## Summary of events:

Total technical events: 16
International Conference organized by Chapter: 01
Conferences technically co-sponsored: 04
Invited lectures/ lecture series organized/ technically co-sponsored: 07
Distinguished Lectures by IMS, IEEE: 02
Workshops/ Short Term Course: 02

No. of Executive committee meetings: 04

**Event 1: IEEE First International Conference on Control, Measurement & Instrumentation (CMI) 2016**:
Venue: Jadavpur University, Kolkata India
Technically co-sponsored by: IEEE IMS
Collaborator: Jadavpur University, Kolkata, India.
Dates: January 08-10, 2016



1. Summary of lectures:

(A) Keynote speaker:

**Prof. Wuqiang Yang, University of Manchester, UK, IEEE Fellow,**
Distinguished Lecturer, IEEE Instrumentation & Measurement Society, USA
Title of the Talk: Electrical Capacitance Tomography and Industrial Applications

(B) Plenary Speakers:

1. **Prof. Bikash Pal, Imperial College London, UK, IEEE Fellow**

Editor-in-Chief, IEEE Transactions on Sustainable Energy

Title of the Talk: Role of Control and Measurement in Future Power Networks

2. **Prof. Huijun Gao, Harbin Institute of Technology, China, IEEE Fellow**

Co-Editor-in-Chief, IEEE Transactions on Industrial Electronics

Title of the Talk: Networked Control Systems with Application to Industrial Processes

3. **Prof. Bijnan Bandyopadhyay, Institute Chair Professor, Indian Institute of Technology (Bombay) India,**

Distinguished Visiting Fellow, Royal Academy of Engineering, London

Title of the Talk: Higher Order Sliding Mode Control – A new Research Paradigm

4. **Prof. Laxmidhar Behera, Indian Institute of Technology (Kanpur) India**

Member, Technical Committee on Intelligent Control, IEEE CSS.

Title of the Talk: Learning to Control Visually Guided Robotic Systems

5. **Dr Subhajit Roy Chaowdhury, School of Computing and Electrical Engineering, Indian Institute of Technology (Mandi) India**

Title of the Talk: Biomedical Systems for the Society: From Non Invasive Diagnosis to Point of Care Testing

(C) Contributory papers: Total papers 105 were accepted, presented in 18 technical Sessions.

(D) Technical Program Committee:

The TPC consisted on 128 researchers from reputed institutions all over the world.

(E) Tutorial Session:

Conducted by Professor Amit Konar, Professor of Electronics & telecommunication Engineering, Jadavpur University.

(F) Proceedings:

The Conference e-proceedings was published with ISBN: 978-1-4799-1768-6. The presented papers are now available in IEEEXplore Digital Library with iSBN: 978-1-4799-1769-3.


Inaugural session


Huijun Gao

**Event 2: Distinguished Lecturer Program of Instrumentation & Measurement Society, IEEE, USA.**
January 11, 2016
Venue: Jadavpur University, Kolkata India

Speaker: Professor Wukiang Yang, University of Manchester
Title of Lecture: Non-ideal OPAMP circuit analysis.


Prof Yang with section of Audience


Prof Yang delivering lecture at DLP

**Event 3 : Special Lecture program**
January 11, 2016
Speaker: Professor Wukiang Yang, University of Manchester
Venue: Department of Applied Physics, University of Calcutta, India.
Title of Lecture: "Electrical Capacitance Tomography for Imaging Industrial processes"
Other Technical Sponsor: IET UK Kolkata Network


Prof Yang delivering lecture


Prof Yang interacting with faculty members

**Event 4 (Technically Co-sponsored) : International Conference on Control, Instrumentation, Energy & Communication, 2016 (CIEC16)**
Date: January 31-February 02 2016
Organizer: Department of Applied Physics, University of Calcutta, India.
Other Technical Sponsors: IEEE Kolkata Section, IET Kolkata network, IEEE SMCS Bangalore chapter, DST Govt of India, CSI Kolkata, TEQIP II UCT, University of Calcutta.

