



IEI NEWS



November 2019

IEI Centenary Industry Excellence Awards

02

Thirty-fifth National Convention of Mechanical Engineers

04

Thirty-fifth National Convention of Civil Engineers

05

Annual Convention 2019 of American Society of Civil Engineers (ASCE)

06

IEI Diary

32

A CENTURY OF SERVICE TO THE NATION

Volume 26

Number 8

Thirty-fifth National Convention of Chemical Engineers, Guwahati

The Food-Energy-Water (FEW) Nexus-Challenges for the Chemical Engineers



Thirty-fifth National Convention of Chemical Engineers was organised during September 6-7, 2019 at Guwahati on the theme "The Food-Energy-Water (FEW) Nexus-Challenges for the Chemical Engineers" by Assam State Centre of the Institution. The Convention was inaugurated by the Chief Guest, Prof Jagdish Mukhi, Hon'ble Governor of Assam. In his speech, Hon'ble Governor explained the nexus formed by Food-Energy-Water in a very lucid manner and urged upon the engineering community to rise up to the clarion call of the country and adopt Sustainable Development Goals (SDGs) in all of their projects and programmes. During this auspicious occasion, Dr T M Gunaraja, President of the Institution

Contd. on page 8

The Institution of Engineers (India)

8 Gokhale Road, Kolkata 700 020

November 1, 2019

To

All Corporate Members of IEI

The One Hundredth Annual General Meeting of The Institution of Engineers (India) will be held at **Cyberabad Convention Centre Pvt Ltd, Novotel & HICC Complex (NearHITEC City), Cyberabad Post Office, Hyderabad 500081 on 29 December 2019 at 1430 hrs.**

AGENDA

1. To confirm the Minutes of the Ninety-ninth Annual General Meeting held on 23 December 2018 at Udaipur, already circulated in March 2019 issue of IEI News, Vol. 25, No. 12.
2. To receive the Annual Report of the Council and the Audited Accounts of IEI for the year ended on 31 March 2019.
3. To receive the Report of the Council on election of the President and also the composition of the IEI Council for the Session 2019-2020.
4. To appoint the Auditors for the year 2019-2020 and to fix their remuneration.

Maj Gen (Dr) S Bhattacharya, VSM (Retd)
Secretary and Director General

From the President's Desk.....



Rapidly increasing energy demand and a growing concern about economic and environmental consequences leads to increased application of renewable and sustainable energy technologies in India. Moreover, due to tremendous industrialization, the climate globally is becoming increasingly unpredictable. The increased awareness of climate change and a concern for the environment has forced large industries to review their environmental credentials. Also fast depletion of conventional and non renewable fossil fuels, which are not spread uniformly around the globe, forecast natural energy imbalance in near future. Therefore a systematic approach of energy utilization and conservation has now becoming a planning imperative.

The National Energy Policy 2018, constituted by NITI Aayog, Government of India highlights energy efficiency and covers the National energy system in a broad scale. The Policy focuses on four key areas, namely electricity at affordable price, improve national energy security by decreasing the share of imports in primary energy supply, greater sustainability to build up resilience towards natural catastrophies and accelerate economic growth. Initiatives include implementation of a grid-interactive renewable power projects based on biomass, wind power, small hydro and solar driven systems with emphasis on development of skilled workforce for project planning, system design etc. The ultimate objective is to develop a National sustainable renewable energy sector.

Recently, Tamilnadu State Centre of the Institution organized the 35th National Convention of Electrical Engineers on the theme 'Storing Energy for a Sustainable Future – Future Energy in any Isolated World' which was well attended by the engineers from industry and academia. IEI would be playing a key role in enhancing the awareness for important issues in the sustainable energy sector.

Contd. on page 5

IEI Centenary Industry Excellence Awards Ceremony 2019

The IEI Centenary Industry Excellence Awards 2019 was organized as a special event in Hotel Le Meridien, New Delhi on 05 November 2019 as a part of Centenary Celebrations of The Institution of Engineers (India).

The event was inaugurated by Shri Nitin Gadkari, Hon'ble Union Minister of Road Transport and Highways, MSME as Chief Guest. The Hon'ble Minister, in his speech noted that professionals should adopt a holistic approach for development of the Country and encouraged them for working in a broader spectrum.

Prof (Dr) K K Aggarwal, Chairman National Board of Accreditation graced the occasion as Guest of Honour and in his address, highlighted the fact that engineering education is undergoing a paradigm shift. He stressed on the importance of professional bodies in development of the engineering fraternity.

Dr T M Gunaraja, President, IEI, while speaking on the occasion, congratulated the award winners. He elaborated on the various activities of IEI being carried out round the year and also on future initiatives for launching digital learning system in line with Government

of India's vision of Digital India. The award ceremony was also attended by Mr Narendra Singh, President-elect, IEI, Past Presidents, Council Members of IEI, Corporate Members and Industry professionals, large galaxy of distinguished engineers from Industries, Government and Academia.



The recipients of the IEI Centenary Industry Excellence Awards 2019 are:

Category Engineering Manufacturing & Processing:

- Hyundai Motor India Limited,
- Hindustan Zinc Limited,
- Bharat Forge Limited,
- Ramkrishna Forgings Limited,
- Tamil Nadu Newsprint and Papers Limited,
- North Eastern Electric Power Corporation Limited,
- The Kerala Minerals and Metals Ltd,

- Carborundum Universal Limited,
- Rajasthan Electronics & Instruments Limited,
- India Carbon Ltd,
- Aerospace Engineers Private Limited

Category Engineering Services & Consultancy:

- Engineers India Limited,
- Captronic Systems Private Limited,
- SPECTRUM Techno Consultants Pvt Ltd,
- Epicons Consultants Pvt Ltd.



**Presentation of
IEI
Centenary
Industry Excellence
Awards 2019**

1. Engineers India Limited; 2. Bharat Forge Limited;
3. North Eastern Electric Power Corporation
Limited; 4. Hyundai Motor India Limited;
5. Hindustan Zinc Limited; 6. Ramkrishna Forgings
Limited; 7. Tamil Nadu Newsprint and Papers Limited;
8. The Kerala Minerals and Metals Ltd;

9. Aerospace Engineers Private Limited; 10. Rajasthan
Electronics & Instruments Limited; 11. Carborundum
Universal Limited; 12. Captronic Systems Private
Limited; 13. Epicons Consultants Pvt Ltd; 14. India
Carbon Ltd; 15. SPECTRUM Techno Consultants Pvt Ltd;

Recent Trends and Development in Automotive Sector

Hosur Local Centre of The Institution of Engineers(India) organized Thirty-fifth National Convention of Mechanical Engineers and National Conference on the topic 'Recent Trends and Development in Automotive Industry' under the aegis of Mechanical Engineering Division Board (MCDB) of IEI during September 04-05, 2019 at Hosur. Dr S C Sharma, Director, National Assessment and Accreditation Council (NAAC), An Autonomous Institution of the University Grants Commission, graced the occasion as the Chief Guest. Dr Sharma, in his inaugural address mentioned that transformation in automotive industry is in a fast pace and stressed on further exploration on automotive transmission system; vehicle to vehicle communication; sensor based pre-collision system to avert accidents; application of automotive night vision and so on. Dr Sharma also highlighted future aspects of smart cars with application of augmented reality, high fuel economy, premier and advanced car safety measure with minimum accidental hazards and sustainable environmental norms. Dr T M Gunaraja, President, IEI and Member, MCDB, IEI in his address development on implementation of electric vehicles to meet laid down pollution norms, autonomous driving, connected vehicle technology and digital transformation in automotive chain. Mr Jagroop Singh, Chairman, MCDB, IEI who was presided over the inaugural function, during his address, highlighted the advancement in Indian automotive industry and lucidly explained position of Indian auto market in terms of production, sales and revenue generation for two wheelers, passenger cars, SUVs and commercial vehicles. Mr Arvind Singh Bakshi and Dr Swapan Bhaumik, Vice Presidents of the Institution and Members, MCDB, IEI were present during the occasion and addressed the audience. Dr G Ranganath, Chairman, Committee for Advancement in Technology and Engineering, IEI and Member, MCDB, IEI was also present during the occasion and addressed the august gathering.

On this occasion, Dr S C Sharma, Director, National Assessment and Accreditation Council (NAAC), Mr. Narasimhan Kesavan, Assistant General Manager, Volvo India Private Ltd, Bangalore and Prof (Dr) J Ramkumar, Professor, Department of Mechanical Engineering, Indian Institute of Technology Kanpur (in absentia) were felicitated as Eminent Engineering personalities in recognition of eminence and contribution to the profession of Mechanical Engineering. The IEI Young Engineers Award for the year 2019-20 in Mechanical Engineering Division were presented to Dr Prosenjit Das, Senior Scientist, CSIR-Central Mechanical Engineering Research Institute, Durgapur, WB, Dr Soumen Mandal, Senior Scientist, Advanced Manufacturing Centre, Skill and Innovation Promotion Group, CSIR-Central Mechanical Engineering Research Institute, Durgapur, WB and Dr Basil Kuriachen, Assistant Professor, Department of Mechanical Engineering, National Institute of Technology Mizoram, in recognition of their contributions in the field of Mechanical Engineering. A Souvenir was also released during the occasion by the Chief Guest and other dignitaries present on the dais. The prestigious Dr S C Bhattacharyya Memorial Lecture was delivered by Prof (Dr) K Palani Kumar, Member, MCDB, IEI & Principal, Sri Sai Ram Institute of Technology, Chennai on the theme 'Natural Fiber Reinforced Polymer Composites for Automotive Applications: Mechanical and Tribological Properties: A View' and Dr S P Luthra Memorial Lecture was presented by Dr Swapan Bhaumik, Vice President, IEI & Associate Professor and Former Head, Department of Mechanical Engineering, National Institute of Technology Agartala, Tripura on the theme 'Study of Performance, Combustion and Emissions of Biodiesels and Diesel Additive

Blends in Diesel Engine and Calibrations of NoX-SOOT-BTBE Trade off Characteristics through Taguchi-Fuzzy based Multi-objective Optimization Technique. A Panel Discussion was also organized on 'Future Trends in Automobile Industry'.

Earlier, Prof (Dr) J Arivudai Nambi, Chairman of the Centre, welcomed the august gathering. Dr M Manivasagam, Honorary Secretary of the Centre



proposed the vote of thanks. A large Number of papers were presented and discussed during the technical sessions of the two-day National Conference. Recommendations emanated from the National Conference are as follows.

To accelerate green revolution, electric mobility will be the first and foremost alternative to replace fossil fuel vehicles with electric vehicles, which are cleaner, greener, energy efficient and cost effective; In order to stick to the emission norms and rules and to reduce carbon foot prints, solar powered vehicle is one of the best solution; Looking forward for digital transformation in automotive industry, implementation of emerging technologies need to be accelerated, which include automotive night vision devices, autonomous driverless vehicles, vehicle to vehicle communication, pre-collision sensors, smart cars etc for better control, safety, accurate navigation, less accidental hazards and sustainability to the environmental norms; With the objective to optimize the performance and emission parameters of IC engines, more research and development is required in alternate fuel applications, particularly for a cost effective agro economy; To energize green economy, applications of automotive components need to be constructed with eco-friendly and biodegradable materials including natural fibre composites in a cost effective manner; Advanced manufacturing processes be applied for automotive industry including laser micromachining, generation of antimicrobial surfaces etc; To reduce the emission of greenhouse gases by the automotive engines with fossil fuels, application of water fuel is another feasible alternative, which need to be explored further; Atmospheric air can also be applied as another substitute to conventional fuel by converting it into water through Atmospheric air-water generator; More research is required to increase the battery life and efficiency for electric vehicles with reduction of charging time of battery; Security system of driverless vehicle is required to prevent hacking of central server; For engine design, reliability, performance and legislations are the three principal aspects should be taken care off; More research and exploration on electric vehicles is required for vehicle to grid operations, car sharing and energy market interactions; More emphasis is required for infrastructural development to convert the conventional cars to electric vehicles. A hybrid approach with an effective combination of conventional fossil fuel and next generation alternative fuel technology is recommended for the paradigm shift; Renewable energy resources be utilized in a more efficient and cost effective manner to meet the vehicle emission norms; Application of Internet of Things in automotive industry need to be explored further to implements smart cars with state of the art technology.

