

Energy Management and Energy Audit

02

Sources of Planet Energy, Environment & Disaster Science: Climatic **Disturbances & its Global Impact**

Bio-fuels. Bio-energy & **Bio-economy**

Ninety-ninth Annual General Meeting of The Institution of Engineers (India) **IEI Diarv**

14

99 YEARS OF RELENTLESS JOURNEY TOWARDS ENGINEERING ADVANCEMENT FOR NATION-BUILDING

Volume 25 Number 12

Launching of **ENGGtalks Mobile Web App**

ENGGtalks Mobile Web App, a Digital Platform for Techno-Professional Community was officially launched by Mr T M Gunaraia, President, The Institution of Engineers (India) on March 4, 2019 at IEI Headquarter, Kolkata. This App provides latest Technology updates on 24x7 basis. It can be downloaded from any mobile browser and installed at any Smartphone on Andriod or iOS platform, eliminating the inconvenience due to regular version updates from App stores. This App can be downloaded through: https://www.enggtalks.com/mobile-web-app-details. During deliberation, President, IEI, opined that in a joint endeavor with CALNESTOR Knowledge Solutions, the Institution facilitated ENGGtalks to its Corporate Members as a value added service in early 2018 towards achieving enrichment by way of technical upgradation, professional collaboration, career enhancement and business development opportunities, which has become India's largest Techno-Professional Community in digital space. He further highlighted that this platform helps IEI members to have their Profile Portfolios with experiences, skills, publications, projects, education, awards, certifications etc. with various technical Blogs, Discussion Forums etc. covering large spectrum of engineering domains and specializations. On this occasion, Mr Sisir Kumar Banerjee, Immediate Past President, IEI, Mr P Rajamani, Council Member of IEI and Maj Gen (Dr) S Bhattacharya, VSM (Retd), Secretary and Director General, IEI, representatives of M/s CALNESTOR and other officials of IEI graced the occasion.



From the President's Desk.....

In today's networked world, the focus is increasingly on developing synergistic relationships between organizations similar objectives. Our focus is on collaborating with different professional bodies both India and abroad, which would deepen our efforts to formulate



meaningful and effective programs for professional enrichment of our corporate members. In this context, initiatives are underway to develop joint programs and conduct events with professional organizations, which would, besides adding value to the services that we provide to our members, also enhance the Institution's outreach. As you are aware a curtain raiser event was held in Vigyan Bhawan, New Delhi on the theme, 'Powering India through Innovation and Technology in Railways' in association with Ministry of Railways in December 2018. I am happy to inform you that this initiative has been taken forward pan-India by organizing similar events at our Centres - Mumbai, Bhopal and Kharagpur to start with. The focus of these events ranged from 'Transformation at ICF in General on Environmental Improvements', 'Making of Train 18', 'Industrial & Occupational Safety and Standards in Indian Railways', and 'Modern Furnishing Material in Indian Railways'.

As we are aware, energy today has become a key factor in deciding product cost at the micro level as well as impacting inflation and debt burden at the macro level. The present day scenario of energy crisis calls for efficient management of available energy and their sources as well as energy conservation measures, which ultimately stress upon less usage of energy for the same level of activity. In order to promote this idea, I request all State and Local Centres of IEI to organize events in around this theme as applicable to the local condition.

We have taken certain measures for planning and organizing various events as part of our Centenary Celebrations. I invite suggestions from you in celebrating this significant event of the Institution.

01

Innovation and Entrepreneurship Opportunities in Advanced Biotechnology

Hosur Local Centre of the Institution organized an All India Seminar on 'Innovation and Entrepreneurship Opportunities in Advanced Biotechnology' under the aegis of Chemical Engineering Division Board of IEI during September 7-8, 2018 at Hosur. The Chief Guest on the occasion, Dr N Barathi, Director, Growmore Biotech Limited, Hosur highlighted that there are numerous opportunities for the Engineering Graduates in Biotechnology field. He urged that the fresher should grab the opportunity to shine as an Entrepreneur instead of depending on the jobs of Government or PSUs

or private organizations. While deliberating on the theme of the Seminar, Dr Barathi added that 'under appropriate conditions, the cultured tissues of some plants can often be made to regenerate new plants and the technique of plant tissue culture includes growing of plant tissues in a nutrient medium i.e. in-vitro'. He also highlighted that 'the implications of plant tissue culture technology for agricultural biotechnology are immense'. Dr Barathi concluded by saving that the purpose of innovation in Biotechnology was to examine a certain transition mechanism from mono-disciplinary academic isolation to University-Industry alliances, marketdriven and public-worth innovation through inter-organizational multidisciplinary collaboration and contextualize the analysis with the case of biosensors. Earlier, Dr J Arivudainambi, Chairman of the Centre delivered the welcome address. Dr N G Ramesh Babu, Head, Department of Biotechnology, Adhiyamaan College of Engineering, Hosur and Convener of the event briefed about the Seminar. Dr N S Bhadrinarayana, Immediate Past Chairman of the Centre and Dean, Adhiyamaan College of Engineering, Hosur was also present and delivered the address. Dr V Manivasagan, Honorary Secretary of the Centre proposed the vote of thanks at the end of the programme. A good number of papers embracing the theme were presented and discussed during various technical sessions of the Seminar.



Energy Management and Energy Audit

Gujarat State Centre of the Institution jointly with Birla Vishwakarma Maha Vidyalaya (BVMV-EC), Vallabh Vidyanagar organized All India Seminar on 'Energy Management and Energy Audit' under the aegis of Electrical Engineering Division Board of IEI during October 26-27, 2018 at Vallabh Vidyanagar. The Chief Guest, Mr Praful Rana, Former Director Technical – Gujarat Urja Vikas Nigam Ltd., Vadodara explained the utility of energy

management in businesses, public sector / government organizations. He further enumerated that when it comes to energy saving, energy management the process of monitoring, controlling and conserving energy in a building or organization. Dr R C Talati, Mentor – Academics, BVMV-EC graced the occasion as the Guest-of-Honour and shared his views on the energy management. Dr Indrajit Patel, Principal, BVMB-EC also spoke on the occasion as a Special Guest. Earlier, Prof I N Patel, the then Chairman of Vallabh Vidyanagar Local Centre delivered the welcome address. Mr H U Kalyani, the then Honorary Secretary of Gujarat State Centre explained in details about the technical activities of IEI. Earlier, Prof R K Yadav, Convener of the event introduced the theme of the Seminar. A large number of participants from Sardar Patel Renewable Energy Research Institute, Anand, G H Patel College of Engineering & Technology, Anand, Gujarat Energy Development Agency, Gandhinagar and various other Institutions participated the Seminar and delivered their thoughts on the theme.



Sources of Planet Energy, Environment & Disaster Science: Climatic Disturbances & its Global Impact'

Uttar Pradesh State Centre of the Institution in association with School of Management Sciences (SMS), Lucknow and Dr A P J Abdul Kalam Technical University, Luckow organized All India Seminar on 'Sources of Planet Energy, Environment & Disaster Science: Climatic Disturbances & its Global Impact' under the aegis of Environmental Engineering Division Board of IEI during November 24-25, 2018 at Lucknow. Dr Rajendra Singh, Waterman of India and Magsaysay Award Winner, dealt in details about the water management issues and various ways of recharging the ground water, as water management becomes very essential in view of the climate change. He also stressed the need of reducing the green house gases in the atmosphere to restrict the temperature rise. The Keynote Speaker on the

occasion, Dr C M Nautiyal, Former Senior Scientist, Birbal Sahni Institute of Palaeobotany (BBIP), Lucknow explained that climate change is also related with the Socio-Economic condition of the Country. 'We could not think of mitigating the climate change without understanding and managing the energy scenario and energy availability and consumption is more in developed countries as compared to the developing countries', Dr Nautiyal added. He further stressed upon the need of generating more and more renewable energy than energy generated by fossil fuel to reduce the emission. The Guest-of-Honour, Prof D P Singh, Head, School for Environmental Sciences, Babasaheb Bhimrao Ambedkar University

(BBAU), Lucknow highlighted the effect of global warming. Earlier, Dr Bharat Raj Singh, Immediate Past Chairman of the Centre, in his welcome address focussed on the report of Intergovernmental Panel on Climate Change (IPCC) where it has been mentioned that World temperature will rise by 2°C to 4.5°C relative to pre-industrial level temperature by 2100. Mr R K Trivedi, Chairman of the Centre also addressed the gathering. Dr Prashant Kumar Gangwar, Head, Department of Civil Engineering, SMS extended the vote of thanks at the end of the programme. A large number of resource papers were presented and discussed during various technical sessions of the Seminar.