Department of Applied Physics, University of Calcutta organized 2016 2nd International Conference on Control, Instrumentation, Energy and Communication (CIEC16) during 28th January to 30th January, 2016 at Department of Applied Physics, University of Calcutta. The conference was organized with the motivation of sharing various developments in core and multidisciplinary areas related to control, instrumentation techniques, power systems, signal processing, communication and expert system.

The initial call for paper received a total submission of 234 manuscripts. After initial screening, about 220 of it were sent for blind review process. After review compliance check, only 113 manuscripts were given final acceptance in 'Oral' and 'Poster' category. Ultimately 109 papers were presented in the conference under five major tracks, (a) Control and Automation, (b) Instrumentation and Measurement, (c) Power and Energy, (d) Communication and Networking, (e) Computational Techniques and Expert Systems. The conference thus had an acceptance rate of 48%.

The inaugural session started with the presence of Professor Sugata Marjit, Hon'ble Vice Chancellor, University of Calcutta, Professor S. Chakraborty Bandhopadhyay, Hon'ble Pro-Vice Chancellor, BA & F, University of Calcutta, Professor N. R. Das, Dean, Faculty of Engineering and Technology, University of Calcutta, plenary **Speakers Professor Sarah Spurgeon, Dept. Control Engineering, University of Kent, UK, Professor Josep M. Guerrero, Institute of Energy Technology, Aalborg University, Denmark, Professor Rangaraj M. Rangayyan, Department of Electrical and Computer Engineering, University of Calgary, Canada Professor J.B. Ekanayake, Department of Electrical & Electronic Engineering, University of Peradeniy**a. Sri Lanka in the dais. Prof. J. N. Bera, Organizing Chair of CIEC16 delivered the welcome address, followed by inaugural address by Prof. Sugata Marjit. Vote of thanks was delivered by Dr K. Dassharma.

The technical programme consisted of four plenary lectures, four invited lectures by senior professors and 18 technical sessions including the Poster Session.

There were adequate interactions amongst the participants and experts. The conference proceeding was published with an ISBN No. of 978-1-5090-0035-7. All the presented research papers are now available in IEEE*Xplore* digital library.


Keynote lecture by Prof Sarah Spurgeon under progress


Inaugural session


Inaugural session

**Event 5 (Technically Co-sponsored) : The National Conference on Recent Advances on Science, Engineering and Management (RASEM-2016)**

Organizer : Bengal Institute of Technology and Management, Santiniketan, West Bengal, India.
Date: February 20-21, 2016
Other Sponsors: AICTE, India

The conference papers ware accepted from the various fields like Science, Technology, Engineering, Management, Mathematics, Law and Hospitality Management. The authors enlighten the new applications and impact in academia and industry. Out of 54 number of research papers only 32 number of papers has been selected for the conference presentation, out of that two (02) papers from University of KwaZula-Natal, South Africa, one (01) paper from University of Wisconsin at Milwaukee, USA, one (01) paper from IIT- Ropar, five (05) from Visva- Bharati University, two (02) from Aliah University, two (02) from Amity University and the rest are from Jadavpur University, NITTTR, CSIR- Indian Institute of Chemical Biology, NIT- Agartala , IMS- Kolkata, CIT- Madhyamgram and BITM- Santiniketan.

The Chief Guest of the Conference was Prf. (Dr.) Sujit Kumar Basu, former Vice-Chancellor of Visva-Bharati University, Santiniketan. Dr. Basu was also the Director of Management Development Institute (MDI), Gurgaon and Director General Institute of Integrated Learning in Management, New Delhi.
He was delivered his speech on the topic "Recent Advances in Science Technology & Management".
Professor (Dr.) Pranab Sarkar, Department of Chemistry, Visva-Bharati was the key-note speaker of the conference. He was delivered his speech on the topic of "New Trends of Scientific Innovations for Human-beings". Professor (Dr.) A. K. Mukhopadhyay, Professor (Dr.) R. Sahoo, Director, BITM-Santiniketan, Prf. (Dr.) P. P. Ray, Dean-Academic, and Mr. Amitava Choudhury, Registrar, BITM-Santiniketan are also enlighten the conference with their valuable notes.