Restoration and Maintenance of Structures and Water Bodies for Sustainability

Gujarat State Centre of The Institution of Engineers (India) organized Thirty-fifth National Convention of Civil Engineers on the theme, "Restoration and Maintenance of Structures and Water Bodies for Sustainability" during September 1-2, 2019 at Ahmedabad. Mr B N Navalawala, Advisor to the Hon'ble Chief Minister of Gujarat and Ex Secretary, Ministry of Water Resources, Government of India graced the occasion as Chief Guest and inaugurated the Convention. During his address, Mr Navalawala highlighted various developmental works related to water resources in the state of Gujarat. Later he also focused on various policies on saving water at domestic as well as at commercial places. On this auspicious occasion, Dr T M Gunaraja, President of IEI and Mr N B Vasoya, Past President of IEI were present as Guests-of-Honour. Dr Gunaraja appreciated the Centre to organize the Convention on such latest contemporary topic. Further, he also highlighted that on the occasion of Centenary Celebration of IEI, the Institution organizes many international events apart from National Conventions and other regular activities. Mr Vasoya briefed about the functioning and regular technical activities of IEI for the benefit of the Members of IEI. Mr Sisir Kumar Banerjee, Immediate Past President, IEI and Mr Ashok Kumar Basa, Past President, IEI also graced the occasion as Distinguished Guests. The inaugural programme was presided by Mr V B Singh, Chairman, Civil Engineering Division Board (CVDB) of IEI. Mr Singh highlighted some strategies of maintaining the

water bodies at the state level. During the function, the eminent engineers, namely, Prof (Dr) Indrajit Patel, Department of Structural Engineering & Principal, Dean (Admin.) & International Collaboration, Birla Vishwakarma



Mahavidyalaya Engineering College, Vallabh Vidya Nagar, Anand, Gujarat; Dr H V Trivedi, Founder Director, Nirma Institute of Technology, Ahmedabad and Chairman, Society for Promotion of Technical Education & Research (SOPTER); Mr Pradeep N Jain, former Secretary, R&B Department, Government of Gujarat; Mr Jaxay Shah, Chairman, Confederation of Real Estate Developers' Associations of India (CREDAI) & Managing Director, Savvy Infrastructure Pvt. Ltd.; Mr Arvind Kumar Gupta, former Engineer-in-Chief & Head of the Department, Uttar Pradesh Public Works Department &

Contd. on page 28

Felicitations of President-elect, IEI



Delhi State Centre



Haryana State Centre

From the President's Desk.....

Contd. from page 1

As you are aware, 14 December each year is observed as Energy Conservation Day by all Centres of IEI through planning and organizing meaningful events embracing contemporary issues on renewable energy practices and subsequently focused on energy conservation and management.

The 34th Indian Engineering Congress will be organized on the theme 'Societal Engineering – Imperatives for National Building' at Hyderabad during December 27-29, 2019. We look forward for your active participation and support to make the apex event of the engineering community of the country a grand success.

Electronics & Communications, Renewable Energy and IoT's Vision 2040

The Punjab & Chandigarh State Centre of The Institution of Engineers (India) organised the International Conference on "Electronics & Communications, Renewable Energy and IoT's" Vision 2040" under the aegis of Electronics & Telecommunication Engineering Division Board during 07-08 September, 2019 at Chandigarh. Prof (Dr) K K Agarwal, Chairman, National Board of Accreditation, Govt. of India graced the occasion as Chief Guest. During his address, Prof Agarwal has expressed doubt whether technologies can be predicted for next 20 years upto 2040. He mentioned that technologies are

Mobility on a Large Scale (LMLS) with low energy requirement. Maj Gen (Dr) Gurcharan Singh Lamba, VSM (Retd), Professor and Principal, Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib, Jalandhar, the Guest of Honour during the occasion, in his address mentioned that the International Conference has provided a very good platform to showcase best practices and researches in academia and industry. He has also discussed different aspects of Smart City. Mr S S Mutha, Chairman, ETDB, IEI, during his address mentioned that renewable energy has to be supplied to national



grid without compromising the quality. 'IoT is gradually becoming an integral part of our society like internet of medical systems, transport systems, smart homes etc.', he added. Further, on behalf of Prof (Dr) T S Kamal, Council Member, IEI and Convenor of the International Conference, Dr Jagtar Singh elaborated the theme of the Conference. He informed the audience that 52 papers from India, Canada, and USA have been received. Earlier, Mr Janak Raj Garg, Council Member, IEI & Chairman, Punjab & Chandigarh State Centre welcomed the august audience. Mr S S Mundi, Honorary Secretary of the Centre proposed the vote of thanks. A large number of papers were presented and discussed during the technical sessions of the International Conference. During valedictory function, Mr S S Sarna,

changing very fast and nobody knows what development will take place in next five years and it is not possible to design any curriculum today and set-up any industry based on present day technologies. "We should teach students 'how to learn' and 'how to re-skill himself' and students should have multi-disciplinary knowledge and will be able to solve trans-disciplinary problems", he opined. Prof Aggarwal felt that IoTs should be used for social and livelihood development of the country, whereas Innovative outlook is need of the day. Dr Labh Singh, Advisor (Telecom), Ministry of Telecommunications, Govt. of India, and Guest of Honour during the occasion, explained different aspects of 5G Technologies and its advantages. Mr Ashoke Kumar Mukherjee, Chairman and Managing Director, Sonodyne Technology Private Limited graced the occasion as Guest-of-Honour. In his speech, Mr Mukherjee hailed IEI for imparting AMIE education and its role in producing more educated engineers. Mr Pawan Garg, Chairman(RRB), International Telecommunication Union, Geneva for 2013 and former Wireless Advisor of Govt of India, who was the Guest of Honour during the occasion, detailed about international researches going on in the field of electronics. Mr Garg further mentioned that ITU was established in 1865 to set up global standards in telecommunication to achieve the sustainable development goals. He has emphasised on Low

Member, Punjab & Chandigarh State Electricity Regulatory Commission graced the occasion as Chief Guest. Mr Sarna, in his address described status of renewable energy, its tariff in the state of Punjab and mentioned that Government of India has emphasized on generation of electricity using renewable energy. 'A significant shift is going on from fossil fuel to non-fossil fuel he added. He further opined that Capacity Building of Indian engineers are required to meet the demand. Prof (Dr) Shakti Kumar, Director, Panipat Institute of Engineering & Technology who was the Guest of Honour in the function, thanked IEI for organising the International Conference in a befitting manner. Prof Kumar in his address stressed on Role of Innovation in Industry Revolution 4.0. He expressed his deep concern over the current slowdown which is leading to a disaster. Innovation is the key factor to overcome this situation. Dr A P Singh, Chairman, Technical Committee has presented the technical report of the International Conference. It was noted that one of the paper has been presented via Video Conferencing from USA and total 26 papers were presented during all the Technical Sessions. Mr S S Mundi, Honorary Secretary, Punjab & Chandigarh State Centre in his vote of thanks thanked all dignitaries, delegates and others who worked hard for success of the programme.

IEI Delegation attended WFEO-STC, Executive Council Meetings and General Assembly

World Federation of Engineering Organization-Scientific and Technological Community, (WFEO – STC), and Executive Council Meetings and General Assembly were held during 18-24 November 2019 in Melbourne along with World Engineers Convention (WEC) 2019. The events were attended by an IEI delegation led by President, IEI. At the General Assembly, Mr Navinchandra B Vasoya was elected as India National member WFEO for a term of four years. India continued to host the Standing Technical Committee on Information & Communication for a further term of four years, the Chair being passed on from Mr S S Rathore to Dr T M Gunaraja. Dr T M Gunaraja and Mr Navinchandra B Vasoya are members of the WFEO Council.

Safety during Development of Infrastructure Projects

Delhi State Centre of The Institution of Engineers (India), organized the Sixteenth Safety Convention under aegis of Safety and Quality forum, during September 16-18, 2018 at New Delhi on the theme 'Safety during Development of Infrastructure Projects'. Mr Vinod Kumar Yadav, Chairman, Railway Board & Ex-Officio Principal Secretary to Govt. of India graced the occasion as Chief Guest. During his address, Mr Yadav explained the significance of safety as an important operational exercise during project implementation and mentioned that it needs to be discussed at the very concept stage and should be the focus of strategic decision making at the top level. During the occasion, Mr I K Pandey, Director General (Road Development) & Special Secretary, Ministry of Road Transport and Highways, Govt of India, Dr T M Gunaraja, President, The Institution of Engineers (India) and Mr Sisir Kumar Banerjee, Immediate Past President, The Institution of Engineers (India) graced the occasion as Guests of Honour. During his address, Mr Pandey mentioned that project implementation has also moved into a digital space which required a shift in approach and understanding of new engineering and science related to digital platform and developing and training perception have also changed considerably and cyber security and cyber safety in project implementation are gaining important place. Mr Yadav mentioned that safety in infrastructure projects needs to be discussed at the very concept stage and should be a focus of decision-making at the top. Dr T M Gunaraja, President, The Institution of Engineers (India), during his address, congratulated the organizers for providing a platform to industries and academia to collaborate on safety issues for increasing productivity and suggested all Fora of IEI should organize their programs in other regions for creating greater awareness on relevant issues. Mr Sisir Kumar Banerjee, Immediate Past President, IEI in his address explained that the vital infrastructure projects provides basic developmental activities including transport, communications, power, water, and accommodation, where proper implementation of safety norms is an integral part, whereas it is significant to evaluate the existing regulations and subsequently assesses the suitability of these regulations and procedures. Mr R N Rajpoot, Chairman, Safety and Quality forum, IEI was present on the dais and addressed the gathering. Mr Pradeep Chaturvedi, Council Member,

IEI & Chairman, Safety Convention, in his address mentioned about the high priority to safety issues with advancement of technology and analytics, and stressed on get equipped with in depth understanding of safety issues. Representatives from NPS School, New Delhi and Amity University, Nodia were also shared their view on the theme of the Convention. On the occasion, Prof P B Sharma, Vice Chancellor, Amity University, Manesar was felicitated on completing 50 years of Academic Career. A Proceedings-



Cum-Souvenir was released during the occasion by Chief Guest and other dignitaries. Earlier, Mr Dinesh Kumar, Council Member, IEI & Chairman, Delhi State Centre welcomed the august gathering. Mr Jitendra Kumar Sharma, Honorary Secretary, Delhi State Centre, IEI proposed the vote of thanks. Various papers were presented during the Plenary sessions, technical sessions and case study presentations. *Recommendations emanated from the Safety Convention include; A good Safety Policy should be able to predict and prevent any mishap during execution and in case of accident to be able to contain the damage to men and material; While most of the organizations have a very well drafted Safety Policy and Guidelines, the real challenges is in the process and implementation of laid down policy and procedures. There is a strong need to create awareness amongst stakeholders and workers on the need and relevance of safety policy and procedures and develop a safety culture within the organization.*

