

ABOUT IEEE

IEEE Mission & Vision

IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity. Below, you can find IEEE's mission and vision statements.

Vision statement

IEEE will be essential to the global technical community and to technical professionals everywhere, and be universally recognized for the contributions of technology and of technical professionals in improving global conditions.

Membership Benefits

IEEE membership offers access to technical innovation, cutting edge- information, networking opportunities, and exclusive member benefits. Members support IEEE's mission to advance technology for humanity and the profession, while memberships build a platform to introduce careers in technology to students around the world.

Mission statement

IEEE's core purpose is to foster technological innovation and excellence for the benefit of humanity.

About IEEE

IEEE and its members inspire a global community to innovate for a better tomorrow through highly cited publications, conferences, technology standards, and professional and educational activities. IEEE is the trusted voice for engineering, computing, and technology information around the globe.

MESSAGE FROM SUBSECTION CHAIR PROF. A. K. TRIPATHY



I congratulate all student members, members, senior members and office bearers for actively organizing events in last six months. The executive council meeting at regular intervals and has successfully held a large number of invited lectures. The number and strength of Student chapters have increased and some of them have been quite active. We are exploring possibilities as to how to engage ourselves with a larger audience and how to increase our membership further.

IEEE encourages diversity in Technology in professional, social and welfare fields. We are hoping that our WIE group who recently arranged an excellent program would take IEEE activities to other inclusive areas. A major concern is not having a permanent address for the subsection and not being able to get professionals from Industry to become members. We are

hopeful that membership would improve with addition of chapters on Communication, and signal processing to existing chapters on Power and Energy, and Power Electronics. Power and Energy society is also planning to offer Institutional membership to Industries.

IEEE is a global organization with millions of professionals in the field of Electrical, Electronics, Engineering, computer Science, Robotics, Artificial Intelligence, Biomedical Engineering and Information and Communication Technology. It values professional ethics and upholds it. Seventy percent of all conferences and seminars held in a year are under the umbrella of IEEE. IEEE therefore is particular that these conferences maintain global standard. Let all professional Institutions under our subsection hold seminars and conferences, but if they look forward to get co sponsorship from IEEE, they have to maintain the standard.

Lastly, Members are reminded to renew their membership and our Members who are professors in colleges to encourage other faculty and students to join IEEE in large numbers.

ABOUT NEW EC MEMBERS IN THE YEAR 2019



Renu Sharma: Born on 29th Oct, 1976 at Allahabad, India. She has completed PhD in Electrical Engineering from SOA Deemed to be University in 2014 and Masters in Electrical Engineering from Jadavpur University in 2006. She is Life Member IE (India), Member IET, Member IEEE, Life member ISTE, Life member ISSE, Chair WIE IEEE Bhubaneswar Sub Section. Her research areas are Smart Grid, Soft Computing, Solar Photovoltaic systems, Power System Scheduling, Evolutionary Algorithms and Wireless Sensor Networks. She has published several journal and conference articles of International Repute. She has authored a book .She has organized several national and international conferences .She is guest editor of Special Issue in International Journal of Power Electronics, Inderscience. She has coordinated AICTE sponsored FDP programs. She is one of the organizing member of PEDES 2020. Presently she is working as Professor and Head of Department in Department of Electrical Engineering in Siksha 'O' Anusandhan Deemed to be University, Bhubaneswar, India.



Pradyut Kumar Biswal obtained his M.Tech and Ph.D. from Visvesvaraya National Institute of Technology, Nagpur and Indian Institute of Technology, Kharagpur in 2002 and 2011 respectively. Currently, he is positioned as an Assistant Professor in International Institute of Information Technology, Bhubaneswar, India. His research interest includes Biomedical signal and image processing, Architecture design for signal and image processing algorithms, and Hyper-spectral image processing.

He is a Member of IEEE, USA since 2009 and member of IEEE Signal processing society. He is also an associate member of IEI (India). He has published many research papers in peer reviewed international journals and conferences. He is acting as a reviewer in IEEE transactions of Image processing, IEEE transactions of Circuits and systems, IEEE transactions on Geoscience and remote sensing, Springer and Elsevier Journals.



Er. P. K. Pattanaik : DGM (Elect), at Odisha Power Transmission Corporation Ltd. - Odisha

He has 28 years of technical experience on various HT and EHT voltage level in the field of transmission sector. Specialization on the development techno-economical design of protection control schemes for system development and system planning. At present he is involved with various on-going projects on GIS, SAS and updated Remote SCADA control stations of OPTCL.

He has published 98 technical papers in National and International arena and is a regular contributor to the National journals like Electrical Mirror, Electrical India, CBIP journal and IEEMA journal author of many technical books. He has been awarded in various arena on National level, the recent one during April-2017 and August-2019, as BEST PAPER in the International Conference "Metering India-17" & "Metering India-19" organized by IEEMA with cash award of Rs 1Lakh and Rs 50K.

He is also the coordinator of a Nationwide Power Engineers' Technical Group named "SPARK- Ignited to share" consisting of Senior Electrical Engineers from different parts of the country.

ACTIVITIES

EVENT-01:

IEEE PES Chapter Bhubaneswar in collaboration with School of Electrical Sciences, IIT Bhubaneswar organized a Technical Talk at IIT Bhubaneswar on 2nd January 2019 at School of Electrical Sciences, IIT Bhubaneswar, Argul, Jatni, Odisha. Prof Sanjib Kumar Panda, NUS Singapore was the speaker and he focused on the topic "Future Grid2.0 – Solid-State Transformer and Matrix Converter".

Abstract - The future electricity distribution networks would be structuralized as an interconnection of small clusters of distributed energy resource (DER), distributed energy storage (DES) devices and passive/active loads. Each cluster, called a micro-grid, is connected to other clusters or the distribution networks through energy control centers (ECC). A power electronic based distribution transformer called a solid-state transformer (SST) is a suitable choice to realize the ECC. The key features of the SST are controlled power flow and disturbance decoupling between the two grids, provide ancillary services such as reactive power compensation, harmonic compensation etc., and enable integration of DES and DER to the low voltage DC (LVDC) bus. by a three phase inverter in stage-3.