Inaugural session

**Event 6 (Technically Co-sponsored) : Lecture Series on**
  **(A) Advances in Automation: Current Practices in Industry**
  **(B) Modern Power System: Issues and Challenges**
Organizer: Department of Applied Physics, University of Calcutta, India.
Other Technical Sponsors: UGC SAP DRS II Program at Dept of Applied Physics, CU
Date: March-May 2016

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|---|---|
| Lecture 1 | |
| Date and Time: | March 8th, 2016, 4:00pm |
| Speaker with brief details: | Mr. Ranjit Das |
| | Principal Consultant with FAULT & RELAY, an organization dealing with Power system protection and Training of Graduate Electrical Engineers. |
| Title of Lecture: | 1. Modern Power System Overview - Introduction of Some Issues. |
| Lecture 2 | |
| Date and Time: | March 15th, 2016, 4:00pm |
| Speaker with brief details: | Mr. Ranjit Das |
| | Principal Consultant with FAULT & RELAY, an organization dealing with Power system protection and Training of Graduate Electrical Engineers. |
| Title of Lecture: | 2. Power System Network Architecture & Different Protection/ Isolation Component |
| Lecture 3 | |
| Date and Time: | March 17th, 2016, 4:00pm |
| Speaker with brief details: | Mr. Debabrata Sarkar |
| | Chief Engineer, Instrumentation/ Oil & Gas, Qatar Kentz W.L.L. |
| | Member of the SNC-Lavalin Group, Doha, Qatar. |
| Title of Lecture: | 1. Electronic Marshalling – An innovative technology. |
| | 2. Material Selection for Instruments – Recent development in material science. |
| Lecture 4 | |
| Date and Time: | March 17th, 2016, 4:00pm |

Speaker with brief details:      Mr. Ranjit Das
Principal Consultant with FAULT & RELAY, an organization dealing with
Power system protection and Training of Graduate Electrical Engineers.
Title of Lecture:      3. Power System Grounding



Lecture of Mr Debabrata Sarkar under progress



Lecture of Mr Ranjit Das under progress

**Event 7 (Technically Co-sponsored) : Special Lecture Program**

Organizer: Department of Applied Physics, University of Calcutta, India.
Other Technical Sponsors: UGC SAP DRS II Program at Dept of Applied Physics, CU
Date: August 10, 2016
Speaker: Prof Koushik Maharatna, Chair in Signal processing Systems Design, Electronics & Computer Science, University of Southampton, UK
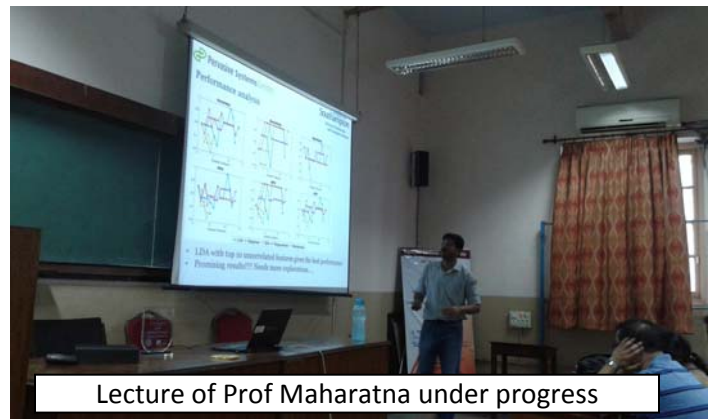Title: "On the Application of ICT-based Remote Healthcare Strategy for Treating Autistic Children at Home".