Scope and Opportunity of Small Hydro and Wind Power in North Eastern Region of India

Mizoram State Centre of the Institution in association with National Institute of Technology Mizoram (NITMz) organized the All India Seminar on Scope and Opportunity of Small Hydro and Wind Power in North Eastern Region of India under the aegis of Mechanical Engineering Division Board of IEI during August 2-3, 2019 at Aizawl. Dr M P Poonia, Vice-Chairman, All India Council for Technical Education (AICTE), Ministry of Human Resources and Development (MHRD), Govt of India graced the occasion as Chief Guest and inaugurated the Seminar. Prof Poonia, in his address highlighted various opportunities available in technical education and further opined that it should be utilised by the budding level technical institutions for further infrastructural development and other technological provisions. He further stressed on the essentiality in improving the quality of technical education in the country and various possible approaches that could be adopted to bring in the change. Dr Poonia remarked that it is high time to take up the cause and work towards

a better future for the generations to come. Dr Arup Kumar Misra, Director, Assam Science Technology and Environment Council, Guwahati, was another key note speaker during the occasion. Dr S K Kakoty, Council Member & Chairman, Assam State Centre, IEI, Mr Sandip Kumar Deb, Council Member & Chairman, West Bengal State Centre, IEI and Mr Tapan Lodh, Council Member & Chairman, Tripura State Centre, IEI were present during the occasion and addressed the gathering. Prof Manab Deka, Director, Gauhati University – Institute of Science and Technology (GU-IST), Guwahati also shared his views during the occasion. Earlier, Prof (Dr) Rajat Gupta, Chairman Mizoram State Centre delivered the welcome address. A Souvenir-cum-Book of Abstracts was released by the Chief Guest on this auspicious occasion. Mr K Lalsawmvela, Honorary Secretary of the Centre proposed vote of thanks. A large number of papers embracing the theme were presented and discussed during the technical sessions of the two-day Seminar.

The Food-Energy-Water (FEW) Nexus Challenges for the Chemical Engineers

Contd. from page 1

graced the occasion as Guest-of-Honour and enlightened about various events on the occasion of Centenary Celebration of the Institution. During the inaugural session, Honorary Fellowship was conferred to Hon'ble Governor of Assam by President of IEI. Mr S Rajagopal, Chairman, Chemical Engineering Division Board (CHDB), IEI presided over the function and highlighted various aspects on bio-energy, food production, energy efficient processes etc. He also expressed that food security is an important issue, which should be addressed properly. A large number of participants from Oil India Ltd., Duliajan, Indian Oil Corporation, Digboi, Numaligarh Refinery Ltd., IIT Guwahati and other organizations were present during the event. A Technical Volume of the Convention was released by the dignitaries during the function. The prestigious "Acharya Prafulla Chandra Ray Memorial Lecture" was delivered by Prof Vilas Gajanan Gaikar, Institute of Chemical Technology, Mumbai. During the occasion, Mr A N Das, Former Executive Director, Assam Oil Division, Indian Oil Corporation, Digboi, Assam; Prof Rama Govindarajan, Tata Institute of Fundamental Research, Hyderabad (in absentia) and Prof Vilas Gajanan Gaikar, Former Vice Chancellor, Babasaheb Ambedkar Technical University & Bharat Petroleum Distinguished Professor in Chemical Engineering, Institute of Chemical Technology, Mumbai were felicitated as Eminent Engineering personalities for their outstanding contributions in the field of Chemical Engineering. The State-of-the-Art Lecture was delivered by Prof Chandan Das, Department of Chemical Engineering, IIT Guwahati on the topic, "Recent Advances in Food, Energy and Wastewater Treatment in Chemical Engineering". The IEI Young Engineers Award in Chemical Engineering Division 2019-2020 were presented to Dr R Vinu, Associate Professor, Department of Chemical Engineering, IIT Madras, Chennai; Dr (Ms) K Saranya, Associate Professor, Department of Biotechnology, Adhiyamaan College of Engineering, Hosur and Dr Boopathy Ramasamy, Scientist, CSIR-Institute of Minerals and Materials Technology (IMMT), Bhubaneswar in recognition of their contributions in the field of chemical engineering. During the occasion, a Lecture on "Additives in Dry Grinding for Electrical Energy Saving" was presented by Dr R Bhima Rao, former Chief Scientist, CSIR-IMMT, Bhubaneswar. Earlier, Dr S K Kakoty, Chairman, Assam State Centre welcomed the august gathering. Dr Arup Kumar Misra, Convener, Technical Committee of the function briefly described the background of the theme. Md. Nuruzzaman, Honorary Secretary, Assam State Centre proposed the vote of thanks. The recommendations emanated from the Convention are given hereunder:-

Food, energy and water (FEW) and other nature-based resources, form a complex web where resource use and availability rely heavily on one another and a nexus exists among these. So, there is a need to promote cross-sectoral approaches in natural resources decision making; There exists a knowledge gap in process, system, technology, and policy linking water with food and energy. Research efforts must be brought together to address the challenging questions in the nexus research and develop sustainable and resilient water, energy and food systems; There is need to create a shared foundation for researchers, policy makers, practitioners and stakeholders to understand and manage linked production, utilization, and security of FEW systems; Chemical engineers will have to play an important role in the design and realization of solutions to problems in each of the areas - food, energy and water, which are affected by cross-cutting issues, such as education, advances in technology, sustainability,

product & process lifecycles and safety by providing knowledge and technical skills; Among food, energy and water, chief concern is quality and quantity of water, which is unequally distributed and in seriously short supply in many regions. Chemical engineers must work for making water available for personal, agricultural and industrial use, specifically in respect of developing small-scale technologies for local water purification for domestic use, developing technologies to recycle process water in industrial plants, e.g., membrane bioreactors, advanced digestion, granular treatment processes, fixed film biomass reactors, anaerobic ammonium oxidation processes, etc., developing advanced technologies for recovering valuable materials from wastewater; Meeting the demand for energy in respect of personal mobility and movement of goods is now a crucial challenge for the engineering fraternity, and everybody has to work towards the development of next generation products – electric, electronic and hybrid vehicles. This will need chemical engineers to newer verticals and opportunities for development of materials for auto components through systematic research & development, design & development of battery technology, developing methods to recycle and extract strategic materials from batteries, including cell phone batteries; It is a fact that fossil fuels shall remain the major energy source for some time and their climate impact must be mitigated by chemical engineers via carbon capture and similar other technologies; Engineering developments and life cycle analysis are required to be done by chemical engineers for an integrated bio-refinery approach for production of ethanol from agri-wastes and residues and to cut down the cost second generation ethanol to gasoline level to justify it as a substitute for gasoline; Nuclear fusion may decarbonize the global energy, but as on today, the contribution of nuclear energy to the energy basket is very small. Chemical engineers, with their knowledge of chemical reactors and nuclear fuel reprocessing, may be of help to nuclear scientists in development of nuclear reactors; It is to be noted that 66% of the energy produced is wasted and the chemical industry is among the most energy intensive. Chemical engineers should find ways and develop systems to be more energy efficient; The ever-increasing demand for food will be satisfied by the application of enhanced farming and food generation methods. Chemical engineers have opportunities to work with the agricultural industry and other disciplines to solve problems with water management, controlled release of nutrients, weed and pest management, harvesting, preservation, and processing technologies; Chemical engineers should work on processes to improve the overall efficiency and sustainability of producing food to ensure that the land and water from which food is obtained maintains the right qualities to produce food sustainably; System developments are needed to be done by chemical engineers for energy recovery from food waste through incineration, anaerobic digestion, pyrolysis, gasification or production of fuels and chemicals through fermentation; Chemical engineers should support the quest for sustainability in all the three sectors – food, energy, and water – by creating new products & processes and alternative materials with greater atom efficiency, reduced ecological footprints and renewable feedstocks; The Institution of Engineers (India) should play a major role in collaborating and exchanging ideas with industry, government, regulatory agencies, academicians & researchers and other stakeholders to meet the challenges ahead.

IEI Delegation attended Annual Convention 2019 of American Society of Civil Engineers (ASCE)

Dr T M Gunaraja, President, IEI and Mr V B Singh, Chairman CVDB & Council Member IEI attended the Annual Convention 2019 of American Society of Civil Engineers (ASCE) held at Miami, Florida (US) during Oct.10-13, 2019. The event was attended by Dr. Robina A. Kemper, President, ASCE; Dr K N Gunalan, President (Elect), ASCE; Mr Thomas W. Smith, Executive Director, ASCE; Mr. E.R.S. Suero, National President, Philippine Institute of Civil Engineers INC; Mr Udai P. Singh, Secretary General (Elect), Asian Civil Engineering Co-ordinating Council, (ACECC), Tokyo which is a Federation of Civil Engineers from 14 countries and many more. Plenary Session was organised in the morning. Opening keynote address was delivered by Mr Alex Mc Dowell, Production and Creative Designer who proposed a new approach to education & planning for an unpredictable future. Various concurrent Technical Sessions were held on building the transcontinental rail, roads, Design Liability Evolution with performance based designs, Real Life Ethical Challenges: Today and Tomorrow, Life Cycle: Managing Cost with Timely Data, Visualizing Design and Construction Project Performance Data, Climate Resilience Infrastructure: Adaptive and Risk Management, How Social Justice Relevant to Civil Engg, Visualizing and Immersing in Design Alternatives etc. After the Concurrent Technical Sessions, Closing General Session was organised which was addressed by Dr. Robin A. Kemper, President, ASCE and Dr. K. N. Gunalan, President (Elect) ASCE. This session was also addressed by Major Lisa Jaster, a motivator and a soldier from US Army who spoke on Leadership and Peak Performance. During this Session a pledge was also taken. Technical tours were also organised in the afternoon which included Miami pump stations, University of Miami & Sea-level Rise Projects in South Beach of Miami. The Miami-Dade Water & Sewer Dept (WASD) has upgraded the sewer pump stations including installation of new pump resulting in infiltration & inflow



and the construction of new force mains. Laboratory of University of Miami is a unique resource for fundamental studies on air-sea interactions, wave dynamics and boundary layer turbulence. Sea-level Rise Projects include rising of roads, innovative drainage improvements as per the latest scientific data and installation of pump stations. Recommendations emanated from the Convention include :-

As a part of it's Social Commitment, IEI may also plan & execute some projects through technical & financial support from members at the place of IEC every year like ASCE is doing; It may be made mandatory to attend Technical Sessions of IEC once in two years to renew PE certificate along with other All India Seminars of IEI. Existing policy may be amended suitably giving Professional Development Hours (PDHS) to these activities; Different topics of Technical Sessions of Annual Convention of ASCE may be considered by CVDB for including in the list of thrust area.