Speaker: S. K. Panda (S'86-M'91-SM'01) received his B.Eng. degree from NIT, Surat, India in 1983, M.Tech. degree from Indian Institute of Technology (IIT), Banaras Hindu University, Varanasi, India in 1987, and PhD. Degree from the University of Cambridge, U.K., in 1991, all in electrical engineering. Since 1992, he has been a Faculty Member in the Department of Electrical and Computer Engineering, National University of Singapore, where he is currently serving as an Associate Professor and Director of the Power and Energy Research Area. His research interests include control of electric drives and power electronic converters, renewable energy source integration with utility grid, transactive energy modeling and control, condition monitoring, predictive and preventive based maintenance.

EVENT-02:

IEEE Bhubaneswar sub-section and School of Electrical Sciences, IIT Bhubaneswar jointly organized the lecture program on 23rd January 2019 at IIT Bhubaneswar. The topic of the programme was "Characterization of materials at nano order scale length - A SAXS study". Prof. D. K. Bisoyi from NIT Rourkela was the speaker of the day.

EVENT-03:

IEEE Bhubaneswar sub-section and School of Electrical Sciences, IIT Bhubaneswar jointly organized the lecture program on 07 February, 201,4.00 p.m. on Anomaly Detection and Identification of Natural Data Using Benford's Law at IIT Bhubaneswar. Prof. Ho is from University of Surrey, U.K. was the speaker of the programme.

Abstract: This talk will present an overview of the theory and applications of Benford's law for anomaly detection in natural data. Some examples will be highlighted including the detection of glare effect in images and classification of biometric images for privacy protection, as well as security attacks related to network traffic data. Recent research based on this law has further shown that consistent anomaly patterns could be achieved for different network attacks, leading to the potential identification/pattern recognition of various types of attacks. Moreover, Benford's law has also been successfully applied for the detection of Alzheimer's Disease based on Electroencephalogram (EEG) data and this will be highlighted in the presentation.

Speaker: Professor Anthony T.S. Ho holds a Personal Chair in Multimedia Security and served as Head of Department of Computer Science, University of Surrey from 2010 to 2015. He is also a Tianjin Distinguished Professor, Guest Professor of Tianjin University of Science and Technology and of Wuhan University of Technology, China, as well as Visiting Professor of University of Malaya, Malaysia. He was the recipient of the prestigious Institution of Engineering and Technology (IET) Innovation in Engineering Award under the Security category for his research and commercialization work on digital watermarking in 2006. Professor Ho obtained his MSc in Applied Optics from Imperial College London in 1980 and his PhD in Digital Image Processing from King's College London, University of London in 1983. After graduation, he worked in technical management positions in industry for 11 years in the UK and Canada. From 1994 to 2005, He was a Senior Lecturer and then Associate Professor at Nanyang Technological University (NTU), Singapore. He has published more than 160 articles in international journals and conference proceedings as well as 8 international patents granted related to watermarking and steganography.

EVENT-04:

IEEE Bhubaneswar sub-section and School of Electrical Sciences, IIT Bhubaneswar jointly organized the lecture program Titled "Multi-robot task allocation in warehouse" on 08 February, 5.30 p.m. at Room No-014, SES Building. IIT Bhubaneswar. Dr. Chayan Sarkar. TCS research labs, Kolkata was the speaker of the programme.

Abstract: Mobile robots are a convenient tool to perform a set of tasks efficiently with minimal human intervention as robots can perform a known task with higher accuracy and efficiency if its capability permits. Deploying a team of robots is often beneficial as opposed to a single robot. A multi-robot system increases parallelism, thereby increases system throughput compared to a single-robot system. With the advent of Industry 4.0 era, employing a team of robots within a factory floor or a warehouse is pretty prevalent today. Among others, efficiency of such a collaborative exploration depends largely on efficient multi-robot task allocation (MRTA), which has gained significant research attention due to its diverse range of applications. In a warehouse, goods are systematically stored across a large area and they are taken out of the storage as and when there is an order for the goods. Moving goods in and out of the warehouse account for the majority proportion of its operational cost. Multi-robot systems are deployed in a warehouse not only to automate the process, but to achieve higher operational efficiency. In this talk, I shall present various task allocation scenarios that arises in modern warehouses.

Speaker: Chayan Sarkar is a Scientist at the TCS Research and Innovation. He received his bachelor's and master's degree in Computer Science from Jadavpur University in 2009 and IIT Bombay in 2011, respectively. He completed his doctoral studies at the Delft University of Technology, the Netherlands in 2016. He briefly worked as a post-doctoral scholar at SICS Swedish ICT in Sweden. Currently, he is part of the embedded systems and robotics research area of TCS Research. His research interest includes Internet of Things, Embedded Systems, Multi-robot systems, and Human-robot interactions. He is part of the organizing committee of IEEE ANTS'17 & '18 and AIoTAS '17 & '18 apart from serving as the reviewer of various conferences and Journals.

EVENT-05:

IEEE Bhubaneswar sub-section and School of Electrical Sciences, IIT Bhubaneswar jointly organized the lecture program on Synchronous neural networks for cyber-physical systems at Room No-014, SES Building. IIT Bhubaneswar on 11 February, 3.30 p.m., 2019. The Speaker of the programme was Prof. Partha Roop, University of Auckland.

Abstract: Cyber-physical systems (CPS), such as autonomous vehicles or smart power grids, use interactive machine learning modules for decision making. Current design approaches use multiple machine learning modules, often using neural networks, to achieve the desired functionality. Timing validation is performed using measurement-based approaches, which may produce unsound results. To this end, we propose a new approach for designing such systems, by relying on the well known synchronous paradigm. Using this approach, we introduce Synchronous Artificial Neural Networks (SANNs), where we associate logical time to the different operations of the network. This approach provides sound compositional primitives, which enable the composition of interacting neural networks to ensure causality and determinism. We then show that we can embed the generated code on time predictable platforms enabling static analysis

Speaker: Prof. Partha Roop is a Professor in the department of Electrical, Computer and Software Engineering (ECSE) of Auckland University. His research interests are in biomedical engineering, formal methods and digital health, which are applications of cyber-physical systems.

EVENT-06:

IEEE Bhubaneswar sub-section and School of Electrical Sciences & Dept of Physics, SOA Deemed to be University, Bhubaneswar jointly organized the lecture program Titled: "SPIN CALORITRONICS" on 05 March, 1.00 p.m. at ITER, SOA Deemed To Be University, Bhubaneswar. Prof. Sunil Nair, IISER, Pune was the speaker of the programme.