FEISCA Seminar at The Institution of Engineers, Bangladesh

59th Convention of The Institution of Engineers, Bangladesh (IEB) was organized at Dhaka, Bangladesh during March 1-5, 2019, where Federation of Engineering Institutions of South and Central Asia (FEISCA) Seminar was held on the theme, "Regional Perspectives in National Infrastructure Developments". Mr T M Gunaraja, President, IEI, Mr N B Vasoya, Past President, IEI and FEISCA Representative to World Federation of Engineering Organizations (WFEO) graced the occasion. During the FEISCA Seminar, Mr Gunaraja, President, IEI presented the Country Paper on the topic, "National Infrastructure Development: Indian Perspective".



Micro Machining

Punjab & Chandigarh State Centre of the Institution in association with Department of Mechanical Engineering, Baba Banda Sing Bahadur Engineering College (BBSBEC), Fatehgarh Sahib organized All India Seminar on 'Micro Machining' under the aegis of Mechanical Engineering Division Board of IEI during October 25-26, 2018 at Chandigarh. Prof Alakesh

Manna, Head, Department of Mechanical Engineering, PEC University of Technology graced the occasion as the Chief Guest. Prof Manna, in his Keynote Address on the topic 'Advanced and Smart Materials: Opportunity and Importance' highlighted about the historical development of various types of materials since 400 B.C. and the need of advanced materials in

that have the intrinsic and extrinsic capabilities as to respond to stimuli and environmental changes and to activate their functions according to these changes', he added. Prof Manna also opined that smart materials are classified depending upon their responses to the surrounding changes like, piezoelectric, magnetostrictive etc. Earlier, Prof Lakhvir Singh, Head,

Department of Mechanical Engineering, welcomed the gathering. On this occasion, Maj Gen (Dr) G S Lamba, VSM (Retd.), Principal, BBSBEC, Dr T S Kamal, Council Member of IEI and other dignitaries graced the occasion. Mr S S Mundi, Honorary Secretary of the Centre extended the vote of thanks at the end of the programme. A good number of resource papers embracing the

theme were presented and discussed during various technical sessions of the Seminar.



today's high-tech industry. 'Smart or intelligent materials are materials

Tunnel Engineering

Roorkee Local Centre of the Institution in association with CSIR- Central Institute of Mining & Fuel Research (CIMFR) and Indian Society for Rock Mechanics & Tunnel Technology (ISRMTT) organized All India Workshop on 'Tunnel Engineering' under the aegis of Mining Engineering Division Board of IEI during October 10-12, 2018 at Roorkee. Mr H L Arora, Director (Technical), Tehri Hydro Development Corporation (THDC) Rishikesh graced the occasion as the Chief Guest. Mr Arora, in his inaugural address emphasized that there is need of greater outreach and advocacy regarding the construction of tunnels using new technologies including environmental considerations in the country without disturbing the ground surface. He presented the challenges encounters during construction of Tehri Hydro Power Project. Dr P K Singh, Director, CSIR-CIMFR, Dhanbad graced the

function as the Guest-of-Honour. Dr Singh, in his address highlighted that the workshop would serve as useful repository for all stakeholders involved in planning & construction of tunnels by providing state-of-the-art knowledge about Geo-mechanics, Geology and Structural Engineering with thorough skill in rock-mass conditions. Earlier, Mr Malvinder Singh, the then Chairman of the Centre welcomed the august gathering by highlighting various technical activities conducted by IEI, which gives engineers a global platform from where they can share their professional and engineering oriented interests. Dr Achal K Mittal, Honorary Secretary of the Centre proposed the vote of thanks at the end of the program. A large number of resource papers by eminent personalities were presented and discussed during the technical sessions of the Workshop.



Issues and Challenges in Pipelines & Pumping System, for Water Transportation

Gujarat State Centre of the Institution organized One day Workshop on "Issues and Challenges in Pipelines & Pumping System, for Water Transportation" in association with Multi Mantech International Pvt. Ltd. under the aegis of Mechanical Engineering Division Board of IEI on February 18, 2019 at Ahmedabad. Before commencement of inaugural

session silence was observed in the memories of Central Reserve Police Forces, who lost their lives in terrorist attack on February 14, 2019 at Pulwama, Jammu & Kashmir. During the function, the Chief Guest, Mr T M Gunaraja, President of IEI was felicitated by Gujarat State Centre. On this occasion, Padmashri S S Rathore, Past President of IEI and Chairman, Sardar Sarovar Narmada Nigam Limited, Gandhinagar and Mr N B Vasoya, Past President of IEI graced the occasion as Guests-of-Honour. Mr Vasoya deliberated on the role of IEI in skill imparting and engineering education in the country. He also discussed the Professional Engineering Certification by IEI for the Corporate Members. The background of the theme was delivered by the Convener of the Workshop, Mr H V Patel, Managing Director, Multi Mantech International Pvt. Ltd. Earlier, Mr H U Kalyani, Chairman of the Centre welcomed all dignitaries and participants. Mr Shyam

Varghese, Honorary Secretary of the Centre proposed the vote of thanks at the end of the program. A large number of participants were present during the Workshop from L&T, NETAFIM, Xylem Water Solutions India Pvt. Ltd., Aqua Machineries Pvt. Ltd. and other Govt. organizations.



Role of Embedded System in Wireless Sensor Networks

Punjab & Chandigarh State Centre of the Institution in collaboration with the Department of Electronics & Communication Engineering, Baba Banda Sing Bahadur Engineering College (BBSBEC), Fatehgarh Sahib organized All India Seminar on 'Role of Embedded System in Wireless Sensor Networks' under the aegis of Electronics & Telecommunication Engineering Division Board of IEI during October 11-12, 2018 at Chandigarh. The Chief Guest, Dr Prashant Kumar, Scientist, CSIR- Central Scientific Instruments Organisation, Chandigarh, in his speech discussed how wireless sensor networks (WSN) were being used to assess the vulnerability of the ground water. He shared that WSNs were being used to measure the depth of ground water at various places on a continuous basis. 'The contamination

levels of the ground water caused by harmful pollutants like arsenic etc. are also measured with the help of WSNs', he added. Dr Kumar urged that the use of wireless sensor networks in agriculture would not only help reduce the wastage of water but also decrease the contamination of the soil and the ground water caused due to over usage of chemical fertilizers and pesticides / weedicides. Dr Sujata Pal, Assistant Professor, Department of Computer Science & Engineering, IIT Ropar delivered an expert lecture on the topic, 'Use of Embedded Systems in Wireless Sensor Networks'. Dr Pal highlighted the importance of embedded systems in daily life and also discussed how wireless sensor nodes could be designed using various commonly available

processors like, Arduino etc. Dr Mandep Singh, Senior Scientist, Centre for Development of Advanced Computing, Mohali, speaking on the occasion highlighted the ubiquitous presence of embedded systems. Dr Singh also discussed the categorization and characteristics of embedded systems before highlighting the need to develop power efficient systems. Earlier, Dr Raminder Singh Uppal, Head, Department of Electronics & Communication, BBSBEC and Convener of the Seminar welcomed the august gathering. On this occasion, Dr T S Kamal, Council Members of IEI also shared his views on the occasion.