Optical Fibre Technology and Photonic Integrated Devices for Communication and Industrial Applications

Tiruchirappalli Local Centre of the Institution in association with the Department of Electronics and Communication Engineering, National Institute of Technology, Tiruchirappalli organized the All India Workshop on the theme Optical Fibre Technology and Photonic Integrated Devices for Communication and Industrial Applications under the aegis of Electronics & Telecommunication Engineering Division Board of IEI during August 9-10, 2019 at Tiruchirappalli. Dr T Srinivas, Associate Professor, Department of Electrical & Communication Engineering, Indian Institute of Science Bangalore graced the occasion as the Chief Guest and delivered the inaugural address. Dr Srinivas, in his speech highlighted about various recent light-wave technologies for future high speed photonic networks and industrial applications. During the technical sessions, eminent resource persons, namely Prof (Dr) D Srinam Kumar, Department of Electrical & Electronics Engineering, National Institute of Technology, Tiruchirappalli; Prof (Dr) A Sivanantha Raja, Department of Electronics and Communication Engineering, Alagappa Chettiar Government College of Engineering and

Technology, Karaikudi; Dr S Robinson, Associate Professor, Department of Electronics and Communication Engineering, Mount Zion College of Engineering and Technology, Pudikottai; Dr J Jeyarani, Associate Professor, Department of Electronics and Communication Engineering, J J College of Engineering and Technology, Tiruchirappalli; Dr G Thavasi Raja and Dr S Deivalakshmi, Assistant Professors, Department of Electrical & Electronics Engineering, National Institute of Technology, Tiruchirappalli; enlightened

the audience with diversified topics, that include optical computing, bio-medical optical instrumentation, bio-optics, optical fibres, optical image processing and so on. Earlier, Prof (Dr) N Kumaresan, Chairman Tiruchirappalli Local Centre and Professor, Department of Electrical & Electronics Engineering, National Institute of Technology, Tiruchirappalli welcomed the august gathering. Mr A Anand, Honorary Secretary of the Centre proposed the vote

of thanks. A good number of papers embracing the theme and various sub-themes were presented during the technical sessions of the two-day Workshop.



IEI Celebrates World Standards Day

Theme

Video Standards Create a Global Stage

The World Standards Day was celebrated by the Institution on October 14, 2019. Brief accounts of celebration as received from various Centres are reported hereunder

STATE CENTRES

Bihar

Dr Jyoti Prakash Singh, HoD, Computer Science & Engineering Department, NIT Patna, the Chief Guest in the occasion, stated that World Standards Day has a significant role in quality, safety and efficiency of services. Mr



M K Pramanik, Scientist 'D' & Head, Bureau of Indian Standards (BIS), Patna, in his keynote address highlighted about the scope of functioning of BIS regarding constitution of National Standards across

different fields. He further explained that BIS, being the founder member of ISO, represents the nation in ISO, IEC and ITU. Mr Pramanik mentioned about the Standards in different technical facets including video technology. Mr R N Rai, Scientist 'C', BIS Patna and Mr Vishwa Mohan Jha, Director in charge, MSME Development Institute, Patna presented technical papers on the theme. Earlier, Mr N K P Singh, Chairman, Bihar State Centre welcomed the august gathering. Mr B N Singh, past Honorary Secretary of the Centre proposed the vote of thanks.

Delhi

Mr C S Prasad, Former Director General, Central Public Works Department, Government of India graced the occasion as Chief Guest. Mr Prasad, in his address apprised about applications of video in different areas including education, healthcare, gaming, surveillance etc. 'Technologies like Augmented Reality and Virtual Reality are taking the applications of video

to the next level by providing immersive experience to user. Video is the Modern Medium of Expression', Mr Prasad added. Dr Srikanta Kumar Panigrahi, Director General, Indian Institute of Sustainable Development, New Delhi delivered the



Keynote Address. Mr K K Mahajan, Energy Management & Conservation Professional, Petroleum Conservation Research Association & Industrial Consultant, KSJ Technocrats, in his lecture, stressed upon the importance of

energy efficiency in today's perspective & usefulness of ISO 50001 Quality Standard, Energy Management System and its specifications, purposes and aims. 'Advances in the technology have changed our world, revolutionizing entertainment, connecting friends and families across the globe, and our communications experiences and enabling major improvements in medical care and education', he added. Earlier, Mr Devendra Gill, Immediate Past Chairman, Delhi State Centre, delivered the welcome address. Mr Jitendra Kumar Sharma, Honorary Secretary, Delhi State Centre proposed the vote of thanks.

Jharkhand

Ms Asha Wazir Biswas, General Manager (Corporate Communications and HRD), MECON Limited graced the occasion as Chief Guest and shared her vast experience of Quality standards used worldwide and the significance of applications of Standards. The Guest-of-Honour on the occasion, Mr



Manoj Kumar, Jt General Manager (Vigilance), MECON Limited, Ranchi, in his Keynote address shared his rich and practical experience on ISO 37001: Anti-Bribery Management

System Standard. Mr M R Kumar, Assistant General Manager, MECON Limited delivered lecture on ISO 9001: 2015 Quality Management System and explained in detail Quality Management System, Audits and Standards. Mr M Thangapandian, Deputy General Manager I/c (IT Services), MECON Limited spoke on ISMS (ISO 27001) and explained in detail about information technology standards, IT threats & internet security. Earlier, Mr Siyaranjan Kumar Singh, Chairman, Jharkhand State Centre and Council Member, IEI welcomed the Chief Guest, Guest-of-Honour and other dignitaries. Mr Prasant Deva, Past Honorary Secretary, Jharkhand State Centre proposed the vote of thanks.

Kerala

Dr P V Unnikrishnan, Strategic Advisor, Kerala Development and Innovation Strategic Council (KDISC) delivered the theme lecture. Dr Unnikrishnan, in his speech explained that the collaborative efforts put forth by thousands of experts resulted in agreement to have Institutional Standards which will help the customers to get standard items at lower price. He further covered how video technology changed the world, revolutionized entertainment, connecting friends and families across the Globe including major improvements in medical care and education. He touched upon how 35mm movie pictures started and still relevant even today.



Mr K K Goplakrishnan Nair, Chairman, Kerala State Centre and Council Member, IEI presided over

the function. Mr S Radhakrishnan, Past Chairman, Kerala State Centre proposed the vote of thanks.

Uttar Pradesh

The Keynote Speaker on the occasion, Mr Mohit Meena, Scientist-B, Bureau of Indian Standards informed about the fact that video has merged in our daily life very deeply and we could not think about the World without video like our favourite News Channels, U-tube, Sports Channels, Reality Show or



like-wise any other channel. He further narrated that due to smart phone revolution, video camera and video reached to almost all people and it played a very important role in changing the method of sharing experiences and

making contacts. 'Now-a-days, use of video has a pivotal role in the field of education, health services, family security and safety/vigilance', Mr Meena added. He concluded with explanation that Standards always played an important role in the developments of Video Technology specially, when video moved a step forward from analog to digital. Earlier, Mr R K Trivedi, Chairman of the Centre welcomed the guests and dignitaries. Mr Prabhat Kiran Chaurasia, Honorary Secretary, Uttar Pradesh State Centre proposed the vote of thanks.

LOCAL CENTRES

Ahmednagar

Dr R S Deshpande, Principal, Shri Chhatrapati Shivaji Maharaj College of Engineering, Ahmednagar, in his Keynote Address defined Standards and stated that Standards provide people and organizations with a basis for mutual understanding, and are used as tools to facilitate communication, measurement, commerce and manufacturing and play an important role in the economy by facilitating business interaction. While briefing the audience about the video standards, Dr Deshpande mentioned different aspects of digital video processing. 'The most recent uses of digital video are DVD/BlueRay, Digital TV-Broadcasting, and Mobile Devices', he mentioned and highlighted video as an element of multimedia. Earlier, Mr A D Kulkarni, Chairman, Ahmednagar Local Centre welcomed the august gathering. Mr R P Waykar, Honorary Secretary, Ahmednagar Local Centre proposed the vote of thanks.



Aligarh

Prof Ekram Khan, Department of Electronics Engineering, Zakir Husain College of Engineering & Technology, Aligarh Muslim University, Aligarh, graced the occasion as Chief Guest and addressed the gathering on theme of the day. Dr (Ms) Salma Shaheen, Honorary Secretary, Aligarh Local Centre proposed the vote of thanks.



Anpara

Mr Rajeev Ranjan, Executive Engineer, Anpara Thermal Power Station (ATPS), Anpara, graced the occasion as Chief Guest. While addressing the gathering, Mr Ranjan mentioned that implementation of International Standards alongwith fourth industrial revolution is the need of the hour. He further called upon the engineering fraternity to provide equal weightage to the urban and rural population while planning for future projects. Mr Mukesh Kumar Singh, Honorary Secretary of the Centre proposed the vote of thanks.



Bareilly

Mr S K Gupta, Immediate Past Honorary Secretary of the Centre threw some lights on the innovation of recent decades which have driven a huge leap forward in video quality and video has also become more accessible, helping



people worldwide to share their stories in vivid, moving pictures. 'These gains in both the sophistication and accessibility of video are built on International Standards', he added. Mr K B Agarwal, Founder Chairman of the Centre, in

his speech briefed about the people's President and 'Missile Man of India' Dr A P J Abdul Kalam. Earlier, Mr S C Mehra, Chairman, Bareilly Local Centre welcomed the august gathering. Mr Sudhir Gupta, Immediate Past Honorary Secretary, Bareilly Local Centre proposed the vote of thanks.

Bokaro Steel City

The Chief Guest of the function, Ms Anupma Tewari, General Manager (Business Excellence), SAIL, Bokaro Steel Plant (BSL), in her address explained the importance of standards in every walk of life and highlighted ISO certification of each unit and Department of SAIL, Bokaro Steel Plant to meet higher quality standards of products for global market. Mr N P Srivastava, General Manager & Head of Environment Division, BSL and Jt. Honorary Secretary of the Centre, in his Keynote Address, mentioned the various Environment related standards applicable to industries and various organizations. He further urged to make these standards integral part of the working culture. Earlier, Mr Yogendra Nath Singh, Chairman, Bokaro Steel City Local Centre, in his welcome address mentioned the significance of the day for regulators, Industries and consumers to the global economy. Mr B K Prasad, General Manager (C & IT), BSL proposed the vote of thanks.



Dhanbad

Dr T B Das, Chief Scientist, Mineral Technology & Combustion, CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad graced the occasion as the Keynote Speaker and addressed the gathering on the



Theme of the Day. The other dignitaries present on the occasion included Dr Pradeep Kumar Singh, Chairman, Dhanbad Local Centre, Dr T N Singh, Former Director, CSIR-CIMFR, Dhanbad and others. Dr M

K Singh, former Chairman, Dhanbad Local the Centre proposed the vote of thanks.

Dharwad

The Chief Guest on the occasion, Prof Raveendra Moodithaya, Dean (Academics) Karnatak Law Society's Vishwanathrao Deshpande Institute of Technology, Haliyal, Karnataka while spoke on the theme, highlighted the technological breakthrough for image capture and compression including Codec. Further, he explained the need for standardization and the pros and cons of video compression. Earlier, Prof (Dr) Ramesh Laxman Chakrasali, Chairman, Dharwad Local Centre, welcomed the audience. Mr Vijaykumar H Totiger, Honorary Secretary, Dharwad Local Centre proposed the vote of thanks.



Durgapur

The Chief Guest on the occasion, Mr Amar Nath Banerjee, Chief General Manager (Quality), SAIL, Durgapur Steel Plant addressed the gathering regarding the need of quality awareness and its impact. He mentioned about various standards followed at various stages and organization to facilitate the quality, product cost minimization and interchangeability. Mr Dharmveer Singh, Quality Control Manager, GE Power India Limited and Dr Kalyan K Mistry, Principal Scientist, Energy Research and Technology Group, CSIR-Central Mechanical Engineering Research Institute, Durgapur graced the occasion as Guests-of-Honour. Earlier, Mr Tilak Roy, Past Chairman, Durgapur Local Centre, welcomed the audience. Mr. Manoja Kumar Biswal, Honorary Secretary, Durgapur Local Centre proposed the vote of thanks.