Abstract: Spin caloritronics pertains to the generation and manipulation of spin currents in magnetic materials by the application of thermal gradient. In this talk I give a brief overview of this relatively new field. Some of current results in the mixed valent manganites is also reported and placed in perspective with existing literature in this area.

Speaker: Sunil Nair did his PhD at the Inter University Consortium for DAE Facilities, Indore followed by a brief postdoctoral stint at the Tata Institute of Fundamental Research (TIFR), Mumbai, India. In 2005 he moved to the Max Planck Institute for Chemical Physics of Solids at Dresden, Germany as a Humboldt Fellow. Subsequently, he worked in the Clarendon Laboratory at the University of Oxford, UK as a Marie Curie Fellow. He joined IISER Pune in July 2011.

EVENT-07:

IEEE PES Chapter Bhubaneswar in collaboration with School of Electrical Sciences, IIT Bhubaneswar organized a Technical Talk at IIT Bhubaneswar on 22nd April 2019 at ROOM-102, School of Electrical Sciences, IIT Bhubaneswar, Argul, Jatni, Odisha. Prof D Thukaram, from IISc Bangalore was the speaker of the programme and he focused on the topic " Application of AI Techniques for Post-fault Analysis and Restoration of Smart Power Grids".

Abstract: Some studies on post-fault analysis of recent major power failures around the world reveal that mal-operation and/or improper co-ordination of protection system were responsible to some extent. When a major power disturbance occurs, protection and control action are required to stop the power system degradation, restore the system to a normal state and minimize the impact of the disturbance. However, this has indicated the need for improving protection co-ordination by additional post-fault and corrective studies using intelligent/knowledge based systems. In this talk a process to obtain knowledge-base using Support Vector Machines (SVMs) is presented for ready post-fault diagnosis purpose.

SVMs are used as Intelligence tool for identifying the faulted line that is emanating from a substation and finding the distance from the substation. The approach is particularly important for post-fault diagnosis of any mal-operation of relays following a disturbance in the neighbouring line connected to the same substation. This may help in improving the fault monitoring/diagnosis process, thus assuring secure operation of the power systems.

EVENT-08:

IEEE Bhubaneswar sub-section and School of Electrical Sciences, IIT Bhubaneswar jointly organized the lecture program on 10.06.2019 (Monday) at : Room No-201, SES, IIT Bhubaneswar. Dr. Amulya Yadav, Assistant Professor in the College of Information Sciences and Technology at Penn State University. The Title of the talk was AI For Societally Relevant Problems: Influence Maximization in an Uncertain World.

Abstract: The potential of Artificial Intelligence to tackle challenging problems that afflict society is enormous, particularly in the areas of healthcare, conservation and public safety and security. Many problems in these domains involve harnessing social networks of under-served communities to enable positive change, e.g., using social networks of homeless youth to raise awareness about HIV (and other STDs). Unfortunately, most of these real-world problems are characterized by uncertainties about social network structure and influence models, and previous research in AI fails to sufficiently address these uncertainties, as they make several unrealistic simplifying assumptions for these domains

Speaker: Amulya Yadav is an Assistant Professor in the College of Information Sciences and Technology at Penn State University. He also has an affiliate faculty appointment with the USC Center for Artificial Intelligence in Society. His research interests include Artificial Intelligence, Multi-Agent Systems, Computational Game-Theory and Applied Machine Learning. His work in the field of Artificial Intelligence for Social Good focuses on developing theoretically grounded approaches to real-world problems that can have an impact in the field. His algorithms have been deployed in the real-world, particularly in the field of public health and wildlife protection.

EVENT-09:

IEEE Bhubaneswar sub-section and School of Electrical Sciences, IIT Bhubaneswar jointly organized the lecture program Titled Securing Cyber-Physical and IoT Systems in Smart Living Environments on 05.08.2019 at Room 211, SES, IIT Bhubaneswar, Jatni, Khordha. Dr. Sajal K. Das Daniel St. Clair Endowed Chair Department of Computer Science Missouri University of Science and Technology, USA was the speaker of the programme.

Abstract: The advent of pervasive sensing, 5G wireless communications, cognitive networking, and ubiquitous computing has made our lives increasingly dependent on a variety of smart service systems and cyber-physical infrastructures (e.g., smart city, smart energy, transportation, healthcare, etc.) with a goal to improve quality of life and experience. Alongside, low-cost sensors, Internet of Things (IoTs) and rich mobile devices (e.g., smartphones) are empowering humans with fine-grained information/opinion collection through mobile crowd sensing, leading to actionable inferences and decisions. However, sensors and IoTs are extremely vulnerable to attacks and security threats. This talk will highlight unique research challenges and opportunities in securing such systems, followed by the design of novel defense mechanisms, particularly against data falsification attacks. Additionally, secure and trustworthy decision making schemes will be proposed in mobile crowd sensing to detect false contributions due to selfish or malicious user behavior. The proposed approaches are based on a rich set of theoretical and practical design principles, such as secure data fusion, uncertainty reasoning, information theory, belief and trust models, and prospect theory. Case studies and experimental results will also be presented. The talk will be concluded with directions of future research.

EVENT-10:

IEEE PES Chapter Bhubaneswar in collaboration with School of Electrical Sciences, IIT Bhubaneswar organized a Technical Talk on “Security in SDN/NFV and 5G Networks Opportunities and Challenges”.

Abstract: Software Defined Networking (SDN) and Network Function Virtualization (NFV) are the key pillars of future networks, including 5G and Beyond that promise to support emerging applications such as enhanced mobile broadband, ultra low latency, massive sensing type applications while providing the resiliency in the network. Service providers and other verticals (e.g., Connected Cars, IOT, eHealth) can leverage SDN/NFV to provide flexible and cost-effective service without compromising the end user quality of service (QoS). While NFV and SDN open up the door for flexible networks and rapid service creation, these offer both security opportunities while also introducing additional challenges and complexities, in some cases. With the rapid proliferation of 4G and 5G networks, operators have now

started the trial deployment of network function virtualization, especially with the introduction of various virtualized network elements in the access and core networks.