One Day Seminars/Workshops Conducted by Various Centres of IEI

STATE CENTRES

Andhra Pradesh



Andhra Pradesh State
Centre of the Institution
in association with
ATOM Research Group,
Department of Computer
Science Engineering, Sri
Vasavi Engineering College,
Tadepalligudem, Andhra
Pradesh organized One

day Workshop on 'Artificial Intelligence and Machine Learning' under the aegis of Computer Engineering Division Board of IEI on January 30, 2019 at Tadepalligudem. Dr S Nagesh Bhattu, Assistant Professor, NIT Andhra Pradesh graced the occasion as the Chief Guest.

Gujarat

Gujarat State Centre of the Institution in association with Water Management Forum (WMF) of IEI and Water & Land Management Institute (WALMI), Anand organized One day Workshop on 'Issues and Challenges in Water



Resources Management' under the aegis of Civil Engineering Division Board of IEI on February 16, 2019 at Anand, Gujarat. The dignitaries addressed the gathering included, Mr V S Patel, Joint Director, WALMI, Anand, Mr M P Raval, Chairman, WMF, IEI, Mr K A Keshvani, CE & Director, WALMI, Anand and Mr K A Patel, Special Secretary, Water Resource Department, Govt. of Gujarat, Dr B S Deora, Chief Scientist, Centre for Natural Resources Management, Sardarkrushinagar Dantiwada Agricultural University, Gujarat. On this occasion, Prof D K Dobaria, former Professor, WALMI delivered the lecture on "Challenges in Water Resources Management, Participatory Irrigation Management in Canal Command Area".

Gujarat State Centre of the Institution in association with IEEE Signal Processing Society Chapter of Gujarat Section and Sankalchand Patel



College of Engineering (SPCE) organized One day Workshop on 'Image **Processing** Algorithms and Application' under aegis of Electronics the Telecommunication **Engineering Division Board** of IEI on February 22, 2019

at Ahmedabad. Prof V K Srivastava, Provost of Sankalchand Patel University graced the occasion as the Chief Guest. Other dignitaries present on the

occasion included, Dr Vishvjit Thakar, Head, ICT Department & Convener of the Workshop, Dr D D Shukla, Principal, SPCE, Visnagar, Prof P P Gajjar, Govt. Girls Polytechnic, Surat.

LOCAL CENTRES

Bhimavaram

Bhimavaram Local Centre of the Institution in association with Department of Mechanical Engineering, Sir C R Reddy College of Engineering (CRRCOE), Eluru organized One day Seminar on 'Sustainable Solid Waste Management



for Smart Cities' under the aegis of Environmental Engineering Division Board of IEI on February 9, 2019 at Eluru, Andhra Pradesh. Mr N V K Durga Rao, Secretary,

Sir C R R Educational Institutions as the Chief Guest and addressed the gathering. Other special guests graced the occasion included, Dr K Venkateswara Rao, Head, Department of Mechanical Engineering, Dr G Samba Siva Rao, Principal, CRRCOE, Prof Peddineni V V Prasada Rao, Andhra University, Mr S Venkateswarlu, AP Pollution Control Board.

Bhimavaram Local Centre of the Institution in association with Department of Mechanical Engineering, Sri Vasavi Engineering College (SVEC), Tadepalligudem organized One day Workshop on 'Computational Fluid



Dynamics using MATLAB' under the aegis of Mechanical Engineering Division Board of IEI on February 23, 2019 at Tadepalligudem. Dr V R K Raju, Associate Professor, NIT Warangal graced the occasion as the Chief Guest. Other Dignitaries present on the occasion included, Dr Guduru V N S R Ratnakara Rao, Principal, SVEC, Dr P V V Rama Rao, Dean (R&D), SVEC and Dr M V Ramesh, Head, Department of Mechanical Engineering, SVEC, Tadepalligudem addressed the gathering.

Kanchepuram



Kanchepuram Local
Centre of the Institution
in collaboration with the
Department of Electrical
& Electronics Engineering,
SRM Institute of Science
and Technology, Chennai
organized One day

Workshop on 'Instruments for Solar Photovoltaic (PV) Systems Monitoring and Conditioning' under the aegis of Electrical Engineering Division Board of IEI on February 20, 2019 at Chennai. Dignitaries present on the occasion included, Mr J K Giridhar, Solar Consultant, Deccan Energy Solutions Pvt. Ltd., Prof K Vijayakumar, Head, Department of Electrical & Electronics Engineering, SRM Institute of Science and Technology, Dr R Sendhil, Department of Mechanical Engineering, SRM University and Dr S Manikandan, Department of Mechanical Engineering, SRM University.

Obituary



Ajoy Kumar Ghose, one of the illustrious Past Presidents of The Institution of Engineers (India) and a distinguished authority in the field of Mining Engineering, has left for his heavenly abode on March 13, 2019. Born on April 13, 1934, Prof Ghose obtained AISM in Mining Engineering from Indian School of Mines, Dhanbad in 1956. Thereafter, he acquired Associate Membership Examination from Institution of Mining Engineers, London in 1959. Prof Ghose was the recipient of First Class Colliery Managers' Certificate of Competency from Ministry of Labour and Employment, Govt. of India in 1960. He started his career from National Coal Board, UK as Management Trainee. Then he was a Senior Lecturer in Indian School of Mines. Dhanbad for a short period, Later, he became Senior Scientific Officer in Central Mining Research Station, Dhanbad, Due to his outstanding performance. Prof Ghose became Head of the Department of Mining Engineering in Regional Engineering College, Srinagar, Finally, he became the Professor and Director of Indian School of Mines, Dhanbad. Prof Ghose received various prestigious Awards from different places in the world, such as, from North of England Institute of Mining & Mechanical Engineers, from Institution of Mining Engineers, London, from Patna University etc. He has published many research reports, research papers, technical articles in various reputed Journals. He served the Institution as Council Member for a long period. Prof Ghose was President of The Institution of Engineers (India) for the Session 1998-99.

Bio-fuels, Bio-energy & Bio-economy

Assam State Centre of the Institution organized All India Seminar on 'Biofuels, Bio-energy & Bio-economy' under the aegis of Chemical Engineering Division Board of IEI during October 29-30, 2018 at Guwahati. Mr Subhash Das, Chairman, Assam Electricity Regulatory Commission graced the occasion as the Chief Guest. Mr Das, in his address elaborated on the policy issues of Bio-fuels, Bio-energy and Bio-economy in India and abroad. He further explained about the land issues in Assam citing how the solar projects suffer due to land scarcity in Assam. The Keynote Speaker, Prof Uppaluri Ramgopal V S, Department of Chemical Engineering, IIT Guwahati spoke on the contemporary issues related to Bio-fuels, Bio-energy and Bioeconomy. Prof Ramgopal elaborated more specifically on the Bio-economy with special reference to the scenario of North-Eastern Region. Earlier, Mr P D Choudhury, Organizing Secretary of the Seminar delivered the welcome address. Mr Amitava Nath, Past Honorary Secretary of the Centre proposed

the vote of thanks at the end of the function. A large number of papers embracing the theme of the Seminar were presented by the participants from Numaligarh Refinery Ltd., Assam Engineering College, Indian Oil Corporation, Assam Pollution Control Board etc. and discussed during various technical sessions.