Ghaziabad

Dr Arindam Basu, Director General, Northern India Textile Research Association (NITRA) graced the occasion as Chief Guest. Mr Abhijit Pal, Faculty Member, Department of Textiles, NITRA and Mr R R Tanwar, Chairman, Electrical Engineering Division Board, and Council Member, IEI also graced the occasion and addressed the gathering. Earlier, Mr Jaipal Singh, Chairman of the Centre delivered the welcome address. Mr Naipal Singh, Convener of the event proposed the vote of thanks at the end of the programme.



Gwalior

Dr K V Arya, Associate Professor, ABV Indian Institute of Information Technology and Management, Gwalior elaborated that video has become more accessible, helping people worldwide to share their stories in vivid, moving pictures and able to be encoded on one device as well as decoded



by another, regardless of the device being used. Prof Arya further explained different aspects of video compression algorithms. Earlier, Prof (Dr) Promod Kumar Singhal, Chairman,

Gwalior Local Centre, in his welcome address stated that the changing face of international video standards has led to single, globally acceptable technical standards for globally marketable products.

Indore

The Theme Speaker on the occasion, Mr Amit Bhatt, Entrepreneur & Trainer, Software & Web Development demonstrated about the mobile application e-video. Dr Sanjiv Tokekar, Director, IET-DAVV in his address explained the need to consider security threats and further opined that personal information should not be uploaded on social media platforms. Earlier, Prof (Dr) Ms Shilpa Tripathi, Chairman, Indore Local Centre, welcomed the august gathering. Mr Deepak S Shah, Honorary Secretary, Indore Local Centre proposed the vote of thanks.



Kanyakumari

The Chief Guest on the occasion, Ms Tmy S Rasathi, Scientist, ISRO, Mahendragiri, in her Keynote Address explained the theme with power point presentation. She enumerated that the video technology has been continually developed in a rapid manner. The standards in respect of video images,



protocol, technology and security system has been explained in detail by Ms Rasathi. She further highlighted with examples the application of video standards in Education, Healthcare, Games and Surveillance. Earlier, Mr V Sivathanu Pillai, Chairman, Kanyakumari Local Centre

welcomed the guest and dignitaries. Mr V Muthum Perumal, Honorary Secretary, Kanyakumari Local Centre proposed the vote of thanks.

Kanpur

The Guest Speaker on the occasion, Mr Himanshu Gupta from IIT Kanpur stated that Video is the modern medium of expression and the technological advances are changing the world, revolutionizing entertainment, connecting friends and families across the globe, enriching the communication experiences and enabling major improvements in medical care and education. He narrated that the innovation of recent decades has driven a huge leap forward in video quality and video has also become more accessible, helping people worldwide to share their stories in vivid, moving pictures.

'These gains in both the sophistication and accessibility of video are built on International Standards', Mr Gupta added. Earlier, Prof (Dr) J Ramkumar, Chairman, Kanpur Local Centre welcomed the august gathering. Dr Rajat Kumar Khare, Honorary Secretary, Kanpur Local Centre proposed the vote of thanks.



Kochi

Mr P A Salahuddin, Retd Deputy Chief Mechanical Engineer, Indian Railways, in his speech discussed in detail about various Standards like BIS, ISO 9000 - Quality Management System, Indian Railways standard organization, ASME, IEC, ITU, IEEE, IETF. He further explained various steps for formulations of Standards including Name and scope of Standard;



Explanation of Terms; Description of the Product; Inspection Procedure; Sampling Plan; Acceptance or Rejection Criteria and Test Procedure, if any. 'Standards are formulated to respond to the needs in market as per global experts' opinion and developed through multi stake holder process and based on consumers', he opined. Mr V Vijayachandran Nair, Council Member, IEI welcomed the august gathering. Mr

M P Eldhose, Honorary Secretary of the Centre proposed the vote of thanks.

Ludhiana

Dr Ashok Kumar, HoD, Electrical Engineering and Information Technology, College of Agricultural Engineering and Technology, Punjab Agricultural University, Ludhiana and Mr Sukhbir Singh Jakhar, Superintending Engineer, Ludhiana Improvement Trust graced the occasion as the Chief Guest and Guest-of-Honour respectively and addressed the august gathering. Earlier, Mr Rup Lal Mahajan, Chairman, Ludhiana Local Centre and Council Member, IEI, welcomed the audience. Mr Surjit Singh, Honorary Secretary, Ludhiana Local Centre highlighted the achievements of the institution in the past years.



Madurai

The Chief Guest on the occasion, Dr N Sivasubramanian, Senior Scientist and Former Chief General Manager, ISRO, Thiruvananthapuram shared his association with Dr A P J Abdul Kalam at ISRO for 15 years. He enumerated that Dr Kalam involved himself and his team for the development and indigenisation of materials and parts for ISRO like Gyroscope etc. The Chief Guest mentioned that Dr Kalam developed nano materials for medical applications at reduced cost



such as callipers for physically handicapped and stunt for heart patients by using Beryllium developed by ISRO. Earlier, Mr K Vijayakumar, Immediate Past Chairman, Madurai Local Centre delivered the welcome address. Mr R Narayanasamy, Honorary Secretary, Madurai Local Centre delivered the theme lecture. Mr M Savari Raj, Joint Honorary Secretary of the Centre proposed the vote of thanks.

Meerut

The Keynote Speaker on the occasion, Prof Tushar Jain, Professor, Mechanical Engineering, Meerut Institute of Engineering and Technology (MIET) explained video standards as an ability of a video card or video display device that defines the amount of colors that are shown with resolution. He further enumerated that four broadcast and video standards and recording formats are commonly in use around the world which include NTSC, PAL, SECAM, and HDTV.



'Visual multimedia source combines a sequence of images to form a moving picture and the video transmits a signal to a screen and processes the

order in which the screen captures should be shown', he opined. Other Speaker of the function, Prof Rohit Agarwal, Assistant Professor, MIET, Meerut discussed on Video Transmission Standards and different video streaming formats. Earlier, Mr Rajneesh Kumar, Chairman, Meerut Local Centre welcomed the guests and dignitaries. Mr Mohan Lal Jain, Honorary Secretary, Meerut Local Centre proposed the vote of thanks.

Roorkee

Prof (Dr) Achal Kumar Mittal, Chairman, Roorkee Local Centre welcomed the august gathering and highlighted the significance of World Standards Day. Dr M A Iqbal, Honorary Secretary, Roorkee Local Centre briefed about the life sketch of Dr A P J Abdul Kalam and proposed the vote of thanks.



Saurashtra

The Chief Guest on the occasion, Mr Jayen Kotecha, Management Consultant, Founder & CEO, Perfext Consulting Group, in his speech explained how Standards creates global stage and mentioned the industrial demands and recognition of International Standards 'The introduced economies of scale that help to grow the market giving innovators the confidence to invest in new video applications and services', Mr Kotecha opined. Mr Jay Pandya from Government Engineering College, Rajkot, informed that the advances in video technology has transformed the world, revolutionizing entertainment, connecting friends & families around the globe, enriching communications



experience and provided major improvements in medical care and education. Dr Hasmukh Koringa, from Government Engineering College, Rajkot welcomed the august gathering. Mr Deepak V Suchde, Executive

Committee Member of the Centre proposed the vote of thanks..

IEI Celebrates World Habitat Day

Theme

Frontier Technologies as an Innovative Tool to transform Waste to Wealth

The World Habitat Day was celebrated by the Institution on October 7, 2017. Brief accounts of celebration as received from various Centres are reported hereunder.

STATE CENTRES

Delhi

The Chief Guest of the function, Mr Rajesh Goel, Chairman & Managing Director, Hindustan Prefab Limited, Delhi explained different aspects of waste management. 'The need of the hour is to extend the reach and accessibility of startups so that more people become aware about waste management', Mr Goel opined. The Guest-of-Honour on the occasion, Mr Anant Kumar, ADG (Tech), Central Public Works



Department apprised that the purpose of the Day is to reflect the state of the towns and cities and the basic right of all to adequate shelter. 'It is also required to remind the world that we all have the power and responsibility to shape the future of our cities and towns', he added.

Kerala

The Speaker of the function, Dr V Thankamani, Former Professor & Head, Department of Bio Technology, University of Kerala, in her speech explained the applications of micro organisms which can be utilized for waste processing at specified operating conditions. The details of plant installed for converting the waste to cooking gas and fertilizers were also explained by the speaker. She further narrated that the normal issues associated with waste processing is foul smell, lack of cleanliness and duration of processing. Dr Thankamani continued that in this anaerobic system, there is no smell and the processing is obtained within 24 hours by tuning the operating parameters of the plant. 'Due to the speed with which the waste is processed, the plant has potential to become a very acceptable solution for processing the bio-waste in cities', she added. Earlier, Mr S Radhakrishnan, Past Chairman, Kerala State Centre introduced the Speaker and Mr Ashok Kumar K, Honorary Secretary, Kerala State Centre proposed the vote of thanks.



Manipur

The Theme Speaker on the occasion, Mr N Gitkumar Singh, Former Director, Municipal Administration, Housing and Urban Development (MAHUD) and Chief Town Planner, Government of Manipur, in his speech explained elaborately on the Municipal Solid Waste Management (MSWM) undertaken by the Govt. of Manipur with a view to making the Imphal city clean and healthy. He mentioned that the initiatives of the State Government include collection

and transportation of solid waste from different parts of the city and subjected it to composting, pyrolysis, briquetting and power generation through suitable technological applications. 'The process would enable the State authorities to transform the waste to wealth', he opined. Mr N Shyamsundar Singh, Chairman, Manipur State Centre, in his presidential address stressed upon the need for the Engineers to actively involved in the process of transformation of waste to wealth wherever necessary in order to keep our small habitat clean and healthy for all living beings.



Uttar Pradesh

The Chief Guest on the occasion, Prof Jagbir Singh, Director, Architecture College of Amity University, Lucknow stated that one hundred crore tonnes of residential and industrial waste is generated in the World every year and disposal of this waste is essential to lead a better life in the cities. He informed that in Ambikapur City of Chattisgarh State, this waste is segregated in different categories and reusable and recyclable materials are sold. He further mentioned that green waste is converted in to organic manure and is sold separately. 'In many part of the world the waste is being used to generate electricity also', Prof Singh added. Mr V B Singh, Chairman, Civil Engineering Division Board and Council Member, IEI stated that the aim of celebrating this Day is to make the society aware of delivering adequate basic residential facilities to all citizens of any country. 'Additionally it serves as a reminder of our responsibility to develop the cities in a planned manner to have safe and better landscape for next generation', he added. Earlier Mr R K Trivedi, Chairman, Uttar Pradesh State Centre welcomed the guests and dignitaries. Mr Prabhat Kiran Chaurasia, Honorary Secretary, Uttar Pradesh State Centre proposed the vote of thanks.



LOCAL CENTRES

Ahmednagar

Mr Amit Parvekar, Technical Manager, Precise Engineering Pvt. Ltd, Ahmednagar and Mr Abhijeet Shejwal, Director, ECOWELL E-Waste Consultants, Ahmednagar graced the occasion as Theme Speakers. Mr Amit Parvekar, in his speech highlighted about the unique technology developed

by his Industry in transforming plastic garbage to fuel. He informed that his industry developed the technology to transform plastic waste in three by-products namely hydrocarbon gas, carbon powder and fuel and claimed that this plant is probably the first plant in India to transform fuel from plastic waste. Mr Abhijeet Shejwal emphasized that in order to conserve ecology of the earth, it is necessary to keep the planet eco-friendly. He further clarified that garbage of plastic is creating threat to the ecology and management of waste

must be given top priority by all of us. He enumerated that while providing housing and amenities to the citizens, it is necessary to manage domestic and industrial waste for better livelihood. Dr R S Deshpande, Principal, Shri Chhatrapati Shivaji Maharaj College of Engineering, Ahmednagar, was also present on the dais and highlighted the importance of waste management. Earlier, Mr Avinash D Kulkarni, Chairman, Ahmednagar Local Centre welcomed the august gathering. Mr R P Waykar, Honorary Secretary, Ahmednagar Local Centre proposed vote of thanks.