Speaker: Ashutosh Dutta is currently Senior Wireless Communication Systems Research Scientist at Johns Hopkins University Applied Physics Labs (JHU/APL), USA. Most recently he served as Principal Member of Technical Staff at AT&T Labs in Middletown, New Jersey. His career, spanning more than 30 years, includes Director of Technology Security and Lead Member of Technical Staff at AT&T, CTO of Wireless at a Cybersecurity company NIKSUN, Inc., Senior Scientist in Telcordia Research, Director of Central Research Facility at Columbia University, adjunct faculty at NJIT, and Computer Engineer with TATA Motors. He has more than 90 conference and journal publications, three book chapters, and 30 issued patents. Ashutosh is coauthor of the book, titled, "Mobility Protocols and Handover Optimization: Design, Evaluation and Application" published by IEEE and John & Wiley that has recently been translated into Chinese Language. Ashutosh served as the chair for IEEE Princeton / Central Jersey Section, Industry Relation Chair for Region 1 and MGA, PreUniversity Coordinator for IEEE MGA and vice chair of Education Society Chapter of PCJS.

EVENT-11: REPORTS ON IEEE DAY AT ITR CHANDIPUR

IEEE Day 2019 was celebrated with great enthusiasm in ITR, Chandipur premises on 1st Oct 2019 by IEEE members of ITR. Shri H K Rahta, Addl Director, IEEE committee Chairman ITR delivered the welcome speech and highlighted the objective of holding the event. He also enlightened the gathering with benefits of being an IEEE member. Further Dr BK Das, outstanding scientist and director ITR inaugurated the event along with Mr DK Joshi, Director PXE by lighting the lamp of knowledge and point out that such event bring together people from different specialization of engineering for introduction with peer group as well as with professional members to promote IEEE research, development and promotional activities. On this occasion, technical talk on Cognitive IoT was delivered by Prof R N Mohapatra from Texas A & M University. In addition to this massive membership drive was organized to encourage scientists and officers to get enrolled as IEEE members. In this effort 18 scientists and officers got enrolled as the new members of IEEE.



EVENT-12: 2nd IEEE Technical Lecture

As a part of IEEE Technical lecture series, a technical lecture was conducted on 25th Oct 2019 at the PMA hall, ITR Chandipur. On this occasion, Prof. Ganapati Panda, FNAE, FNASc, FIET, currently professorial fellow at IIT Bhubaneswar, delivered lecture on "Machine Learning and Data Analytics". He delivered the talk with sharing his views on current trends in the field of IoT, practical approach and emerging techniques to Machine learning. He also covered various data analytic techniques and emphasized to apply those techniques in the realm of defence applications. The one hour technical session turns out to be an interactive one and good number of scientists and technical officers participated in it.



Prof. Ganapati Panda delivering Technical Talk on Machine Learning and Data Analytics

Prof. Ganapati Panda interacting with the audience during question and answer session

Director ITR Dr. B K Das addressing audience on this occasion

STUDENT ACTIVITIES

Student Branch Activities of IEEE Bhubaneswar Subsection

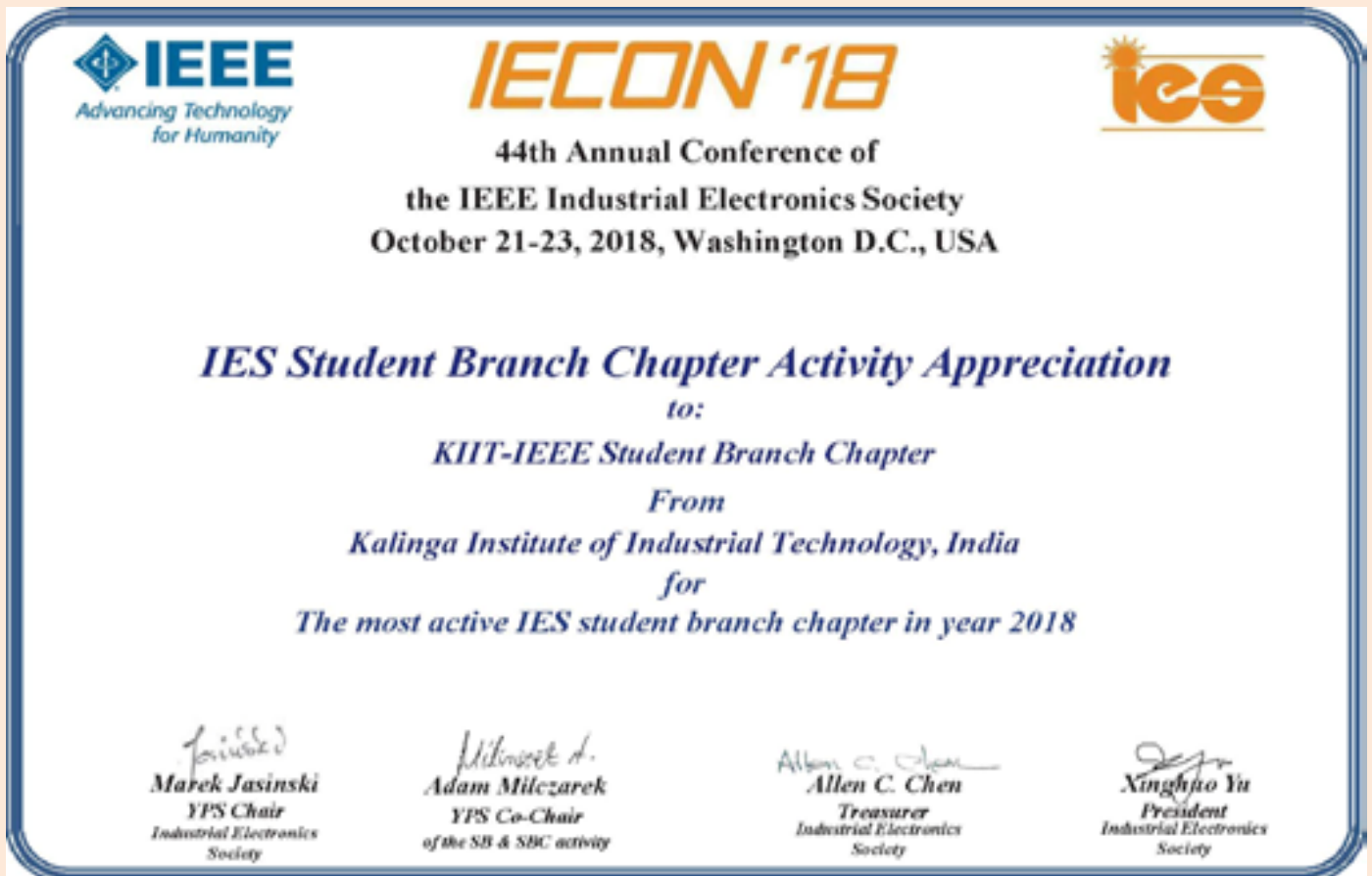
KIIT Student Branch Chapter formed on November 7, 2017 is continuously working to inspire its member to innovate for the betterment of the Institution through highly cited publications, conferences, technology standards, and professional and educational activities. Students here are working beyond geographic boundaries on various projects and have been to different International Platforms for the paper presentations. Students here are very active and enthusiast towards networking opportunities and cutting-edge information that will help them with careers in technology around the world. IEEE Industrial Electronic Society and Power and Energy society student branch chapter has been formed on 7th November 2017 and 6th march 2019 respectively.

