A Rahman City University London UK on 11 Dec 2013, at Radio Physics and Electronics.
- PS activity extended for Outreach Program along Joint IEEE Calcutta University Student Branch for National Science Day Celebration on May 17, at Ulludanga Sadhanpur Tulsi Ram High School, Aamdanga, 24 Parganas (North), West Bengal.

**GOLD AG organized 4 lecture meetings as given:**

- “Program Multi-scale opening of conjoined structures in shared intensity space”, by Dr. Subhadip Basu, Assistant Professor, CSE-JU, 25th February, 2013, at CSE Department Jadavpur University.
- “AN INTRODUCTION TO PARTICLE SWARM OPTIMIZATION (PSO) AND ITS APPLICATIONS” by Dr. Nibaran Das, Assistant Professor, CSE-JU, on 22 April 2013, at CSE Department Jadavpur University.
- Third lecture program in association with CMATAR, CSE, Jadavpur University, “FLOW CYTOMETRY: APPLICATION OF TECHNOLOGY IN MEDICAL SCIENCE” by Dr. Arnab Chattopadhyay, Institute of Haematology & Transfusion Medicine, Calcutta Medical College, Kolkata, India, on 18 May 2013 at Venue: CMATER Seminar room (T-3-11), Dept. of CSE, JU.
- 4th lecture program of GOLD Affinity Group, IEEE KOLKATA SECTION in association with Government College of Engg. & Ceramic Technology held on 31 Aug 2013 on Data Analytics-Issues and Challenges at Ceramic Tech. College, Beliaghata Main Road, delivered by Debashish Jana, Senior Information Technology Expert, TEOCO Software Pvt. Ltd., Kolkata, India.

**In the year 2013 WIE AG Kolkata Section has organized several innovative programs as outlined here:**

**WIE AG organized** organized a program on March 19, 2013, Tuesday titled “Free-Hand Self-Defence” at Indian Statistical Institute, Kolkata from 4:00 pm to 6:00 pm to spread the awareness for learning some basic self defence strategies among young students. The program began with an introductory lecture on “Workplace Hazards” by Professor Jayasree Dattagupta, Ex-Chairperson of Sexual Harassment Committee, Indian Statistical Institute, Kolkata. A set of very interesting demonstrations on Judo, Aikudo, Yoga, free-hand exercises followed the next one and half hour by four personnel from Swami Vivakananda State Police Academy, Barrackpore. About 50 students, faculties, researchers from Indian Statistical Institute, University of Calcutta participated very actively in the demonstration.

- **To celebrate World Water Day, IEEE WIE AG, Kolkata chapter and IEEE AP-MTT Kolkata chapter in collaboration with Birla Industrial & Technological Museum (BITM), Kolkata organized** a program for underprivileged children on 22.03.2013.
- A visit to the Sensor Hub facilities and Fiber Optics Laboratory at Central Glass and Ceramic Research Institute (CGCRI) was arranged **by WIE AG on 21st May 2013** for B.Tech students of Electronics and Telecomm. Engineering. 21 students from Jadavpur University and Bengal Engineering and Science University participated.

- WIE organized a one-day outreach program at Masjidbati Parbati Vidyalay, Basanti, Sundarban, West Bengal in collaboration with Birla Industrial and Technical Museum (BITM), Kolkata on June 15, 2013.
- IEEE WIE Kolkata Chapter organized a one day workshop “A glimpse of the e-world” at the Institute of Radio Physics & Electronics, University of Calcutta on 7th August 2013, to cater to home makers, teachers and other professionals who found themselves difficult in operating computers and became confused by their “tech – savvy” children. Nineteen women participated in the workshop.
- WIE AG organized two days workshop on “**Electronics: Basic Applications**” in the Department of Instrumentation & Electronics Engineering, Jadavpur University, Salt Lake Campus, Kolkata on 30th and 31st October, 2013.

**Special Interest Group on Humanitarian Technology (SIGHT) is formed first time** in Kolkata Section in the year 2012 and continued successfully the second year project in 2013 with Prof. Iti Saha Misra is the Chairperson for this group.

- This year SIGHT on **Low Cost Low Bandwidth Remote Virtual Educational Platform for underserved**, did the advancement program to be used this platform for the student community **having hearing and visual impairments and also for the teacher students having limited mobility**. On 30 July 2013 SIGHT Kolkata Section used this platform for a **SIGHT Awareness Program** to the student community. About 25 students attended in different classrooms of this virtual educational platform at Broadband Wireless Communication Laboratory, involving 3 rooms and one sitting room of the coordinator, Prof. Iti Saha Misra, in a separate building acted as the Teacher Room where as the Server Room was situated to the university’s Server Room.
- The objective of the project is to provide remote classroom teaching where at a time considerable number of students can be served for the **primary level of education and/or to a higher level of teaching assistance where availability of resources is the problem**. An Internet based solution that assumes computer facilities at the end points is the main concept. Simultaneous use of more than one educational centre is possible in this platform.
- The technology can assist the physically challenged people and empower them to be part of the mainstream life with the facility of remote class room teaching. The second program of SIGHT was demonstrated on 21 Dec 2013 adding some features like to use doc file apart from ppt file presentation which is the main mode of teaching.

## **PART C – GOALS and PLANS**

### **C.1 Goals**

Retention of existing members through membership development programs like elevation to Senior Member grade, recognizing the efforts of active members by awarding them citations or personalized plaques.

- Increasing activities of section by arranging more lecture meetings, not necessarily technical but also on public affairs, professional activities, and educational trips for students to nearby industries.
- To spread the message of IEEE within the geographical area under the jurisdiction of Kolkata Section.
- To increase the involvement of more women members for the office bearers for the Section.

### **C.2 Implementation Plans**

Institution of awards in the following category:

- a) Best Chapter Award based on yearly activity.
- b) Organizing frequent one day program involving branch counselors from all student branches.
- c) Involving more and more young members in interactive sessions.
- d) More programs on the practical aspects of IEEE technology for day-to-day use.

- e) Increasing the student activities through the collaborative work of Student Branches along with the Section, Chapters and AGs.

## **PART D – OTHERS**

### **D.1 Relationship with National Societies**

The relationship with National Societies like The Institution of Engineers (India), The Institute of Electronics & Telecommunication Engineers India, Computer Society of India is cordial.

### **D.2 Special Events**

- **As special event** IEEE Kolkata Section felicitated its **eminent member Prof. Sankar Pal**, former Director of Indian Statistical Institute in the evening of March 27, 2007 on the occasion of being **bestowed with the Padma Shri Award 2013**. This was arranged at Dakshin Kalikata Samsad, Deshapriya Park, Kolkata. About 45 Section, Chapter and GA officers were present in that evening.
- IEEE Kolkata **Section felicitated Dr. Amiya Kr. Chatterjee**, an eminent Electrical Engineer and Educator of the country, in the evening of May 3, 2013 on the occasion of his Birth Centenary being celebrated this year. Prof. Chatterjee was born on March 29, 1914 and graduated with diploma in electrical engineering in 1935 from National Council of Education, Jadavpur. He received his MS degree from Cornell University and PhD degree from University of Illinois in 1946 and 1948, respectively. Apart from various Industries in India, UK, and USA, Prof. Chatterjee served Jadavpur University, Birla College of Engineering, Pilani and Birla Institute of Technology, Mesra in different capacities.

### **D.3 Concern Areas and Suggestions**

- Number of members from industry is low
- Student member retention is low, but formation of new student branches add new member every year
- Involvement of members in section activities not as per expectation
- Increased participation of section volunteers in national and international committees
- Nominating deserving volunteers of the section for IEEE awards and recognitions