Anpara

Mr Ajay Pratap Singh, Executive Engineer, Anpara Thermal Power Station (ATPS) graced the occasion as Chief Guest and Mr Vikas Kumar Srivastava, Assistant Engineer, ATPS as Guest of Honour. Earlier, Mr Prashant Kumar on behalf of Anpara Local Centre welcomed the guests and dignitaries. Mr Mukesh Kumar Singh, Honorary Secretary, Anpara Local Centre proposed the vote of thanks.

Bareilly

Mr Sovan Mohanty, Department of Electronics and Communication Engineering, Shri Ram Murti Smarak College of Engineering and Technology, Bareilly explained that product design needs to include the environmental impact over its entire lifecycle so that scarce resources including the fossil fuels being applied during manufacturing are preserved and emissions of harmful greenhouse gases are avoided. Mr K B Agarwal, Founder Chairman of the Centre expressed that technology has immense potential to improve quality of working life of people that significantly accelerate efforts to achieve the Sustainable Development Goals and address climate change. Mr Sudhir Gupta, Immediate Past Honorary Secretary of the Centre described Frontier as an innovative tool to transform waste to wealth. Earlier, Mr S C Mehra, Chairman, Bareilly Local Centre, delivered the welcome address.

Bokaro Steel City

The Chief Guest on the occasion, Mr S N Teriar, former Deputy General Manager (Structural Design), Bokaro Steel Plant (BSP), in his address explained the need of housing for all and effective use of frontier technologies by young engineers in housing construction keeping in mind the environmental constraints to save future generation. Mr

Aditya Dubey, Deputy Manager, SAIL, Bokaro Steel Plant and Mr M Kashif, Senior Manager, ECD (W), SAIL, Bokaro Steel Plant presented their papers on the theme of the day. Mr N P Srivastava, Jt Honorary Secretary of the Centre, in his speech explained various aspects of environmental issues faced by housing and emphasized to reduce waste generation and its better utilization for energy and gas generation. Earlier, Mr Yogendra Nath Singh, Chairman, Bokaro Steel City Local Centre welcomed all the dignitaries and spoke about the need of adoption of new technologies along with small steps by individuals like reduction of waste. Mr B K Prasad, Executive Committee Member of the Centre proposed the vote of thanks.

Coimbatore



Mr M R Navaneethakumar, Partner, Sakthi Constructions, Coimbatore graced the occasion as Chief Guest and addressed the audience. Earlier, Mr P R Natarajan, Chairman, Coimbatore Local Centre welcomed august gathering

Dr H Ram Mohan, Honorary Secretary, Coimbatore Local Centre proposed the vote of thanks.

Dharwad

The Chief Guest on the occasion, Mr Harsha Annegeri, Architect and Project Management Consultant, Smart City opined that waste management has been considered as an urgent and critical issue that must be addressed to ensure future prosperity and sustainability of our planet. He further remarked that the Day is intended to remind the world that we all have the power and the responsibility to shape the future of our cities and towns. 'Going beyond solid waste this includes all waste produced by human activity (solid, liquid, domestic, industrial and commercial), which continues to have a devastating impact on climate change, public health and the environment', Mr Annegeri added. Earlier, Prof (Dr) Ramesh Laxman Chakrasali, Chairman, Dharwad Local Centre, welcomed the audience. Mr Vijaykumar H Totiger, Honorary Secretary, Dharwad Local Centre proposed the vote of thanks.



Durgapur

The Chief Guest on the occasion, Prof (Dr) Harish Hirani, Director, CSIR-Central Mechanical Engineering Research Institute, Durgapur, WB in his address stated that startup companies in India should think about investing in technologies for social sector such as municipal waste management. He further expressed that CSIR-CMERI has already set up a green colony at its campus in Durgapur with absolutely zero waste. Prof Hirani stressed upon the need for a sustainable economy and biodegradable waste management. He also spoke on issues such as waste and environment, plasma gasification process, conversion of waste to gas to produce electricity, eco-friendly disposal of municipal waste without formation and reformation of toxic dioxins and furans, and large volume reduction of waste. He further focused on composting, increase in use of organic manure, decrease in chemical fertilizer and improving the soil. 'Methane is a greenhouse gas with a much higher potential than carbon



dioxide', he opined. Invited Speaker of the function, Mr Kailash Chand, Deputy General Manager, Project Department, SAIL-DSP in his speech addressed on some issues *ie.* Housing Problem in India and programs run by Govt. of India; Standards of Smart city; Sources and types of Waste and Advisory steps for each citizen to manage/res-use waste in own capacity. Earlier, Prof (Dr) Kartik Chandra Ghanta, Chairman, Durgapur Local Centre, in his welcome address stated that urban India is the third largest producer of solid waste. He further mentioned that solid, liquid, domestic, industrial and commercial waste needs 5Rs – rethinking, reducing, reusing, refusing and recycling to transform waste to wealth. Mr Manoj Kumar Biswal, Honorary Secretary, Durgapur Local Centre, proposed the vote of thanks.

Ghaziabad

Mr Awadhesh Kumar, Chief Engineer (T&R) II cum Nodal Officer, National CPWD Academy, Ghaziabad, graced the occasion as the Guest Speaker.



Mr Kumar, in his address highlighted the efforts, recent developments and important activities being carried out by CPWD regarding reducing the effects of pollution and subsequently improving the environment. Mr R R Tanwar, Council Member &

Chairman, ELDB, IEI informed about various projects being implemented using plastic waste as a resource material for construction purpose particularly for the project being carried out at Nagpur. Earlier, Mr Jai Pal Singh, Chairman, Ghaziabad Local Centre welcomed the august gathering. Mr C K Tyagi, Honorary Secretary Ghaziabad Local Centre proposed the vote of thanks.

Gwalior

Mr Sunil Chaturvedi, Senior Engineer – Department of Rural Development, Government of MP elaborated waste system management in rural area and conveyed that Gwalior is the first city by construction of 668 toilets leads to open defecation free (ODF) program in a village. Mr B S Sikarwar, Executive Engineer – Smart City, Gwalior Municipal Corporation, Gwalior explained waste recycling by avoiding voids for 96% achievements for proper waste disposal, which can lead to controlled dump sites, better air and water. 'Managing waste properly is essential for building sustainable and livable cities, but it remains a challenge for many developing countries and cities', he added. Earlier, Mr P Y Khanvilkar, Honorary Secretary, Gwalior Local Centre, in his welcome address briefed about the theme of the day. Mr Prabhat Bhargav, Chairman, Gwalior Local Centre, in his speech stated that the day is intended to remind the world that we all have the power and the responsibility to shape the future of our cities and towns.



Kanyakumari



Mr P Gopal, Chief Engineer, PWD (Retd), in his keynote address pointed out that the basic amenities to be provided to all for healthy life. He further explained about the task for achieving sustainable waste

management system and making waste into wealth. 'Recycling process in respect of plastic, sewage water into irrigation purpose, solid waste into manure for farming are required', he added. Earlier, Mr V Sivathanu Pillai, Chairman Kanyakumari Local Centre welcomed the august gathering. Mr V Muthum Perumal, Honorary Secretary, Kanyakumari Local Centre proposed the vote of thanks.

Kochi



The Speaker on the occasion, Dr Anil Joseph, Managing Director, Geo Structural (P) Ltd, Kochi, in his speech explained various methods of utilizing waste materials like copper

slag, mining waste for construction purposes and also usage of waste pet bottles as insulation materials. 'Precast buildings, modular construction etc. can save money and time in construction', he added. Earlier, Mr K K Gopalakrishnan Nair, Chairman, Kerala State Centre, IEI welcomed the Speaker and other dignitaries. Mr P M Chacko, Past President, IEI was also present during the occasion. Mr P Eldhose, Honorary Secretary, Kochi Local Centre, proposed the vote of thanks.

Ludhiana

Mr S Charanjit Singh Channi, Chairman, CT Group of Institutions, Jalandhar graced the occasion as the Chief Guest and addressed the august gathering. Dr Anupam Deep Sharma, Professor and Dean – Academics, CT Group of Institutions, Jalandhar lauded the efforts of Architecture wing for organizing the function. Earlier, Mr Rup Lal Mahajan, Chairman, Ludhiana Local Centre welcomed the audience. Dr Arvind Dhir, former Honorary Secretary of the Centre highlighted the sustainable development goals as given by United Nations. Dr G S Kalra, Campus Director, CT Group of Institutions proposed the vote of thanks.



Madurai



Dr M Kottaisamy, Professor & Head, Department of Chemistry, Thiagarajar College of Engineering, Madurai graced the occasion as Chief Guest. Mr R Narayanasamy, Honorary Secretary, Madurai Local

Centre proposed the vote of thanks.

Meerut

Prof Jaimala, Dean, Engineering and Technology, Ch Charan Singh University Campus, Sir Chhotu Ram Institute of Engineering and Technology (SCRIET), Meerut graced the occasion



as Chief Guest and addressed the august gathering. The Keynote Speaker of the function, Mr Deepak Agarwal, Senior Vice President, IL&FS Environmental Infrastructure and Services Ltd. New Delhi stated that with the rapid infrastructure development, the quantum of construction and demolition waste is ever increasing. 'Use of C&D recycled products contribute towards

conservation of natural resources such as sand & aggregates etc. and mitigates air pollution', he added. Earlier, Mr Rajneesh Kumar, Chairman, Meerut Local Centre welcomed the guests and dignitaries. Mr Mohan Lal Jain, Honorary Secretary, Meerut Local Centre proposed the vote of thanks.

Roorkee

Dr N Gopalakrishnan, Director, CSIR-Central Building Research Institute (CBRI), Roorkee graced the occasion as Chief Guest. Dr Gopalakrishnan threw lights in detail on prefabricated structures and how this concept



of building construction is being used in different nations and is a very good way to solve the problem of housing. Dr P S Chani, Head, Department of Architecture & Planning, IIT,

Roorkee, discussed about the energy aspects in building construction and the crucial aspects of embedded energy systems. He further explained the use of low energy building materials to enhance the goal of sustainable development as advocated by United Nations as a message on Habitat Day. Dr Ashok Kumar, Chief Scientist and Head of Architecture & Planning Group, CSIR-CBRI Roorkee covered the 'Frontier Technologies as a tool for Sustainable Habitat: current practices and the way forward'. He highlighted the importance of frontier technologies such as Digital Technologies, Energy & Environment, advanced materials and waste to wealth. His lecture also covered the life cycle energy analysis and current R&D work being done at CBRI. Earlier, Prof (Dr) Achal Kumar Mittal, Chairman, Roorkee Local Centre welcomed the august gathering. Dr M A Iqbal, Honorary Secretary, Roorkee Local Centre proposed the vote of thanks.