The SBC has got recognized by the IEEE Industrial Electronics Society and we have already organized three events.

1. One-day meet up on the benefits of being a IEEE Member and Planning the future road map for the SBC. (2nd December, 2017)
2. One-day Workshop on 3D Printing. (20th December, 2017)
3. One-day Workshop on Introduction to Internet of Things. (29th March, 2018)
4. One-day Workshop on Smart Grid Issues and Challenges. (13th April, 2018)

“One day meet up on the Benefits of being a member of IEEE and Planning the future Roadmap for KIIT-IEEE Student Branch Chapter” Saturday, 2nd December

Venue: Campus 3, Block-A, Conference Hall.



KIIT School of Electrical Engineering organized a One day meet up on **“Benefits of being a member of IEEE and Planning the Future Roadmap for KIIT-IEEE Student Branch Chapter”**. The meet up was headed by a IEEE Young Professional Mr. Ankit Dave. The basic agenda of the meet up was:

- Preparing the full road map for our Student Branch Chapter
- Building Awareness and Willingness among the Students
- Knowing our Thrust Areas
- Inviting Professionals from other Institutions and Industries
- Keeping Guest Lectures on regular basis
- Promotions of Ongoing Activities via Website and Social Media
- Creating new Contacts with professionals from all around the world
- Reporting the Organized Events and Activities to IEEE
- Showcasing our works in IEEE for better recognition



Esteemed dignitaries present in the meeting were:

1. **Mr. Ankit Dave**, IEEE Young Professional (Gujarat Section)
2. **Dr. C.K. Panigrahi**, IEEE Member (Kolkata Section)
3. **Dr. Kundan Kumar**, IEEE Member (Advisor, KIIT-IEEE SBC)
4. **Prof. Subhendu Bikash Santra**, IEEE Member (Counsellor, KIIT-IEEE)

One Day Workshop on “Introduction to Internet of Things” Wednesday, 29th March 2018

A “One-day workshop on Introduction to IoT” was organized by KIIT-IEEE Student Branch Council at School of Electrical Engineering, KIIT on 29th March, 2018.

Objective of the workshop:

- Coordinate and help to increase and optimise the utilisation of results and value creation in the area of IoT.
- Identify research opportunities in IoT technology, applications and services.
- To get an insight of the use of IOT in the fields of Agriculture, Industrial and Healthcare.

Workshop Highlights:

- What “the Internet of Things” means and how it relates to Cloud computing concepts
- How open platforms allow you to store your sensor data in the Cloud
- The basic usage of the Arduino environment for creating your own embedded projects at low cost
- How to connect your Arduino with your Android phone.
- How to send data to the Internet and talk to the Cloud.
- How to update sensor readings on Twitter (Social Networking Sites).
- Control a Relay Switch by texting from your Phone.

The participants of the workshop gave positive feedback about the workshop and showed overwhelming desire to take part in further such workshops. The participants were motivated by the department and IEEE by giving certificates of participation.

IEEE-IIT Bhubaneswar Student Branch (STB08131)

Event-1: Title: VISION 1.0 one day workshop on “**Computer Vision**”

Date : 17th March 2019 **Number of Attendees:** 41

Description: This workshop focused on "image & video interfacing", "image operations", "image filtering", "thresholding", "edge detection", "image segmentation" "histogram analysis for images", "morphological operation of images", "real time face detection", "real time object detection" and "real time pedestrian detection". This workshop had 2 hours of talk for "introduction about specified topics" and "hands on session for specified topics". This workshop conducted basis on "OpenCV" and "Python" softwares.



Event-2: Title: Technical talk on “**Demystifying latest trends in video analytics & video quality engineering -A practitioner's perspective**”

Date : 12th April 2019 **Number of Attendees:** 36

Description: With the adoption of various digital forces like cloud, mobility, IoT, conversational systems, big data, AI, etc. on a constant rise, almost every industry has witnessed tremendous digital disruptions in their business models in the last few years. Apart from these digital disruptions, penetration of high-speed internet and proliferation of mobile multimedia devices across the globe have enabled multiple industries to adopt new technology mediums for furthering their business models. Digital video is one such emerging technology medium with a wide range of use from Media to Airlines, from Healthcare to Education, from manufacturing to transportation, from government to



law enforcement and many more. Aligned to these latest trends, TCS focuses on various applied research & innovation in the field of digital video engineering, quality analysis, and video analytics to solve real-time problems of its customers and to enable them in their digital transformation journey for the future.

Event-3:Title: Technical talk on “Developing and deploying deep learning applications on computer vision-image processing using MATLAB”

Date : 26th August 2019 **Number of Attendees:** 60

Description: Developing and deploying deep learning applications on computer vision-image processing using MATLAB. Real time operations using MATLAB coding. This talk focused on the following topics using MATLAB:

- Create and validate deep learning models
- Automate ground truth labeling
- Access large amount of data from cluster/cloud
- Interoperability with deep learning frameworks
- Visualization and hyper parameter tuning
- Seamlessly scale training to GPUs, clusters and cloud
- Deployment on embedded targets and web services



The IEEE VSSUT Student Branch was inaugurated on 15th Feb,2019 during our college’s Technical Fest ‘Samavesh’. Prof. T. Srinivas from IISC Bangalore, India was the Chief Guest. He is a senior member of IEEE and chairman of The IEEE Phonetics Society, Bangalore Chapter. The inauguration was conducted at the auditorium at 10:45 am. In the inauguration our Honorable Vice Chancellor “Prof. Atal Chaudhuri”, Dean of Student Welfare “Prof. Sudhanshu Sekhar Das” and our IEEE branch Counselor Dr. Harish Kumar Sahoo were also present.