FORM IV

(See Rule 8 of The Registration of Newspapers (Central) Rules, 1956)

Statement about ownership and other particulars about IEI News of The Institution of Engineers (India) to be published in the first issue every year after the last day of February

- Place of Publication 1.
- Periodicity of its Publication
- Printer's Name Nationality Address
- Publisher's Name **Nationality** Address
- Editor's Name Nationality Address

Dated: March 01, 2019

Names and addresses of individuals who own the newspaper and partners or shareholders holding more than one percent of capital

- 8 Gokhale Road, Kolkata 700 020
- Monthly (April to March)
- M/s Florence Offset Process Pvt. Ltd.
- Indian
- 6A S N Banerjee Road
- Kolkata 700 013
- Maj Gen S Bhattacharya, VSM (Retd)
- 8 Gokhale Road, Kolkata 700 020
- Maj Gen S Bhattacharya, VSM (Retd)
- Indian
- 8 Gokhale Road, Kolkata 700 020
- The Institution of Engineers (India)
- 8 Gokhale Road
- Kolkata 700 020

I, Maj Gen S Bhattacharya, VSM (Retd), Secretary and Director General of The Institution of Engineers (India), hereby declare that the particulars given above are true to the best of my knowledge and belief.

Sd/-Maj Gen S Bhattacharya, VSM (Retd) Signature of Publisher

News-in-Brief

The following is a brief account of Technical Activities organised by various Centres and Overseas Chapter of the Institution

STATE CENTRES

Andaman & Nicobar

Lecture on 'Power Generation from Solar Energy' delivered by Mr M P Ganeshan, Project Manager, Neyveli Lignite Corporation on February 18, 2019.

Assam

Lecture on 'Surface Engineering and Modification' delivered by Dr Dipankar Paul, Assistant Professor of Chemical Engineering, Assam Engineering College, Guwahati on February 2, 2019.

Chhattisgarh

Lecture on 'Climate Change' delivered by Dr K Subramaniyam, Director General, Chhattisgarh Council of Science & Technology, Raipur on December 29, 2019.

Awareness Programme on 'Energy Conservation Building Code (ECBC) and Initiatives of Building Sector by Bureau of Energy Efficiency (BEE) on January 31, 2019.

Seminar on 'Powering India through Innovation and Technology in Railways' on February 12, 2019.

Karnataka

Lecture on 'Solid waste as a Resource' delivered by Ms Nupur Tandon, Founding Director, Pro waste Concepts Pvt Ltd on February 26, 2019.

Kerala

Organized an 'Interaction Session' chaired by Mr P A Prabhakaran, Former Chief Engineer, ISRO/DOS on February 1, 2019.

Lecture on 'Ham Radio' delivered by Mr Sunil Radhakrishnan, Surveyor / Loss Accessor on February 6, 2019.

'Twenty-second Er C S Padmanbha Iyer Memorial Lecture' delivered by Dr N Ganesan, Former Professor and Dean, NIT Calicut on February 13, 2019.

Lecture on 'Cryogenic Rocket Technology in India' delivered by Mr Kailasanadhan P P, Deputy Director (Retd.), ISRO, Thiruvananthapuram on February 27, 2019.

Mizoram

Seminar on 'Science for the People and the People for Science' as part of National Science Day 2019 on February 28, 2019.

Tamilnadu

Lecture on 'Importance of Power Quality and need for Model Power Quality Regulations in India 2020' delivered by Dr (Ms) C Sharmeela, Associate Professor, Department of Electrical & Electronics Engineering, College of Engineering, Guindy, Anna University, Chennai on February 27, 2019.

Telangana

Seminar on 'Industrial and Occupational Safety and Standards in Indian Railway – Environmental Compliances for Industry in India in Indian Railways' on February 25, 2019.

Uttar Pradesh

Lecture on 'Water & Environment' delivered by Mr Ravindra Kumar, Advisor,

World Wide Fund-India and Senior Basin Plan Expert, Tahal on February 12, 2019.

LOCAL CENTRES

Bokaro Steel City

Lecture on 'Cold Rolling Mill – III Bokaro Steel Plant' delivered by Mr Manish Kumar on January 27, 2019.

Lecture on 'Finance for Engineers' delivered by Mr Sudhir on January 31, 2019

Lecture on 'Cloud Computing' delivered by Mr B K Prasad, DGM (C& IT) SAIL, Bokaro Plant on February 27, 2019.

Coimbatore

Lecture on 'Big Data and Social Responsibility' delivered by Dr T Senthil Kumar, Associate Professor, Department of Computer Science and Engineering, Amrita School of Engineering, Coimbatore on February 13, 2019.

Gorakhpur

Lecture on 'Waste Disposal – Problem and Remedies' delivered by Dr Govind Panday, HOD, Civil Engineering Department, Madan Mohan Malviya University of Technology Gorakhpur on January 31, 2019.

Gwalior

Celebrated National Science Day 2019 on 'Science for the People and the People for Science' on February 28, 2019.

Indore

Celebrated 'World Standards Day' on October 15, 2018.

Lecture on 'Comparison of Seismic Qualification Challenges in Nuclear Power Plants in North America and Peninsular India' delivered by Dr Amitabh Dar on December 17, 2018.

Lecture on 'Pre-Engineered Affordable Green Houses Using Steel' delivered by Mr Dinesh Kumar Shukla, Former Deputy General Manager, MECON India Ltd on January 24, 2019.

Kadapa

Organized an All India Seminar on 'Multi-objective Optimization in Mechanical Engineering', in association with Department of Mechanical Engineering, Annamacharya Institute of Technology & Sciences (AITS), Rajampet during September 27-29, 2018 at Rajampet, Kadapa.

Kollam

Seminar on 'Energy Conservation and Management' on February 2, 2019.

Kota

Lecture on 'Understanding Knee Pain and its Management: The Engineering behind it delivered by Dr Vishwas Sharma, Consultant Joint Replacement Surgeon on February 28, 2019.

Kozhikodo

Lecture on 'Work Life Balance' delivered by Dr Varsha Vidyadharan, Assistant Professor, Department of sychiatry, Govt. Medical College, Kozhikode on February 20, 2019.

Munirabad

Lecture on 'Usage of Drone in Various Walks of Life' delivered by Mr B V Prasad, Senior Scientist (Retired), ISRO on February 15, 2019.

Muzaffarpur

Seminar on 'Energy Conservation' on February 15, 2019.

Palgha

Lecture on 'Pharmaceutical Engineering with Emphasis on Ayurvedic



Industries' delivered by Mr Ramesh Chandra Varma R, Senior Manager - Process, Arya Vaidya Sala, Kottakkal on February 26, 2019.

Ramagundam

Seminar on 'Present and Future Scenario of Coal and Coal based Industries with Special Reference to Pranahitha -Godavari Vally Coal Field' on February 19, 2019.

Ranipet

Lecture on 'Vibration Monitoring & Control – Its Importance in the Life of Equipment' delivered by Mr M Desigan, Senior Deputy General Manager, EDC/FES, BHEL, Ranipet on February 12, 2019.

Rourkela

Lecture on 'Nano-materials for Clean Energy and Environment Applications' delivered by Dr Rahul Purbia, Department of Chemical Engineering, NIT Rourkela on February 13, 2019.

Salem

Organized One day Seminar on 'Nanotechnology for Industrial Applications', in association with Department of Mechanical Engineering, Narasu's Sarathy Institute of Technology (NSIT), Salem, on August 2, 2018 at Salem.

Saurashtra

Seminar on 'Additive Manufacturing' on January 17, 2019.

Tiruvallur

Lecture on 'The Role of Engineers in Abdul Kalam Vision 2020' delivered by Mr M Vivekananthan, Chairman, Vision 2020, Moral Resource and Research Foundation on February 12, 2019.

Lecture on 'INTEX T01 - Connecting International Expert with Professionals' delivered by Dr Jens Bo Holm-Nielsen, Head of Energy Section, Department of Energy Technology, Aalborg University, Esbjerg, Denmark on February 16, 2019.

Trichur

Lecture on 'Men and Machinery in Agriculture' delivered by Dr U Jaikumaran, Special Officer, Agricultural Research Station, Mannuthy on February 16, 2019.

Vallabh Vidyanagar

Symposium on 'Green Chemistry and Technology for Sustainable Development' during January 18-19, 2019.

Organized Short Term Training Programme on 'Energy Conservation and Management' during January 28 – February 2, 2019.