South Gujarat

Mr Sovan Mohanty, Department of Electronics and Communication Engineering, SRMS CET, Bareilly explained that product design needs to include the environmental impact over the entire lifecycle so that scarce resources including the fossil fuels used during manufacture are preserved and emissions of harmful greenhouse gases are avoided. Mr K B Agrawal, Founder Chairman of the Centre expressed that technology has great potential to improve how people work and live, to significantly accelerate efforts to achieve the Sustainable Development Goals and address climate change. 'Frontier technologies, such as automation, robotics, electric vehicles, renewable energy



technologies, biotechnologies and artificial intelligence can transform the social, economic and environmental spheres', he added. Mr Sudhir Gupta, Immediate Past Honorary Secretary of the Centre, while spoke on the theme explained that according to the World Economic and Social Survey 2018, frontier technologies hold immense potential to improve how people work and live, as well as to significantly accelerate efforts to achieve the Sustainable Development Goals and address climate change. Earlier, Mr Subhash Mehra, Chairman of the Centre, in his welcome address urged to provide attention to the issue of waste, wishing to change the discourse into a positive one, where waste is presented as an opportunity to bring about wealth and change in the communities and cities where we live. Dr Rajat Mehrotra proposed the vote of thanks.

Tiruchirappalli

Dr G Subbaiyan, Professor & Head, Department of Architecture, NIT Trichy graced the occasion as the Theme Speaker. Earlier, Prof (Dr) N Kumaresan, Chairman, Tiruchirappalli Local Centre addressed the audience and Mr S Lakshmanan, Past Honorary Secretary,



Tiruchirappalli Local Centre proposed the vote of thanks.

Upper Assam

Mr Vijay Swami, Executive Director, Research Institute of World's Ancient Traditions, Culture and Heritage (RIWATCH), Rowing, Arunachal Pradesh, graced the occasion as Chief Guest. The Guest-of-Honour, Mr Ranjan Kumar Das, Principal I/C, Tinsukia College described about eco-system of our planet and expressed his concern about endangered plants and animals. Guest-of-Honour, Mr Sanjoy Kishan, MLA, Tinsukia, Assam described about importance of World Habitat Day with special reference to the Habitats of Dibru Saikhowa Wild Life Sanctuary and Namdhapa Tiger Project of Arunachal Pradesh. He further advised all to avoid Plastic. Mr Ashit Kumar Baruah, Chairman, Upper Assam Local Centre delivered the welcome address to the august gathering and highlighted about drinking water crisis in Assam and Mizoram. He emphasized upon recycling of all the used products and avoid plastics. Mr Digant Goswami, Honorary Secretary, Upper Assam Local Centre proposed the vote of thanks.



Important Notice

It has been observed that there are many Corporate Members of IEI whose mobile number/email id is not registered with IEI till date. Non availability of the mobile numbers and email ids precludes us not only from providing our full range of services but also from participation in the Online Election Process.

The Corporate Members whose mobile number/email id is not registered with IEI are therefore requested to kindly communicate their mobile no. and email id along with membership number to datamemb@ieindia.org by 10 December 2019.

For any further clarification, one may feel free to speak to us at (033)40106248/ 246/ 269/ 299.

Maj Gen (Dr) S Bhattacharya, VSM (Retd)
Secretary and Director General

IEI Celebrates Royal Charter Day

The Institution of Engineers (India) was incorporated by Royal Charter on September 9, 1935 by King and Emperor George V at the Court at Buckingham Palace, London and remains the only professional body in India to be accorded this honour. This endowed the Corporate Members of the Institution with the right to use the title 'Chartered Engineer' after their names, implying that they are qualified engineers deemed worthy to hold a Charter. The 'Royal Charter Day' was celebrated by IEI all over the country on September 9, 2019. A brief accounts of celebration as received from various Centres are reported hereunder.

STATE CENTRES

Delhi

The Chief Guest of the function, Mr O P Goel, Past President, IEI apprised about the development and Royal Charter issue of IEI since 1929. His address covered in chronological order different incidents in the history of IEI interlinked directly or indirectly with the Royal Charter. Earlier, Mr Dinesh Kumar, Chairman, Delhi State Centre, and Council Member, IEI welcomed the audience. Mr Jitendra Kumar Sharma, Honorary Secretary of the Centre proposed the vote of thanks.

Jharkhand

The Chief Guest on the occasion, Hon'ble Mr Justice Anant Bijay Singh, Sitting Judge of Jharkhand High Court discussed in detail about the importance of Royal Charter and its legal status and briefed about the role and importance of Engineers in Arbitration. The Guest-of-Honour of the function, The Guest of Honour, Mr Arun Kumar Singh, IAS, Additional Chief Secretary, Water Resource Department, Govt. of Jharkhand dwelt upon the importance of the Royal Charter and its significance to engineering fraternity. Earlier, Mr Siyaranjan Kumar Singh, Chairman, Jharkhand State Centre and Council Member, IEI delivered the welcome address. Mr Prasant Deva, Past Honorary Secretary Jharkhand State Centre proposed the vote of thanks.



Telangana

Dr S Nagabhushana Rao, Past Chairman, Andhra Pradesh State Centre, IEI, graced the occasion as the Chief Guest. Earlier, Mr T Anjaiah, Honorary Secretary of the Centre welcomed the gathering. Dr S Satyanarayana, Imm Past Chairman of the Centre spoke on the occasion. Dr G Rameshwar Rao, Chairman, Telangana State Centre and Council Member, IEI presided over the function. Dr G Chandra Mohan Reddy, Past Honorary Secretary of the Centre proposed the vote of thanks.



LOCAL CENTRES

Anpara

The Chief Guest on the occasion, Mr A P Singh, Executive Engineer, Anpara Thermal Power Station



(ATPS), Anpara appealed to the Engineering fraternity to follow the path laid down by Royal Charter. Mr Prashant Kumar, Assistant Engineer, ATPS, and Mr C P Chaurasiya, AM, AE, Anpara Thermal Power Project were also present and graced the occasion. Mr Mukesh Kumar Singh, Honorary Secretary, Anpara Local Centre proposed the vote of thanks.

Kalpakkam

Dr T M Gunaraja, President, IEI graced the occasion as Chief Guest and deliberated about the role of IEI in nurturing engineering & technology towards nation building. Dr G Amarendra, Director, Material Science Group, Indira Gandhi Centre for Atomic Research, in his address, proposed to enrich engineering students' skill by various organs of IEI. Dr Kallol Roy, Chairman and Managing Director, Bharatiya Nabhikaya Vidyut Nigam Limited (BHAVINI), Department of Atomic Energy, Government of India stressed on digital transformation and further proposed a road map for co-coordinating various professional activities across engineering community. Prof (Dr) A Baskar, Panimalar Institute of Technology, Chennai illustrated deep impact of video standards across different engineering disciplines. Earlier, Mr R Ramdoss, Chairman, Tamilnadu State Centre and Council Member, IEI welcomed the august gathering. Mr Raju Ramakrishnan, Chairman, Kalpakkam Local Centre proposed the vote of thanks.



Kollam

Dr Jose Prakash M, Principal, TKM Institute of Technology, in his address urged the students to involve actively in all technical activities and interact with various experts located at different industries, universities and research organizations. Mr P Jayakumar, Additional Divisional Railway Manager, Southern Railways delivered the Keynote Address. Mr Rajendra Prasad, Past Chairman of the Centre, in his address stressed upon the benefits and facilities available for both student members and corporate members. He further deliberated on the importance of Royal Charter Day.



Tirupati

Prof. G.M. Sundaravalli, Rector, S. V. University graced the occasion as Chief Guest. Prof. S. Narayana Reddy, Chairman, Tirupati Local Centre welcomed the gathering and Prof. G. Umamaheswara Reddy, Honorary Secretary, Tirupati Local Centre proposed the vote of thanks.



One Day Seminars/Workshops Conducted by Various Centres of IEI

STATE CENTRES

Jharkhand

Jharkhand State Centre of the Institution organized One Day Seminar on 'Intra-state River Interlinking in Jharkhand' on 25 August, 2019 at Ranchi under the aegis of Civil Engineering Division Board. The Chief Guest during the day, Dr. D K Singh, Ex. Project Director (Tech), Jharkhand Urban Infrastructure Development Company Limited and Ex. Chief Engineer, Water Resources Department, Govt. of Jharkhand, mentioned that it is the need of the hour to get the river interlinking implemented in Jharkhand. He further reiterated the need of making efforts at the highest level to request NWDA for preparing DPR of three Intra State Links i.e. Barakar-Damodar-Subernarekha River Link; Sankh-South Koel River Link; and South Koel-Subernarekha River Link proposed by Jharkhand in view of water scarcity. Other dignitaries present during the occasion include Mr Bimal Kumar Jha, Executive Engineer and Mr Mithilesh Kumar Sinha, Superintending Engineer, Minor Irrigation Circle, Dumka, Water Resources Department, Government of Jharkhand, and others. Earlier, Mr Siyaranjan Kumar Singh, Chairman, Jharkhand State Centre and Council Member, IEI welcomed the august audience. Mr Shivanand Roy, Council Member, IEI proposed the Vote of Thanks.



Telangana

Telangana State Centre of the Institution organized One-Day Seminar on the theme 'Utilisation of Koyna Hydropower Water and Diversion of Western Ghats Rain Water into Krishna Basin and Linking of Rivers' at Hyderabad on 23 September, 2019 under the aegis of Civil Engineering Division Board. Dr Rajendra Singh, Waterman of India graced the occasion as Chief Guest and Mr V Prakash Rao, Chairman, Telangana Water Resource Development Corporation (TWRDC) as was the Guest of Honour. In his address, Dr Singh explained the idea of utilization of water of Koyna Hydro power diverting to Krishna basin as it is for people development and not for degrading the environment. Further, Dr Singh mentioned that the farmers should dispense with cultivating the water intensive crops like rice and sugarcane and the cropping patterns should be according to the water availability and the food style should be changed accordingly Mr V Prakash Rao, Chairman, TWRDC during his address, endorsed the view of Dr Singh. Farmers from Tamilnadu, Karnataka and students from Telangana have attended the Seminar, Earlier, Dr G Rameshwar Rao, Chairman, Telangana State Centre and Council Member, IEI addressed the august audience. Mr T Anjaiah, Honorary Secretary, Telangana State Centre proposed the vote of thanks.



West Bengal

West Bengal State Centre of the Institution organized an One Day Seminar on the theme 'Advancement in Marine Technology' on 25 September, 2019 at Kolkata under the aegis of Marine Engineering Division Board. During the occasion, Mr B N Bera, Ex. Director, Marine Engineering Research Institute (MERI), erstwhile Directorate of Marine Engineering Training (DMET), Kolkata graced the occasion as Chief Guest. Mr Bera, during his address mentioned the changing scenario in marine engineering in order to keep pace with the advancement of technology all over the world, when new generation materials are being used for better and more efficient performance of the marine engines with new generation of fuels to achieve better fuel efficiency. He further mentioned that maritime Rules and Regulations are being regularly amended to keep pace with stringent requirements of International Maritime Organization. Mr Amit Bhatnagar, Senior Principal Surveyor & Vice President, Indian Register of Shipping, Kolkata and Cmdr Ashoke Bahl, VSM (Retd.), Campus Director, Indian Maritime University (Kolkata Campus) addressed the audience as Guest of Honours. Mr Bhatnagar, during his address, emphasized on advancements in marine technology, significance of skilled marine workforce with special training on welding, operation and maintenance of electrical equipment. Mr Bhatnagar mentioned applications of new generation marine engines with 0.5% sulphur from the next year onwards. Papers were presented during the technical sessions on diversified sub themes, that include Fleet Expansion for Improved Economic Performance using Alternate Fuel, Use of Advance Material for Prevention of Fatigue failure of Crank Shaft, Hybrid Turbo Chargers for Higher Fuel Efficiency etc. Earlier, Mr Sandip Kumar Deb, Chairman, West Bengal State Centre and Council Member, IEI welcomed the august gathering. Mr Kalipada Das, Honorary Secretary, West Bengal State Centre proposed the Vote of Thanks.