IEEE Bhubaneswar Sub-section -IIT Bhubaneswar Student Branch Council Meetings and Minutes of Meeting

About IIT Bhubaneswar IEEE student chapter

The student branch focuses on conducting social and technical activities for students, and also encourages the students to take full advantage of the benefits of IEEE membership, including scholarships, competitions and conference grants. The student Branch also intends to provide opportunities for students to network with peers in other institutes, academicians, professionals, engineers and scientists through the on campus IEEE student branch and the local IEEE section, thereby encouraging students to be a part of the global IEEE community.

Position	Member
Counsellor	Dr. Debi Prosad Dogra
Chair	Ramji Tangudu
Vice Chair	Nikhil Kumar Sharma
Secretary	Praharsh Deep Singh
Treasurer	Arpit Bal
Student Coordinator – Electronics and Communication	D. Satya Ganesh
Student Coordinator – Electrical	M. V. Satya Sai Chandra
Coordinator- Women in Engineering Event	Madhukrishna Priyadarshini
Student Coordinator – Computer Science	Aashay Avinash Palliwar
Advisory Committee	Rahul Kumar Hindustani Madhukrishna Priyadarshini Biswajit Sahoo Shreetam Behera



Prof. G. Panda (Past President BBSR subsection) visited BIT, Mesra, Ranchi as chief guest and key note speaker in Hackathon Version 2, where 200 CSE students from different parts of India attended for coding contest.

IEEE-SIT Bhubaneswar Student Branch

Event-01: Enhance Your C Programming Skills

Date of Event: 12th September 2018 to 27th September 2018 (holidays included) **Number of Attendees::** 45

Venue: PPT Hall, New Building, Silicon Institute of Technology, Bhubaneswar

Programming and its application in real world is a vital part in today's technology. That is why all recruiters in the job market are searching for at least basic programming skills on the candidates. Similarly, Data structures on any specified languages are important to work on any project within the corporate world. To carry out this talent hunt in more efficient manner, all academic institutes are providing Pre placement training as well as several other lecture series focusing on the important aspects of programming skills to their students.

The IEEE student chapter had also contributed Silicon being a premier institute in the state is playing a key attraction for the recruiters holding a placement record of more its effort in improving this recruitment percentage. This year the Student chapter had organized a ten day lecture series and brush up session with the help of Prof. Sushant Kumar Rout from LIT Bhubaneswar.

This lecture series helped the job aspirants to grab a brief knowledge on the programming languages like C, C++ and Data Structures using C.

Execution : On the first day, the event was inaugurated with 45 students where one of our student representatives delivered the Welcome address to the Professor. After that the lecture began with a narrative explanation on importance of C and its real world applications which reach up to some definition and syntax of malloc- calloc functions.

Each day's lecture ends with hand full of interview questions that are really important for the aspirants. The extraordinary lecture increases the interest of the students and till the end day we are able to have about 45 participants for our lecture.

The lecture series lasts up to 27th September 2018 completing 10 days with 1.5 hours each. Students are well strategized with more than 300 plus probable interview questions and a lot of fundamentals which really benefitted them for their campus placement.

On the final day a student representative delivered a vote of thanks to Prof. Sushant Kumar Rout for his consistent effort for the last ten days and students as well as volunteers for their patience and cooperation.

Conclusions : The resource person had no hesitation in distributing his depth of knowledge to the students, while challenging the interviewers that they won't find any chance to eliminate his students from the recruitment process. And that came true with a massive placement of students in silicon who have attended the course.

Event-02: IEEE Orientation Programme

The IEEE Silicon Students Chapter had organized an Orientation Programme for the first year students to get them know all about the working and mission of IEEE and the benefit they can get from this.

The Orientation Programme is conducted every year at the beginning of the session so that the first years can enjoy meanwhile focusing on their studies.



Date of Event: 21st September, 2018.

Venue: # 102, Old Building, Silicon Institute of Technology, Bhubaneswar

Execution: The event was inaugurated with a crowd of 64 students where three of our student representatives gave the presentation on what is IEEE, its mission and vision, what are the roles of members, its benefits and advantages. Furthermore the students were given idea about the IEEE magazines and also the various applications available to make use of. At the end of the presentation the Events to be conducted in

this academic year 2018-19 were discussed.

Prof. Seema Behera, Branch Counsellor of IEEE Silicon Branch was invited as the Chief Guest in the orientation. To surprise us, Ankit Dave was also invited to the Orientation Programme. He completed his B. Tech from G.H .Patel College of Engineering and Technology, Gujrat. He currently works in Infosys Bhubaneswar and is a member of IEEE India



Council. He has been former Vice Chairperson at Students' Technical Awareness Conference 2016 and also at GCET IEEE Student Branch. He is a great enthusiast and is keen about learning as well as imparting knowledge about IEEE which he gained during his college years.

Outcome: The orientation programme was a great success. The students were completely indulged in the programme and more no. of registrations also came up at the end of the day-

Conclusion: The day ended with complete satisfaction among the IEEE Branch

Representatives as it was a great success with more no. students involved as expected. We look forward to engage more no. of students in IEEE Silicon Students Chapter and emerge as one of the most widely known Students Chapter of IEEE across India.



Event-03: Game Development Using Python

Here are the following details of the workshop:

Session 1: BASICS OF PYTHON AND PYGAME

Basic lectures with few programmings as per requirement are given so that programming in python can be made easier. Basics on pygames are taught for easy understanding of the language and its further applications for game development.



Session 2: GAME DEVELOPMENT

Game developments like worm games are taught helping students improving their skills on it. The workshop was conducted under the guidance of **Prof. Ajay Anand**.

FACULTY PROFILE: Master of Science (M.S) in Mechanical Engineering from State University of New York, U.S.A. Sr. Assistant Professor with E.I.E Masters

Date & Time of Event: 09th November, 2018 (Friday)- 3:40 pm to 5:40 pm, 10th November, 2018 (Saturday)- 10:00 am to 12:00 pm

Venue: Computer Lab 6, New Building, Silicon Institute of Technology, Bhubaneswar

Execution : The event was inaugurated with a crowd of about 40 students where one of our student representatives delivered the Welcome Address to the Professor. After that the lecture began with a narrative explanation on importance of Python and its uses in Web Development, Data Analysis, Artificial Intelligence, Scientific Computing and many more of its real world applications.

Outcomes : For first semester students it would help them in understanding of the topics more clearly in next semester along with gaming applications of python and for the rest of them with the same.