In his lecture Professor Maharatna elaborated the problem in traditional clinical interventions by the psychologists for autistic children and how ICT can be used in gaming to provide a therapy to the children with the simultaneous acquisition of EEG signal and its processing. He also welcomed any joint research initiative by Indian research groups in the same area for possible collaboration.

The lecture was attended by 62 numbers of participants with the following category breakup:



Inaugural Session



Lecture of Prof Maharatna under progress

**Event 8: Distinguished Lecturer Program of Instrumentation & Measurement Society, IEEE, USA.**
August 27, 2016

Venue: Meghnad Saha Auditotium, University of Calcutta, Kolkata, India.

Lecture 1: "Unobtrusive Smart Sensing and Pervasive Computing: Cardio Respiratory and Motor Activity Assessment"..
Speaker: Dr Octavian Postolache, Instituto de Telecomunicações, Universidade de Lisboa, Lisboa, Portugal,
Title of Lecture:

Lecture 2: "Early Diagnosis of Oral Cancer from Histopathological Images: A Computer Vision Theoretic Approach".
Speaker: Dr Ajoy Kumar Roy, Director, Indian Institute of Engineering Science & Technology, Kolkata

The inaugural address was delivered by Professor Sujit K. Biswas, EE Engineering Department, Jadavpur University, Kolkata and Chair-Elect, IEEE Kolkata Section. ". Total 79 participants (including 17 IEEE members, 12 faculty members, 9 Research scholars, 8 industry professionals) attended the lecture. The lecture was followed by adequate interaction with the audience.


Lecture by Dr Octavian under progress


Section of the audience

**Event 9 (Technically Co-sponsored) : Special Lecturer Program.**

Organizer: Electrical Engineering Dept, NIT Meghalaya, Shillong, Meghalaya, India.
Date: August 29, 2016

Lecture 1: Dr Octavian Postolache, IEEE IMS Distinguished Lecturer: "Unobtrusive Smart Sensing and Pervasive Computing for Healthcare: Cardio respiratory and Physical Rehabilitation Assessment"
Lecture 2: Dr Amitava Chatterjee (Section's representative), Professor of EE, Jadavpur University, and Associate Editor, IEEE TIM and IEEE Sensors Journal, Editor, Engineering Applications of Artificial Intelligence (Elsevier), Associate Editor, Control Engineering Practice (Elsevier): "Instrumentation Systems for Hand Vein Based Biometrics using Thermal Imaging".
Lecture 3: Dr. Kaushik DasSharma (Chapter's representative), Associate Professor, EE Section, Dept of Applied Physics, University of Calcutta and EC Member, IEEE Joint CSS-IMS Kolkata, India: "Nano-Bio Sensors for Cancer Sub-Group Detection from Gene Expression Data".

The programme started at 9.30 a.m. with the welcome speech from Prof. Dilip Kr. Saikia, Director NIT Meghalaya. Over all around 50 participants were there in the programme including 13 faculty members, 03 research scholars, 30 M. Tech students and 5 technical staffs within and outside the institute. Out of all participants fifteen were IEEE members

including faculties and students. Finally, the vote of thanks was given by Dr. Atanu Banerjee, HOD, Department of Electrical Engineering, NIT, Meghalaya.


Lecture by Dr Octavian under progress


Lecture by Dr Chatterjee under progress


Speakers with section of the audience and guests

**Event 10 (Technically Co-sponsored) : Special Lecturer Program.**

Organizer: Tata Consultancy Services, Kolkata, India
**Date: August 31, 2016**
Speaker: Dr Octavian Postolache, IEEE IMS Distinguished Lecturer: "Unobtrusive Smart Sensing and Pervasive Computing for Healthcare: Cardio respiratory and Physical Rehabilitation Assessment"
Dr Octavian visited the TCS Innovation Lab at Kolkata and delivered a lecture on pervasive computing in healthcare. The lecture was attended by 35 researchers at Kolkata office and was live broadcasted (through VCON facilty) to other three cities in India, which are Mumbai, Bangalore, Chennai.
Among the audience in Kolkata 25 were IEEE members.