The Institution of Engineers (India)

Notification for

R&D Grant-in-Aid (2019-20)

To promote appropriate technology, assist in building up design & research talents and, most importantly, to help in nurturing potential R&D venture amongst engineering students pursuing Diploma/UG/PG/Ph. D courses, The Institution of Engineers (India) had instituted the R&D Grant-in-Aid program way back in 2001.

Like every year, the Institution invites applications for the session 2019-20 for funding industry-oriented R&D projects and research initiatives aimed at improving the life-style of common people from engineering students pursuing full time Diploma/UG/PG/PhD engineering program in AICTE/UGC/NAAC approved Institutions/Colleges/Universities. The application form and guidelines are available in our website https://www.ieindia.org. The projects should be carried out under the guidance of faculty members who are Corporate Members of IEI. Membership criteria for student(s), guide(s) and Institution(s) are as follows:

Project Category	Student/Applicant Membership	Guide(s) Membership	Institutional Membership
1. Diploma	Exempted [Membership of Student Chapter is desirable]	AMIE/MIE/FIE	Not Mandatory
2. UG (BE/BTech/AMIE/Equivalent)	Preferably 'Student Member' (SMIE)	AMIE/MIE/FIE	Applicant's Institute should preferably be an Institutional Member with valid NIRF Rank
3. PG (ME/MTech/Equivalent)	AMIE/MIE/FIE	MIE/FIE	Applicant's Institute should preferably be an Institutional Member with valid NIRF Rank
4. PhD	AMIE/MIE/FIE	MIE/FIE	Applicant's Institute should preferably be an Institutional Member with valid NIRF Rank

The soft copy of the duly filled-up applications (in editable format), as per the given proforma, should be sent through email to research@ieindia.org and one printed copy of the same should reach the following address:

Director (Technical) The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700 020

Applications received in format other than that available on our website will not be accepted. Application should be forwarded through the Guide, Head of the Department or Head of the Institution. Please note that preference will be given to project proposals received from Institutions who are members of The Institution of Engineers (India) and have a valid NIRF Rank. Kindly go through the guidelines (visit link https://www.ieindia.org/webui/IEI-Activities.aspx#RnD-Initiative) carefully before filling up the application.

The grant is not intended for the faculty members who have access to other avenues of research funding. Proposals received will be scrutinized and the recipients of R&D Grant will be informed accordingly.

Ninety-ninth Annual General Meeting of The Institution of Engineers (India)

PROCEEDINGS

The 99th Annual General Meeting (AGM) of The Institution of Engineers (India) was held at 1430 hrs on 23 Dec 2018 at Ananta Hotel & Resorts, 1 GST Road, Village – Bujhda, Tehsil Girwa, Kotiyat Road, Udaipur – 313001, Rajasthan.

Attended by 126 Corporate Members, the meeting was chaired by Mr Sisir Kumar Banerjee, FIE, President of IEI. The President welcomed the Past Presidents, President-elect and Corporate members of IEI present at the meeting.

The President announced that Jharkhand State Centre and Madurai Local Centre of The Institution of Engineers (India) had been adjudged the best State Centre and best Local Centre respectively for their all-round performance during the year 2017-2018. President presented the trophies of the best State and Local Centre Awards, Certificates and cheques of Rs.50,000/- each to the Chairmen of the Centres.

The President, before taking up the Agenda items, informed that during his tenure as the President, IEI, the Council took many important decisions for the best interest of the Institution. He thanked the Past Presidents, Council Members and Corporate Members of the IEI for extending their wholehearted support on all his activities during his tenure. He requested the Council Members and the Corporate Members for extending their wholehearted support to Mr T M Gunaraja, the incoming President, in all his endeavours.

Thereafter, on being invited by the President, the Secretary and Director General read out the Notice of the meeting published in November 2018 issue of IEI News.

ITEM 1 Confirmation of Minutes of the 98th Annual General Meeting held on 23 Dec 2017 at Chennai

The Minutes of the 98th Annual General Meeting held on 23 Dec 2017 at Chennai were circulated to all Corporate Members through Mar 2018 issue [Vol. 67, No.12] of IEI News. The same was re-circulated in the Nov 2018 issue [Vol.68, No.8] of IEI News along with the Notice of the 99th Annual General Meeting. President invited comments on the Minutes from the members present. Mr Y K Bolia, FIE proposed that the Minutes of the 98th Annual General Meeting of The Institution of Engineers (India) be confirmed. Mr Y C Bhatt, FIE seconded the proposal.

It was then Resolved that the Minutes of the 98th Annual General Meeting of The Institution of Engineers (India) held on 23 Dec 2017 at Chennai be confirmed.

ITEM 2 To receive the Annual Report of the Council and the Audited Accounts of The Institution of Engineers (India) for the year ended 31 March 2018

(a) Annual Report

President invited comments from the members present on the Annual Report of the Council for the year 2017-2018 as circulated.

Dr G Ranganath, FIE proposed that the Annual Report of the Council for the year 2017-2018 be received. Dr S S Rathore, FIE seconded the proposal.

It was then <u>Resolved</u> that the Annual Report of the Council for the year 2017-2018 be received.

(b) Audited Accounts

President then invited comments on the Audited Accounts of The Institution of Engineers (India) for the year ended 31 Mar 2018.

Mr A S Choondawat, FIE then proposed that the Audited Accounts of The Institution of Engineers (India) for the year ended 31 Mar 2018 be received. Mr Anurodh Prashant, FIE seconded the proposal.

It was thereafter Resolved that the Audited Accounts of The Institution of Engineers (India) for the year ended 31 Mar 2018 be received.

ITEM 3 To receive the report of the Council on election of the President and composition of the Council for the Session 2018-2019

The President announced that the Council had duly elected Mr T M Gunaraja, FIE as President of The Institution of Engineers (India) for the Session 2018-2019. The members welcomed the announcement. Mr T M Gunaraja then took over charge from Mr Sisir Kumar Banerjee and presided over the meeting.

Mr T M Gunaraja, President presented the Scroll of Honour to Mr Sisir Kumar Banerjee, Immediate Past President.

Mr T M Gunaraja thanked the Council and the members present for electing him as the President of The Institution of Engineers (India) and requested their support and guidance for further development of the Institution. He then delivered his Presidential Address.

In his address, the President expressed that he was grateful to the Council for having bestowed upon him the opportunity for serving the Institution in this prestigious position. It would be his endeavour to keep up the high standards set by his eminent and illustrious predecessors.

President highlighted the effectiveness of Digital Learning Paradigm and his aim to offer IEI members enhanced opportunities for cloud based platform services and conveyed his appreciation to his predecessor for initiating this move.

The importance of a special impetus for involvement of manufacturing industries in technical activities organized by the Institution was underscored by the President. Formulation of policies leading to Membership Growth and Inclusivity were also emphasized highlighting presence of women engineers in all upfront areas of engineering.

President elaborated the vision of the Institution for 'youth empowerment' coming up with skill development initiatives offered through IEI Fora like National Skill Development Forum (NSDF). Academy-Industry Interface initiatives by IEI are having bright prospects of effectively bridging the gap between academic institutions and corporate bodies.

In his speech, President held aloft the march of IEI towards its 100 years of glorious contribution to national development. He gave a call to take it as an opportunity for IEI to consolidate on its historical legacy and strive further to craft an enhanced image by rendering dedicated and meaningful services to all the stakeholders.