Conclusions: The resource person had no hesitation in distributing his depth of knowledge to the students, while challenging the interviewers that they won't find any chance to eliminate his students from the recruitment process.

Event-04: IOT WORKSHOP



The **IEEE Student Chapter** had contributed its effort in showcasing new and innovative ideas present in young minds. This year the Student chapter had organized a workshop on internet of things using raspberry pi.

This workshop is specially designed for professionals from electronics, electrical, computer science and IT who have keen interest in learning internet of things. The workshop starts from the basics of iot, to working on hardware, interfacing various types of sensors, working with communication modules like Bluetooth and wi-fi, serial communication, connecting to iot cloud services like

ThingSpeak, Twitter, IBM Watson iot platform etc.

Date of Event: 2nd and 3rd February, 2019

Time: 10:00 am to 4:00 pm

Venue: Training Centre, I-Cell, Second floor, New building, Silicon Institute of Technology, Bhubaneswar.

Execution: The event was inaugurated in the Training Centre, I-Cell with a crowd of about 35 students. The resource

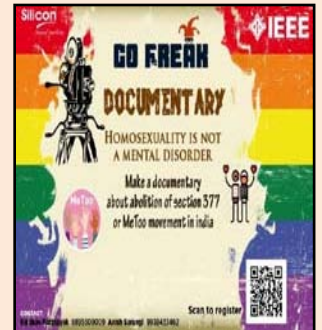
person was Sidharth Macheria who has worked in various US Private level credit cards & UK Investment based companies. His current area of focus is Artificial Intelligence, basically Natural Language Processing & have experience in deploying various projects. The students were enlightened from basics of Raspberry Pi to API Integration using python.

Outcomes: It proved to be a great platform to learn and explore many leading technologies highly in demand in the industry.

Event-05: GO-Freak



“An Event of Socio-technical activities-GO-FREAK“. It promotes how to help the needy and created opportunity for many to learn how to deal with adversity of people. Go Freak gave the chance to build up the personality, the creative thinking skill and presentation skills. Silicon being a top ranked AICTE approved engineering college in Odisha is offering not only quality education but also making students experience the beauty of technology. The IEEE Student Chapter had also

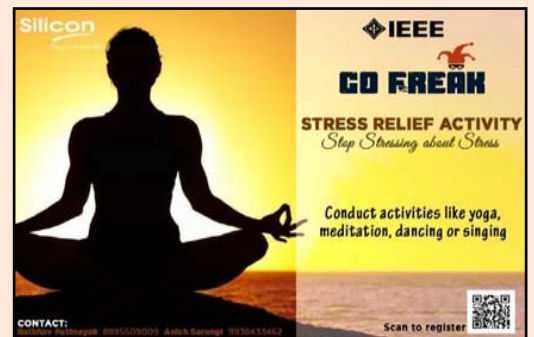


contributed its effort in showcasing new idea and innovative talent present in young minds. This year the Student chapter had organized an event ‘GO FREAK’ comprising series of Socio-technical tasks having certain level of difficulties according to which points are attached to it.

Event Launch: 22nd January Event Ended: 16th February Time: 10:00 to 05:00

Venue: Remote Center, New Building, Silicon Institute of Technology, Bhubaneswar

Execution: The event was launched 3 weeks before the last date, giving time to the students for proper completion of tasks. Every team is asked to accomplish 10 tasks out of 16. A series of task was given to them like Energy conservation, Nukkad Natak, Cloth Donation, Blood Donation etc, with complete details about the points, rules, proofs and documentation.



As most of the events of GO-FREAK are social events, we invited three socially active ladies as the jury members of the event- Sangita Majhi, Chumki Datta and Sharda Bharty. They are all well known personalities of our society due to their socially active well fare activities.

The PRESENTATION day- The event started approximately at 11:00 am at Remote Center or Video Conferencing hall of our new building.

At first the Welcome speech to the respected juries and the participants was delivered by the student member of IEEE Students’ Chapter followed by the speech of the President of IEEE Students’ Chapter, SIT, Baibhav Pattnayak to encourage the participants, wishing them luck and appreciated them for the participation.



Outcomes

It was a great platform to showcase their talents, improvise personality and last but not the least many people got the help they needed.

Conclusions

The event surely did match up to the expectations of the participants. All the participants tried their best for winning the title, the juries were satisfied with the conduction of the event .With sheer dedication and constant support of all the faculty members, IEEE students chapter did make ‘GO FREAK’ a success.

WIE GROUP ACTIVITIES

A workshop is organized by women in engineering (WIE) group of IEEE Bhubaneswar subsection on 31st Aug 2019 at Basuriguru auditorium conference Hall -I, Siksha 'O' Anusandhan University, Khandagiri, Bhubaneswar-751013, Odisha. The speaker of the programme was Dr. Shweta Singh (FOUNDER & CEO, ENNOBLE IP & WOMEN INNOVATION & ENTREPRENEURSHIP FOUNDATION). She talked about "Disruptive Technology Breaking the Barriers".

Few glimpses of the workshop



News : The IEEE Kolkata Section/Bhubaneswar Subsection Joint Section Power Electronics Society Chapter has been accepted and the effective date of chapter formation is 12th June 2019.

Activity Calendar (2019-2020)

Month	Activity
February	Membership Drive
March	Two or Three Technical talks
April	Technical Quiz Competitions
May, June	Technical Talks and Hackathon
July	Membership Drive and Women in Engineering Event
August, September	Women in Engineering Event and Technical Workshops
October	Hackathon/Similar Activities
November	Poster Presentations
December	Symposiums/Colloquium

EC MEETING

Meetings

On 29th January 2019, IIT Bhubaneswar had its first student Council Meeting in the presence of Dr. S. R. Samantaray, Secretary IEEE BBSR Sub-section (IIT BBSR) and Dr. D. P. Dogra (Faculty Counsellor, Student Activities & IIT BBSR).

The following points were discussed in the meeting:

1. Construction of body and chair decision for IEEE -IIT BBSR student branch.
2. Formalizing the body of IEEE -IIT BBSR student branch.
3. Finalizing timeline for the year 2019.
4. Conducting IEEE membership drive.
5. Website design.
6. Bank account creation.

On 7th February 2019, IIT Bhubaneswar had its second student council meeting in the presence of Dr. S. R. Samantaray, Secretary IEEE BBSR Sub-section (IIT BBSR) and Dr. D. P. Dogra (Faculty Counsellor, Student Activities & IIT BBSR).