**Event 11 (Technically Co-sponsored) : Workshop on MES'16(Microcontroller Based Embedded System**
**Organizer:** Techno India Salt Lake, Kolkata, India.

Date: October 1-3, 2016,

Other Sponsors: IET (UK) Kolkata local network.

Dr.P.Kundu (EE Dept., JU) academic expert , put lecture on the various point of "Micrcontroller (AT89S52)" application in today's embedded industry. On 2nd Oct '2016 Mr.S.Ray (EE Dept., JU) introduced to the student the "PIC Microcontroller(16F877A)" and their applications in the embedded industry. On 3rd Oct '2016, Dr.P.Kundu (EE Dept., JU) an academic expert , put lecture on the various point of "Arduino UNO R3" in today's Embedded industry. On 3rd Oct '2016 Dr.D.Dey (EE Dept., JU) an academic expert , put lecture on "Relation between IOT Embedded system". The program was grand success with a total of 79 student participating, out of 80 registered, 41 being the member of IET and the rest of student those who registered for this event.



Dr P. Kundu delivering lecture



Mr S. Ray during hands on session

**Event 12 (Technically Co-sponsored) : 4th International Conference on Advanced Computing, Networking and Informatics ICACNI 2016**

Organizer: NIT Rourkela, India.

Venue: Centre for Computer Vision and Pattern Recognition, NIT Rourkela, Odisha, India.

Date: 22-24 Sept 2016
Other Sponsors: IEEE Communications Society Calcutta Chapter, Aerospace Electronics and Systems Division, CSIR National Aerospace Laboratories, Govt. of India, Dependable Computing and Networking Laboratory, Iowa State University, USA, Multimedia Content Security Innovative Research Group, Henan University of Science and Technology, China; Poznan University of Technology Vision Laboratory, Poland
The conference received more than 550 submissions, which included original research results, survey of state-of-the-art, and case studies. The program chairs ensured a single-blind review of the submissions by at least two experts in the field. A third review by a peer / expert was brought into play in cases of unclear indication of decision by first two reviewers. Having selected 112 article, the proceedings of the conference is in process of being published in the Advances in Intelligent Systems and Computing series of Springer. There were a total of 13 regular sessions that run in parallel during the conference. Associated with these, there were one special session and one contest session.
Prof. Mike Hinchey, President, International Federation for Information Processing, who also serves as Vice Chair and Chair Elect, IEEE UK and Ireland Section has supported the conferences with his presence as Honorary General Chair. The inauguration of the conference was followed by an inaugural keynote by Prof. Bhargab B. Bhattacharya, FIEEE from Indian Statistical Institute, Kolkata, India. The conference also hosted keynotes by Prof. Robert Bestak from Czech Technical University in Prague, Czech Republic; and Prof. Amitava Chatterjee, SMIEEE from Jadavpur University, India. A keynote lecture by Prof. Sankhayan Choudhury from Calcutta University, India was co-hosted with ACM Kolkata Chapter, approved by the chapter chair Prof. Nabendu Chaki, SMIEEE. A tutorial by Mr. Sumit Misra, who is the General Manager of RS Software, India was an indeed benefit for the conference participants, as the tutorial discussed real life industry challenges.

Computer Vision and Pattern Recognition being the annual theme, a special session on 'Biometrics Security Artifacts for Identity Management' was convened by Prof. Dakshina Ranjan Kisku, SMIEEE from National Institute of Technology Durgapur, India. A total of ten articles from the concerned domain of research were presented in the session.