On being requested by Mr T M Gunaraja, President, the Secretary and Director General reported the following composition of the Council for the Session 2018-2019:

Mr T M Gunaraja, President

(1) Under provisions of Bye-Law 4(a)(ii)

The following, by virtue of their being the two Immediate Past Presidents, shall become Members of the Council for the Session 2018-2019:

Mr Sisir Kumar Banerjee

Mr Navinchandra B Vasoya

(2) Under provisions of Bye-Law 4(a)(iii)

The following Corporate Members have been declared elected to the Council from the respective State Centre seat for the Sessions 2018-2019 to 2021-2022 and shall be Member of the Council for the Session 2018-2019:

Bihar :: Dr Arun Kumar Shrivastava

Jharkhand :: Mr Shivanand Roy

Rajasthan :: Dr S K Calla

West Bengal :: Mr S K Banerji

Further, one Corporate Member from Madhya Pradesh State Centre shall become member of the Council for the Session 2018-2019 on completion of the ongoing election process.

The Corporate Members elected to the Council from the following State Centres shall continue as Members of the Council for the Session 2018-2019:

Elected for the Sessions 2017-2018 to 2020-2021:

Kerala :: Mr V Vijayachandran Nair

Elected for the Sessions 2016-2017 to 2019-2020:

Andhra Pradesh :: Dr K Brahma Raju

Delhi :: Mr Pradeep Chaturvedi

Gujarat :: Mr Sandeep B Vasava

Karnataka :: Dr M Chowde Gowda

Maharashtra :: Mr M B Dagaonkar

Odisha :: Dr Nutan Kumar Dash

Tamilnadu :: Mr T M Gunaraja

Telangana :: Mr G Sudhakar

Uttar Pradesh :: Mr V B Singh

Elected for the Sessions 2015-2016 to 2018-2019

Haryana :: Mr K C Sethi

Punjab and Chandigarh :: Mr A S Bakshi

(3) Under provisions of Bye-Law 4(a)(iv)

The following elected members from 15 Engineering Divisions for the Sessions 2016-2017 to 2019-2020 shall become members of the Council for the Session 2018-2019:

Aerospace (1) :: Prof R Manickavasagam

Agricultural (1) :: Mr D V Nagabhushan

Architectural (1) :: Mr H K Mittal

Chemical (2) :: Mr Navinchandra B Vasoya

Dr M P Sukumaran Nair

Civil (5) :: Mr Sisir Kumar Banerjee

Mr P S Bhogal

Dr H O Thakare

Mr O P Saxena

Mr Narendra Singh

Computer (2) :: Mr B S Patel

Mr K Rajanikanth

Electrical (4) :: Mr H B Goswami

Mr M R Kothari

Mr P Rajamani

Mr R R Tanwar

Electronics & :: Dr T S Kamal

Telecommunication (4) Dr G Padmavathi

Mr B Brahma Reddy

Mr S C Rudra

Environmental (1) :: Dr M Velan

Marine (1) :: Dr K Gopalakrishnan

Mechanical (5) :: Dr Swapan Bhaumik

Dr Wooday P Krishna

Mr Enti Ranga Reddy

Mr Jagroop Singh

Dr K Venkatasubbaiah

Metallurgical & Materials (1) :: Mr K K Mehrotra

Mining (1) :: Mr D V Pichamuthu

Production (1) :: Dr D K Tripathi

Textile (1) :: Dr G Thilagavathi

(4) Under provisions of Bye-Law 4(b)(i)

By virtue of being elected as Chairmen of the following State Centres for the Sessions 2018-2019 and 2019-2020 and installed at the Annual General Meeting of the respective State Centres, the following persons shall become members of the Council for its Session 2018-2019:

Andaman & Nicobar :: Mr J I Koilraj

Assam :: Dr S K Kakoty

Bihar :: Mr N K P Sinha

Chhattisgarh :: Mr Anil Kumar Sharma

Delhi :: Mr Dinesh Kumar

Goa :: Mr Chandrashekhar G P Dessai

Gujarat :: Mr K H Udhavdas

Jammu & Kashmir :: Mr Aamir Ali Mir

Jharkhand :: Mr S K Singh

Karnataka :: Mr Jasmail Singh

Kerala :: Mr K K G Nair

Maharashtra :: Dr H M Raje

Manipur :: Mr N S Singh

Meghalaya :: Mr M Marbaniang

Puducherry :: Prof (Dr) Raman Saravanane

Rajasthan :: Mr S S Yadav

Tamilnadu :: Mr R Ramdoss

Telangana :: Dr G Rameshwar Rao

Uttarakhand :: Mr Aditya Kumar Dinkar

Uttar Pradesh :: Mr Rajesh Kumar Trivedi

Further, Chairmen of Odisha State Centre and West Bengal State Centre for Sessions 2018-2019 and 2019-2020 shall become members of the Council for the Session 2018-2019 on their taking office at the AG Meeting of the said State Centres.

By virtue of being elected as Chairmen of the following State Centres for the Sessions 2017-2018 and 2018-2019, following persons shall continue as members of the Council for its Session 2018-2019:

Haryana :: Mr Ajay Mahajan

Himachal Pradesh :: Mr R K Sharma

Tripura :: Mr Tapan Lodh

Punjab & Chandigarh :: Mr Janak Raj Garg

Sikkim :: Mr G P Upadhyaya

By virtue of being nominated as first Chairmen of Mizoram State Centre and Arunachal Pradesh State Centre for the Sessions 2018-2019 and 2019-2020, following persons shall become members of the Council for its Session 2018-2019:

Mizoram :: Prof (Dr) Rajat Gupta

Arunachal Pradesh :: Dr R K Prasad

(5) Under provisions of Bye-Law 4(b)(ii)

By virtue of being elected as Chairmen of the following Local Centres for the Sessions 2018-2019 and 2019-2020, the following persons shall become member of the Council for its Session 2018-2019:

Belapur :: Mr Keshav K Verkhedkar

Coimbatore :: Mr P R Natarajan

Ghaziabad :: Mr Jai Pal Singh

Kanchepuram :: Dr K Palani Kumar

Kochi :: Mr T P Raveendran

Ludhiana :: Mr Rup Lal Mahajan

Madurai :: Mr S Rajagopal

Mysore :: Dr Suresh R

Nagpur :: Dr R L Shrivastava

Neyveli :: Mr N M Rao Nadella

Pune :: Prof K K Ghosh

South Gujarat :: Prof K U Joshi

Vadodara :: Mr N P Singh Brar

Further, Chairman of Durgapur Local Centre for Sessions 2018-2019 and 2019-2020 shall become member of the Council for the Session 2018-2019 on his taking office at the AG Meeting of the said Centre.

By virtue of being elected as Chairmen of the following Local Centres for the Sessions 2017-2018 and 2018-2019, the following persons shall continue as members of the Council for its Session 2018-2019:

Nashik :: Mr Santosh S Mutha

Visakhapatnam :: Dr O Ram Mohan Rao

(6) Under provisions of Bye-Law 4(c)

Following four outstanding engineering personalities have been nominated as members of the Council for its Session 2018-2019:

1. Mr M K Jadav, FIE

Secretary (Water Resources)

Narmada Water Resources,

Water Supply and Kalpsar Department

Government of Gujarat

2. Mr A K Mitra, FIE

Chairman, Technical Advisory Committee

Water Resources Department

Assam Secretariat

3. Mr Prabhakar Singh, MIE

Director General, CPWD

Government of India

4. Dr (Ms) Elizabeth Verghese, FIE

Chancellor, Hindustan University

(7) Under provisions of Bye-Law 12(a), 12(b) and 13

The Council shall co-opt appropriate Corporate Members as Council Members for the session 2018-19.

ITEM 4 To appoint Auditors for the year 2018-2019 and to fix their remuneration

Mr K K Chhabra, FIE proposed that M/s Ray & Ray, Chartered Accountants be appointed as Auditors of The Institution of Engineers (India) for the year 2018-2019 on a remuneration of Rs.5,50,000 + Taxes as applicable. Dr G Ranganath, FIE seconded the proposal.

It was Resolved that M/s Ray & Ray, Chartered Accountants, be appointed as Auditors of The Institution of Engineers (India) for the year 2018-2019 at a remuneration of Rs.5,50,000+ Taxes as applicable.