The following points were discussed in the meeting:

1. To conduct membership drive.
2. To conduct technical talks.
3. To create bank account.
4. To conduct technical workshops

On 6th March 2019, IIT Bhubaneswar had its third student council meeting in the presence of Dr. S. R. Samantaray, Secretary IEEE BBSR Sub-section (IIT BBSR) and Dr. D. P. Dogra (Faculty Counsellor, Student Activities & IIT BBSR).

The following points were discussed in the meeting:

1. To make a one day technical workshop on 16/03/2019 (tentative).
2. To make a three day technical workshop on 29/03/2019 to 31/03/2019 (tentative).
3. To create fund in our student branch bank account through executive committee members.
4. To collect an incentive amount (\$ 50 and extra some amount) from IEEE organization.

On 12th March 2019, IIT Bhubaneswar had its fourth student council meeting in the presence of Dr. S. R. Samantaray, Secretary IEEE BBSR Sub-section (IIT BBSR) and Dr. D. P. Dogra (Faculty Counsellor, Student Activities & IIT BBSR).

The following points were discussed in the meeting:

1. To assign duty to all executive committee members.
2. To make a plan for arrangements to 3 day technical workshop (29/03/2019 to 31/03/2019).
3. To make a plan for one day technical workshop to outside students only.

On 27th March 2019, IIT Bhubaneswar had its fifth student council meeting in the presence of Dr. S. R. Samantaray, Secretary IEEE BBSR Sub-section (IIT BBSR) and Dr. D. P. Dogra (Faculty Counsellor, Student Activities & IIT BBSR).

The following points were discussed in the meeting:

1. To design a logo for IEEE-IIT Bhubaneswar Student Branch and to get official approval for the designed logo.
2. To get official approval for linking between IEEE-IIT Bhubaneswar Student Branch website and IIT Bhubaneswar website.
3. To update the contact details in IEEE-IIT Bhubaneswar Student Branch website.
4. To get an incentive amount from IEEE organization.
5. To upload VISION 1.0 technical workshop photos in IEEE-IIT Bhubaneswar Student Branch website and face book.
6. To conduct a VISION 2.0 technical workshop in the first or second week of May-2019.
7. To get internet banking details of IEEE-IIT Bhubaneswar Student Branch bank account.
8. To arrange a talk for Electronics & Communication, Electrical Engineering and Computer Science in May-June, 2019.
9. To conduct a hackathon or quiz competition or poster presentation for ECE, EEE & CSE in August-October, 2019.

On 05th August 2019, IIT Bhubaneswar had its sixth student council meeting in the presence of Dr. S. R. Samantaray, Secretary IEEE BBSR Sub-section (IIT BBSR) and Dr. D. P. Dogra (Faculty Counsellor, Student Activities & IIT BBSR).

The following points were discussed in the meeting:

- 1 To design a logo for IEEE-IIT Bhubaneswar Student Branch and to get official approval for the designed logo.
- 2 To get official approval for linking between IEEE-IIT Bhubaneswar Student Branch website and IIT Bhubaneswar website.
- 3 To upload VISION 1.0 technical workshop, TCS R & D talk and TENSYP student meet@2019 photos in IEEE-IIT Bhubaneswar Student Branch website and face book.
- 4 To find out contact numbers of companies for organizing one/two day workshop on EC or EE domain in the month of September-2019.
- 5 To finalize a schedule and to organize a workshop on or before 15th Sep-2019.

EC Members:

Chair : Prof A K Tripathy
Vice-Chair : Prof Ajit Kumar Panda
Secretary : Dr S R Samantaray
Treasurer : Dr D P Dogra

Members:

Prof. G Panda (Immediate Past President), CVRECIIT BBSR
Prof. P K Dash (Past President), SOA University
Prof. R V Raja Kumar- IIT BBSR
Prof. D P Acharya- NIT Rourkela
Prof. Harish Sahoo- VSSUT Burla
Dr. Debi Prasad Das- IMMT
Prof. L N Tripathy- CER BBSR
Dr. Kundan Kumar, KIIT BBSR
Prof. Tapas Kumar Panigrahi, P MEC Berhampur
Dr. B K Mishra (**Chair, Student Activities**)- CVREC
Prof. Jayashree Ratnam-ITER, SOA University
Dr. Pradyut Kumar Biswal, IIIT BBSR
Dr. Sujata Chakravarty- CUTM, BBSR
Dr. Renu Sharma (**Chair, Women in Engineering**), ITER, SOA University
Mrs. Umamani Subudhi, IIIT Bhubaneswar
Dr. Ram Prasad Panda, SIT Bhubaneswar
Prof. Srikanta Patnaik, ITER, SOA University
Prof. Mihir Mohanty, ITER, SOA University
Dr. Raman Agrawalla, TCS
Dr. Priyadarshi Kanungo, C V Raman Institute of Technology
Dr. Pradyumna Kumar Tripathy, SIT Bhubaneswar
Dr. Urmila Bhanja, IGIT Saranga
Dr. Tripti Swarnkar, ITER, SOA University
Dr. Shakuntala Mohapatra, Trident Academy
Er. P. K. Pattanaik : DGM (Elect), OPTCL

PES Chapter:

Dr. Ram Prasad Panda, Chair
Dr. S R Samantaray, Secretary
Dr. C N Bhende, Treasurer

PELS Chapter:

Dr. Srinivas Bhaskar Karanki, IIT Bhubaneswar - Chapter Chair
Dr. Chandrasekhar Permulla, IIT Bhubaneswar - Secretary
Dr. Ranjeeta Patel-, KIIT Bhubaneswar- Treasurer

Who is Who in IEEE

IEEE President

Present : **J.M.F Moura** till DEC 31 and

President Elected for 2020 : **Tosho Fukuda**

President Elected for 2021: **Susan K. Kathy Law**

Past President 2019: **James A. Jeffries,**

IEEE Region 10 (Asia Pacific) Director : **Akino Nishihara**

IEEE PES President : **Saifur Rehman**

2018-19 President Elect **Frank.C.Lambert** to take over as Chairman from 2020

Kolkata Section IEEE Chairman : **Sanjay Kar Choudhury**

Chairman Elect : **Sashmita Mitra**

Vice Chairman : **Itisha Mishra**

Secretary: **Atanu Kundu**

Treasurer: **Dibangshu Dey**

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