IEEE Communications Society Calcutta Chapter hosted a contest session for finding the best communication related article, which was chaired by Prof. Iti Saha Misra. Out of all articles related to communication, seven articles were shortlisted for presentation during this contest session. The session identified the best paper and a runners-up article from this contest.

The extended versions of some selected articles from all sessions will undergo re-review for inclusion in special issues of the following journals:
1. Innovations in Systems and Software Engineering (A NASA Journal), Springer
2. International Journal of Computer Vision and Image Processing, IGI Global
3. Digital Communications and Networks, Elsevier
4. Computing and Visualization in Science, Springer


Keynote by Prof Bhargab Bhattacharjya


Inaugural Session


Keynote by Prof Amitava Chatterjee


Keynote by Prof Robert Beztak

**Event 13 (Technically Co-sponsored): 2016 International Conference on Intelligent Control Power and Instrumentation (ICICPI)**

Organizer: Dept of Electrical Eng and Dept of Applied Electronics & Instrumentation Eng, RCCIIT, Kolkata
Date: (October 21st - 23rd, 2016)
Other Sponsors: IEEE PES (US and Canada), IFSA, TEQIP Phase II at RCCIIT, Kolkata

The conference was inaugurated by prof Ajoy Kumar Roy, Director, IIEST, Kolkata. Invited and plenary lectures were delivered by Dr. Alex Mason, Liverpool John Moores University, UK; Dr. Er. Meng Joo, Nanyang Technical University, Singapore; Dr. Anton Nijholt, University of Twente, Netherlands; Dr. Joydeep Mitra, Michigan State University, USA ; Dr. Md. Atiqur Rahman Ahad, University of Dhaka, Bangladesh; Dr. Arup RoyChoudhury, Right to Public Service Commission, W.B. (Ex. Chairman & Managing Director, NTPC Ltd.) India; Dr. Prithwish Kangsabanik, Swisscom, Switzerland; Dr. Subhasis Bhaumik, Indian Institute of Engineering Science & Technology, Shibpur, India and Dr. Siddhartha Sen, Indian Institute of Technology, Kharagpur, India.

Total no of attendee 330 (in 3 days) attended the conference and a total of 62 papers were presented in three days. The presented papers will be published by IEEEXplore Digital Library as per IEEE quality policy.


Inauguration ceremony


Dignitaries and speakers


Prof JK Roy highlighting chapter's activities

**Event 14: Special Lecture Program**

Jointly organized by: Electrical Engineering Dept, Jadavpur University, Kolkata, India.
Speaker: Professor Subhas Mukhopadhyay, FIEEEE, Macquarie University, Sydney, Australia
Date: December 20, 2016
Topic: WSN for Health and Home Management
Venue: Seminar Room (First Floor), Electrical Engineering Department, Jadavpur University, Kolkata 700032

The lecture program was attended by 32 attendees, among which, 12 were faculty members, 18 were students and 6 were research scholars. The inaugural address was delivered by Prof S.K. Goswami, HoD EE Dept JU. Prof Abhijit Mukherjee, EE Dept gave a brief introduction of the speaker and his long association with the speaker.


Felicitation of speaker by HoD EE,


Felicitation by chapter Chair


Section of audience


Lecture in Progress

**Event 15: Special Lecture Program**

Organized by: Dept of Applied Physics, University of Calcutta, Kolkata, India.
Venue: Seminar Room (First Floor), of Applied Physics, University of Calcutta, Kolkata-700009.
Date: December 22, 2016
Other sponsors: IET Kolkata Network

Speakers:
1> Prof. Janaka B. Ekanayake, FIEEE, Department of Electrical and Electronic Engineering
Faculty of Engineering, University of Peradeniya, Sri Lanka
Topic of lecture: "SMART Metering with demand side management"
2> Dr. Sakunthala Ekanayake, Department of Education, Faculty of Arts, University of Peradeniya, Sri Lanka
Topic of lecture: "Role of Science & Technology in Engineering Education"