The meeting then concluded followed by the National Anthem at 1512 hrs.

Engineering Staff College of India



Autonomous Organ of The Institution of Engineers (India) Old Bombay Road, Gachi Bowli, Hyderabad 500 032



CPDPs for the Month of April 2019

	Name of the Course	Scheduled Dates
*	Convergence for Synergy: One day workshop on SDG Goal 13 – Climate Action	April 2
*	Bio Medical Waste Management – Handling & Safe Disposal Option with New Rules 2016 including field visits.	s April 10-12
*	Corporate Capacity Development Programme on Sustainability	April 11-12
*	Machine Learning and Predictive Modeling Using Python	April 21-25
*	Instrumentation and Seismic Analysis of Gravity Dams with Software Applications	April 22-26
*	Distribution Transformers - Failures - Trends in O&M	April 23-25
*	Destructive & Non Destructive Testing Methods in Civil Engineering Structures	April 23-26
*	PLC and SCADA Applications in Water supply and Sewerage Project including field visits.	ets April 23-25
*	Communication and Presentation Skills (Communicating Assertively CPDPs for the Month of May 2019) April 24-26
	Name of the Course	Scheduled Dates
*	Welding Technologies and NDT Techniques (Theory and Practical Orientation with Technical Visit)	May 20-24
	e-Procurement in Engineering Projects	May 07-09

Conducting EIA Study and Preparation of EIA reports – Case study & Group Discussion.	May 07-09
Power System Protection, Control and Monitoring & Digital Substations	May 06-10
Preparation of DPR and Tender Documents for Sewage Treatment Plant.	May 14-16
Laboratory Management System Awareness & Internal Auditing (As per ISO / IEC 17025 : 2017 & NABL Requirements)	May 13-16
Coastal zone Management and Monitoring with remote sensing applications including CRZ 2018 draft notification	May 16-17
Contract Management and Dispute Resolution in Engineering Projects	May 13-17
Web Development using AngularJS 7	May 13-17
Basic Principles of Vibration Analysis, Condition Monitoring, Leveling, Alignment and Balancing Procedures for high speed Rotating Machinery in Power Plants and Process Industries (With Practical Demos)	May 14-17
Climate Change – Management of Water Resources	May 14-17
Quality Initiatives in Technical and Higher Educational Institutions (In Compliance with NBA & NAAC Accreditation)	May 20-22
Best Practices of O&M of DM Water Plants in Power Plants & Process Industry	May 21-23
Use of Fly Ash in Civil Engineering Works	May 21-24
Workshop on Blockchain Technology	May 24-25
Performance Monitoring of Centrifugal Pumps and Compressors (with Practical Orientation and Technical Visit)	May 28-30
Application of Bio- Engineering Technologies for Waste Water Treatment in Nalas, Drains And Canals	May 29-31
Energy Audit & Loss Reduction in T&D Systems	May 29-31
Dam Safety and Emergency Action Plan	May 27-31



IEI - Springer Journal Springer



ISSN Print: 2250-2149 ISSN Online: 2250-2157

SCOPUS Indexed



ISSN Print: 2250-2483 ISSN Online: 2250-2491

SCOPUS Indexed



ISSN Print: 2250-0545 ISSN Online: 2250-0553

SCOPUS Indexed



ISSN Online: 2250-2130

ISSN Print: 2250-2122 **SCOPUS Indexed**

Journal of The Institution of Engineers (India) Series B

ISSN Print: 2250-2106

ISSN Online: 2250-2114

SCOPUS Indexed

Free e-access of Journal papers for all Corporate

Members of IEI

Log-in from www.ieindia.org

IEI DIARY



Thirty-third National Convention of Aerospace Engineers on "Emerging Technologies in Aerospace Structures, Materials and Propulsion System"

Pune, November 15-16, 2019

The Honorary Secretary, IEI, Pune Local Centre, Abhiyanta Bhavan, 1332, J M Road, Shivajinagar, Pune 411005, Maharashtra [☎: 020-25533376 / 25520239 / 25530150; e-mail: punelc@ieindia.org]

Thirty-fourth National Convention of Aerospace Engineers on "Advances in Aerospace Engineering"

Kanpur, November 9-10, 2020

The Honorary Secretary, IEI, Kanpur Local Centre, Engineers Bhawan, HBTI East Campus, Nawabganj, Kanpur 208002 [Telefax: (0512) 2560034; e-mail: kanpurlc@ieindia.org]

Agricultural Engineering Division

International Conference on "Role of Agricultural Engineering towards Global Food Security"

Bangalore, April 11-13, 2019

The Honorary Secretary, IEI, Karnataka State Centre, 3, Dr B R Ambedkar Veedhi, Bangalore 560001 [☎: (080) 22264698; Telefax: (080) 22256191; e-mail: karnatakasc@ieindia.org; website: www.ieiksc.org]

Thirty-third National Convention of Agricultural Engineers on "Commercial Crops Processing and Value Addition"

Agartala, August 10-11, 2019

The Honorary Secretary, IEI, Tripura State Centre, Pandit Nehru Complex, Near Tripura Housing Board, P. O. Kunjaban, PB No 139, Agartala 799 006 [☎: 0381-2304700; Fax: 0381-2304700; e-mail: tripurasc@ieindia.org]

Architectural Engineering Division

International Conference on "Architectural Innovations: Engineering, Technology and Materials"

Kolkata, November 27-29, 2019

The Honorary Secretary, IEI, West Bengal State Centre, 8 Gokhale Road, Kolkata 700020 [☎: (033)22238914; Fax: (033) 22233140; e-mail: wbsc@ieindia.org]

Chemical Engineering Division

Thirty-fifth National Convention of Chemical Engineers on "The Food-Energy-Water (FEW) Nexus- Challenges for Chemical Engineers"

Guwahati, September 06-07, 2019

The Honorary Secretary, IEI, Assam State Centre, Panbazar Overbridge, East Lane, Guwahati 781001 [☎: 0361-2548742; Fax: (0361) 2630368; e-mail: assamsc@ieindia.org; website: ieiasc. org]

Civil Engineering Division

One Day Workshop on "Norms Specifications of RERA and Technical Issues to be Considered by Civil Engineers'

Solapur, April 07, 2019

All India Seminar on "Sustainable Approach for Utilizing Industrial Wastes in Concrete Construction"

Salem, April 26-27, 2019

The Honorary Secretary, IEI, Salem Local Centre, 3rd Floor, SPC Bhawan No. 104/7, Manivannan Street, Opp to Salem New Bus Stand, Salem 636004 [28: 0427 2332544; e-mail: salemlc@ieindia.org]

All India Seminar on "Safety Aspects at Construction Sites"

Panaji, April 12-13, 2019

The Honorary Secretary, IEI, Goa State State Centre, D Type Quarters, D-8-1 Government Polytechnic Campus, Altinho Panaji, Goa 403 001 [☎: 0832-2434686; e-mail: goasc@ieindia.org]

All India Seminar on "Sustainable Solutions for Road Safety"

Lucknow, May 04-05, 2019

The Honorary Secretary, IEI, Uttar Pradesh State Centre, Engineers' Bhawan, River Bank Colony, Lucknow 226018 [Telefax: (0522) 2526322; e-mail: upsc@ieindia.org; website: www.ieiup.org.in]

Electrical Engineering Division

National Workshop on "Renewable Integration with Grid, Power Quality Scenario and Active Distribution Networks"

South Gujarat, May 06-11, 2019

The Honorary Secretary, IEI, South Gujarat Local Centre, Mahida Bhavan, Ichchhanath, Surat 395 007, Gujarat [\$\alpha\$: 0261-2227340; e-mail: sglc@ieindia.org]

Electronics & Telecom. Engg. Division

All India Seminar on "Knowledge Breaks in Environmental Health and Safety for Sustainable Progress of Nano-Industries"

Coimbatore, April 5-6, 2019

The Honorary Secretary, IEI, Coimbatore Local Centre, PSG College of Technology Campus, Peelamedu, Coimbatore 641004, [☎: 0422-2580733; e-mail: coimbatorelc@ieindia.org]

One Day Seminar on 'Digitally Mixed and Biomedical Signal Processing'

Durgapur, April 09, 2019

The Honorary Secretary, IEI, Durgapur Local Centre, Nehru Avenue, 'B' Zone, Durgapur 713205 [Telefax: 0343-2564770; e-mail: durgapurlc@ieindia.org; web: ieidurgapurlc.org]

Environmental Engineering Division

Thirty-fifth National Convention of Environmental Engineers on "Green Technology for Clean & Green India"

Bangalore, August 17-18, 2019

The Honorary Secretary, IEI, Karnataka State Centre, No. 3, Dr. B R Ambedkar Veedhi, Bangalore 560001 [☎: 080-22264698; Telefax: 080-22256191; e-mail: karnatakasc@ieindia.org; www.ieiksc.org]

All India Seminar on "Solid Waste Management: An Industrial Perspective"

Bokaro Steel City, September 21-22, 2019
The Honorary Secretary, IEI, Bokaro Steel
City Local Centre, Abhiyanta Bhawan, Sector
V-A, Bokaro Steel City 827006 [22: 06542-267227/288972; e-mail: bokarolc@ieindia.org]

International Conference on "Influx of Environmental Problems and Sustainable Living"

Hyderabad, November 22-24, 2019

The Honorary Secretary, IEI, Telangana State Centre, Visvesvaraya Bhavan, Khairatabad, Hyderabad 500004 [奮: 040-23314969; e-mail: telanganasc@ieindia.org; website:ieitsc.org]

Mechanical Engineering Division

All India Workshop on "Advanced Materials and their Machining"

Mohali, April 09-10, 2019

The Honorary Secretary, IEI, Punjab & Chandigarh State Centre, IEI, Madhya Marg, Sector 19-A, Chandigarh 160019 [28: (0172) 2775418; Fax: (0172) 2540133; e-mail: pcsc@ieindia.org]







All India Seminar on 'Efficiency Enhancement through Green Technology in Manufacturing', Durgapur, May 03-04, 2019

The Honorary Secretary, IEI, Durgapur Local Centre, Nehru Avenue, 'B' Zone, Durgapur 713205 [Telefax: 0343-2564770; e-mail: durgapurlc@ieindia.org; web: ieidurgapurlc.org]

All India Workshop on 'Nano Technology and Smart Materials'

Chandigarh, May 15-16, 2019

The Honorary Secretary, IEI, Punjab & Chandigarh State Centre, IEI, Madhya Marg, Sector 19-A, Chandigarh 160019 [☎: (0172) 2775418; Fax: (0172) 2540133; e-mail: pcsc@ieindia.org]

All India Seminar on 'Rural Industrialization through Innovative Process Mechanization' Guwahati, June 08-09, 2019

The Honorary Secretary, IEI, Assam State Centre, Panbazar Overbridge, East Lane, Guwahati 781001 [☎: 0361-2548742; Fax: (0361) 2630368; e-mail: assamsc@ieindia.org; website: ieiasc.

All India Workshop on 'Additive and Advanced Manufacturing'

Bengaluru, July 29-30, 2019

The Honorary Secretary, IEI, Karnataka State Centre, 3, Dr B R Ambedkar Veedhi, Bangalore 560001 [☎: (080) 22264698; Telefax: (080) 22256191; e-mail: karnatakasc@ieindia.org; website: www.ieiksc.org]

Thirty-fifth National Convention of Mechanical Engineers, on "Trends and Developments in Automotive Industry"

Hosur, September 13-14, 2019

The Honorary Secretary, IEI, Hosur Local Centre, No.69, Kamaraj Nagar, Kumudepall, Near Adhiyamaan College of Engineering, Tamilnadu, Hosur 635109 [e-mail: hosurlc@ieindia.org]

Thirty-sixth National Convention of Mechanical Engineers, on "Innovations in Thermal Science and Engineering"

Agartala, September 05-06, 2020

The Honorary Secretary, IEI, Tripura State Centre, Pandit Nehru Complex, Near Tripura Housing Board, P. O. Kunjaban, PB No 139,

Agartala 799 006 [☎: 0381-2304700; Fax: 0381-2304700; e-mail: tripurasc@ieindia.org]

Metallurgical & Materials Engg. Division

International Conference of Metallurgical & Materials Engineers on "Synthesis, Characterization and Application of Nanomaterials (SCAN)"

Kolkata, November 01-03, 2019

The Honorary Secretary, IEI, West Bengal State Centre, 8 Gokhale Road, Kolkata 700020 [28: (033)22238914; Fax: (033) 22233140; e-mail: wbsc@ieindia.org]

Production Engineering Division

Thirty-fifth National Convention of Production Engineers on "Emerging Technologies in Power Sector Equipment Manufacturing"

Tiruchirappalli, May 25-26, 2019

The Honorary Secretary, IEI, Tiruchirappalli Local Centre, BHEL Main Office Road, Tiruchirappalli 620014 [☎: 0431-2554285; Fax: 0431-2520383/2520775; e-mail: tiruchirappallilc@ieindia.org]

Nagaland State Centre of IEI inaugurated



Mr T M Gunaraja, President, IEI inaugurated the Nagaland State Centre of IEI (124th Centre) of the Institution in Kohima at a well attended function on February 13, 2019. The Immediate Past President, IEI, Mr Sisir Kumar Banerjee, Secretary & Director General, IEI, Maj Gen (Dr) S Bhattacharya, VSM (Retd) and other dignitaries were also present on the occasion.

Karnataka State Centre felicitates President, IEI



Karnataka State Centre of the Institution felicitated Mr T M Gunaraja, President, IEI on February 4, 2019. Mr D C Thammanna, Hon'ble Minister for Transport, Govt. of Karnataka graced the function as Chief Guest and Dr Y A Narayanaswamy, MLC, Govt. of Karnataka was present as Guest-of-Honour. Mr M Nagaraj, Honorary Secretary of the Centre welcomed and introduced the guests. Mr Jasmail Singh, Chairman of the Centre presided over the function.

West Bengal State Centre felicitates President and Vice Presidents, IEI



West Bengal State Centre of the Institution felicitated Mr T M Gunaraja, President, IEI on February 21, 2019. Dr Swapan Bhaumik and Mr Arvinder Singh Bakshi, Vice-Presidents, IEI were also felicitated in this occasion. Mr Sandip Kumar Deb, Chairman of the Centre welcomed the President, Vice-Presidents and other dignitaries. Mr Kalipada Das, Honorary Secretary of the Centre extended formal vote of thanks at the end of the programme.



Owner: The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700 020 Printer: Maj Gen S Bhattacharya, VSM (Retd), Secretary & Director General Publisher: Maj Gen S Bhattacharya, VSM (Retd), Secretary & Director General

Published from: 8 Gokhale Road, Kolkata 700 020 Printed from: M/s Florence Offset Process Pvt. Ltd. 6A S N Banerjee Road, Kolkata 700013

Editor: Maj Gen S Bhattacharya, VSM (Retd), Secretary & Director General

President: Mr T M Gunaraja

Editor: Maj Gen S Bhattacharya, VSM (Retd)

Associate Editor: Dr S Ghosh

Special Contributors: Mr N Sengupta, Mr K Sen, Mr T Chakraborty, Ms A Dutta, Mr P Mukhopadhyay, Mr A Basu, Ms H Roy, Mr S Bagchi

The Institution of Engineers (India) as a body accepts no responsibility for the statements made by individuals. Reprints of any portion of the publication may be made provided reference thereto is quoted.

Telephones: 91-33-2223 8311/14/15/16; Facsimile: 91-33-2223 8345 Web: http://www.ieindia.org; E-mail: iei.technical@gmail.com