The lectures were attended by 37 attendees (9 faculty members, 20 students, and 8 research scholars). Dr Kaushik DasSharma gave a brief introduction of the speakers and context of the program. HoD, Dr Priyaranjan Mondal falicitated the guests and delivered the inaugural address.
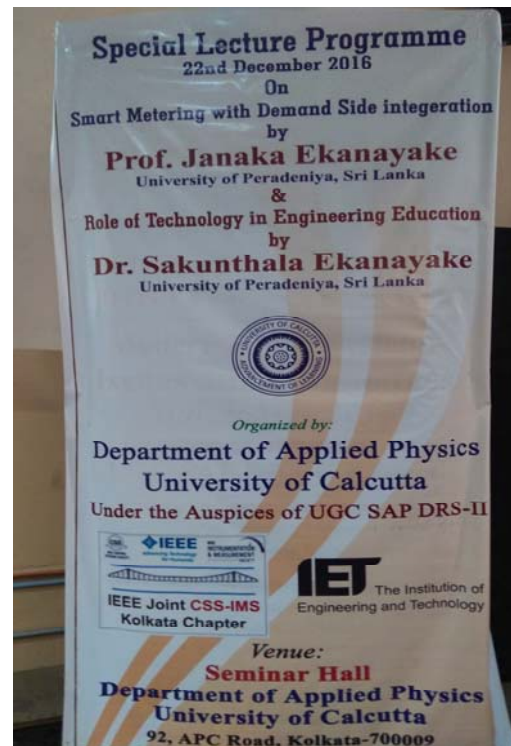


Inaugural session



Section of audience



Lecture # 2 in progress



**Event 16: One Week Short Term course on "Sensor Network For IOT & Cloud Computing"**

Organized by: Dept of AEIE, techno India SaltLake, Kolkata.
Venue: Techno India SaltLake, Kolkata..
Date: December 20-24, 2016.
Other sponsors: IET Kolkata Network

The inaugural session was conducted at seminar room of Techno India Saltlake December 20, 2016. Dignitaries present were Dr Rina Paladhi, Principal, TISL, Mr MK Chakravorty, Dr JK Roy, Mr KC Mukhopadhyay from IET Kolkata, and Dr Rajarshi Gupta from IEEE CSS-IMS Chapter, Kolkata.

The speakers / resource persons were:

(a) Dr Madhurima Chattopadhyay, Professor and Head, AEIE, Heritage Instite of Technology Kolkata delivered lecture on "Sensing based IoT".

(b) Dr Debangshu Dey, Asst professor, EE Dept, Jadavpur University delivered lecture on "Relation between IoT and Embedded systems".

(c) Mr. Soumitra Sasmal (TECHNO INDIA SALTLAKE). Delivered lecture on "IOT BASED CLOUD COMPUTING".

(d) Dr Rajarshi Gupta, Assoc Professor, dept of Applied Physics, University of Calcutta delivered lecture on "Scope of IoT in Cardiovascular Health Monitoring".

(e) Hands on Sessions were conducted by Dr Palash Kundu, Assoc Professor, EE Dept, Jadavpur University with Sri Soumyak Chandra, JRF, Dept of Applied Physics, CU on Arduino programming.

(f) Hands on Sessions were conducted by Mr. Debjyoti Chowdhury (Heritage Institute of Technology) on Python Programming Language and Raspberry Pi.

(g) Mr Dhruba Roy conducted hands on session on Python Programming Language.

(h) Sri Susanta Ray, Asst professor, EE Dept, Jadavpur University delivered a lecture on "Introduction to Embedded Systems".

The programme was attended by 25 participants. Mrs Pranati Dutta, Asst Professor, AEIE Dept, TISL volunteered as the workshop coordinator and supported by other faculty members of the Department and institute.


Participants with Organizing members


Lecture by Sri Susanta Ray in progress


Lecture by Dr Debangshu Dey in progress


Lecture by Dr Rajarshi Gupta in progress