LOCAL CENTRES

Gwalior

Gwalior Local Centre of the Institution organized One Day Workshop on the theme 'Green Energy: Need of the Hour' on 26 October, 2019 at Gwalior under the aegis of Interdisciplinary Coordination Committee. Prof Ms Rekha Gupta, HoD, Department of Electronics Engineering, Madhav Institute of Technology and Science (MITS), Gwalior, while delivering the keynote address during the occasion, briefed about Green Energy and its utilities. Prof Gupta mentioned that India is one of the largest producer of renewable energy. Prof Gupta mentioned that In the electricity sector, renewable energy account for 34.6% and large hydro installed capacity are contributing to 13% of the total installed power capacity.



Salem

Salem Local Centre of the Institution organized One Day Seminar on the theme 'Automation and Impact of Industry 4.0 on the Apparel Industry' on 4 October, 2019 at Salem under the aegis of Textile Engineering Division Board. The Chief Guest during the occasion, Mr PM Devadas, Founder – EFFICIENCIE, Bangalore in his address focused on possibility of developing a customized smart apparel production plant which will be a novel approach in the apparel industry based on the identified issues of the current sewing process and the suggestions to improve them. Mr S Valliappa, Chairman, Sona College of Technology, Salem during his address explained that recent



technological innovations have paved the way for realizing the smart factory vision with the next industrial revolution, which has significant potential to change whole manufacturing processes

and business models for labor intensive clothing and apparel factories. Mr Valliappa opined that the companies in the clothing and apparel industry need to invest in Industry 4.0 and its enabler technologies to start the transition from ordinary plants to the smart factory to gain competitive advantage. Dr S R R Senthil Kumar, Principal, Sona College of Technology, Salem while addressing the audience, explained that an apparel smart factory is able to make iconic breakthroughs in the digital world including creating affordable mass customization by entirely reimagining the production workflow to become more agile, modular and cost-effective. 'Several companies are already experimenting with new apparel production systems at varying scales to make this a reality', Dr Senthil Kumar opined. Earlier, Mr D Arul Selvam, Chairman, Salem Local Centre welcomed the august audience. Mr S Loganathan, Honorary Secretary, Salem Local Centre proposed the vote of thanks.

Salem Local Centre of the Institution organized One Day Workshop on the theme 'Water Conservation and Rain Harvesting System' on 26 September, 2019 at Salem under the aegis of Environmental Engineering Division Board. The Chief Guest of the session, Mr K Muthu, Assistant Executive Engineer, Salem Municipal Corporation shared his experience about the water crisis in different municipal areas and presented an insight about conservation water in a small scale. Dr S R R Senthil Kumar, Principal, Sona College of Technology, Salem while addressing the audience, touched key areas of conservation and harvesting techniques and stressed on the utility of water conservation. Dr V Karthikeyan, Principal, Thiagarajar Polytechnic College, Salem was also present during the occasion and addressed the audience. Earlier, Mr D Arul Selvam, Chairman, Salem Local Centre welcomed the august audience. Mr S Loganathan, Honorary Secretary, Salem Local Centre proposed the vote of thanks.



Tiruchirappalli

Tiruchirappalli Local Centre of the Institution organized One Day Workshop on the theme 'Emerging Technologies in Aerospace Engineering' on 27 September, 2019 at Tiruchirappalli under the aegis of Aerospace Engineering Division Board. The Chief Guest of the function, Mr. R. Dorairaj,

Former Associate Project Director, Geosynchronous Satellite Launch Vehicle, Vikram Sarabhai Space Centre, ISRO, Thiruvananthapuram, briefed

about recent advances in aerospace domain and further highlighted the advanced propulsion systems, orbiting of satellites, Reusable Launch Vehicle etc. He mentioned that breakthroughs in



advanced propulsion systems can significantly improve space mission performance and to further explore the solar system, faster trip times, substantial increase in payload mass delivery, or a large reduction in overall spacecraft mass/size is required. Dr S Nadaraja Pillai, Department of Aerospace Engineering, SASTRA Deemed-to-be University during his address opined that it is mandatory to consider the aerodynamic characteristics along with improvement in aerodynamic efficiency of the aircraft to reduce the airline fuel consumption and to afford economic flight. Dr S Sathiyamoorthy, Principal, J J College of Engineering and Technology (JJCET), Tiruchirappalli and Dr N Pratap, Department of Aeronautical Engineering, JJCET, Tiruchirappalli were present during the occasion and addressed the gathering. Earlier, Prof (Dr) N Kumaresan, Department of Electrical & Electronics Engineering, NIT Tiruchirappalli and Chairman, Tiruchirappalli Local Centre delivered the welcome address. Mr N Sivakumaran, Honorary Joint Secretary, Tiruchirappalli Local Centre and Professor/ICE, National Institute of Technology, Tiruchirappalli, proposed the vote of thanks.

Udaipur

Udaipur Local Centre of the Institution organized One day Workshop on 'Disaster Mitigation' on 15 October, 2019 at Udaipur under the aegis of Civil Engineering Division Board. The Chief Guest during the function, Mr. Qummer UI Zaman Choudhary, IAS, CEO, Udaipur Smart City Limited, Government



of Rajasthan Udaipur in his speech discussed on wise collection of information of potential disasters and stressed on coordination for rescue and relief. He explained in detail about the arrangements for

disaster management, giving the experience of minimum loss due to efficient management during the earthquake in the 'Uri' sector of Jammu and Kashmir in 2005. Prof(Dr) Govind Singh Bharadwaj (Retd), Department of Mining Engineering, College of Technology and Engineering (CTAE), Maharana Pratap University of Agriculture and Technology, Udaipur, speaker of the day presented the global scenario of disasters and mentioned that, to mitigate the loss caused by earthquakes, defensive measures should be taken by mapping through satellites above the earth. Mr Purshottam Paliwal, Retired Executive Engineer, Ajmer Vidyut Vitran Nigam, Mr Rakesh Veerwal, Sub Inspector, State Disaster Response Force, Udaipur, Dr. Atul Rajpara M.D. (Physician), Pharmacology (Diabetes), GBH American Hospital, Udaipur, Dr. Ramesh Patel, Cardiac Surgeon, Geetanjali Medical College and Hospital, Udaipur were present in the occasion and addressed the audience. Earlier, Mr Anurodh Prashant Sharma, Chairman, Udaipur Local Centre, IEI delivered the welcome address. Mr Yawanti Kumar Bolia, Honorary Secretary, The Institution of Engineers (India), Udaipur Local Centre proposed the vote of thanks.

IEI Celebrates 52nd Engineers' Day

Theme: Engineering for Change

The 52nd Engineers' Day was celebrated by the Institution all over the country on September 15, 2019 to commemorate the 159th birth anniversary of legendary Engineer-Statesman Bharat Ratna Sir M Visvesvaraya. Brief accounts of the celebration as received from various Centres are highlighted hereunder.

STATE CENTRES

Chhattisgarh

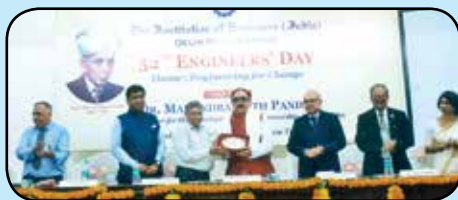


Mr Arun Kumar Sharma, Director, Production (Retd), National Aluminum Company limited (NALCO), Angul, Odisha was the Key Note Speaker and Dr A M

Rawani, Director, National Institute of Technology Raipur was the Guest of Honour during the occasion. Earlier, Mr Anil Kumar Sharma, Chairman, Chhattisgarh State Centre delivered the welcome address.

Delhi

The Chief Guest during the occasion, Dr Mahendra Nath Pandey, Hon'ble Minister of Skill Development & Entrepreneurship, Government of India mentioned that 'Change' is the most important challenge being faced by the engineering fraternity in the country with respect to the changing environment and increasing population. Mr Sisir Kumar Banerjee, Immediate Past President, IEI explained the pivotal role of engineering change for progress and development of country. Earlier, Mr Dinesh Kumar, Chairman, Delhi State Centre and Council Member, IEI welcomed the audience.



Haryana



Mr Rakesh Kumar Chandan, Director (P&C) Bhakra Beas Management Board, Chandigarh and Mr S P Bansal, Chairman, Geeta Group of Institutions Panipat graced the occasion as the Chief Guest and Guest-

of-Honor respectively. Mr K C Sethi, Council Member, IEI presented the life sketch of Sir M Visvesvaraya. Dr Vrinda Gupta, Associate Professor, Department of Electronics and Communication Engineering, National Institute of Technology, Kurukshetra, in her keynote address described 'Change' as the most important challenge faced by the engineers of a developing India. Mr Ajay Mahajan, Chairman, Haryana State Centre proposed the vote of thanks.

Karnataka



Hon'ble Mr Ramachandra Gowda, Former Minister, Ministry of Karnataka graced the occasion as Chief Guest and addressed the gathering. Mr S M Panchagatti, Former Chairman, Karnataka Public Service Commission and Prof S P Basavaraju, Former

Professor, Department of Physics, Bangalore Institute of Technology Bengaluru graced the function as the Guests-of-Honour. Mr Aravind Srinivas, Tata Consultancy Services, Mumbai in his keynote address urged that keeping in view of the rapid transformation and innovation at national and international level, engineers should be prepared to cope-up with the changes. He further opined that the complexity further increases due to environmental concerns and actions required for sustainable development. Earlier, Mr Jasmail Singh, Chairman, Karnataka State Centre welcomed the august. Mr M Nagaraj, Honorary Secretary, Karnataka State Centre proposed the vote of thanks.

Madhya Pradesh

Mr B M Mehra, Additional Director and Unit Head, Central Power Research Institute, STDS, Bhopal was the Chief Guest and Mr C K Meghwal, Manager-Technical, Ultratech Cement, was the Guest of Honour during the function. Mr Satya Narayan Daga, Former Executive Director, BHEL, Dr Malay Ranjan Khare, Principal, Laxmi Narain College of Technology, Jabalpur were also present during the occasion and addressed the gathering. Earlier, Mr Neeraj Dave, Chairman, MP State Centre and Council Member, IEI welcomed the audience. Dr Bharatkumar Kalubhai Modhera, Honorary secretary, MP State Centre proposed the vote of thanks.



Odisha

Mr Samir Ranjan Das, Minister of State (Independent Charge), School and Mass Education Department, Government of Odisha was the Chief Guest, Mr Sandip Dasgupta, Zonal Head (Technical), JSW Cement, Kolkata. Guest of Honour and Dr Trinath Sahoo, General Manager, Indian Oil Corporation Ltd. (IOCL), Paradeep the Chief Speaker of the Day. The Chief Guest mentioned

in his address that the engineers should be the harbinger for the change by exploring the disruptive technologies in all engineering sectors to enable



India to lead the crusade of mitigation of climate change. Dr Trinath Sahoo, in his keynote address stressed that 'Change' is the most important challenge faced by the engineers of a

developing India. 'Engineers are further being challenged by the changing climate and ever increasing population and extensive research is being carried out in all engineering disciplines to cope with such emerging challenges', he added. Earlier, Prof (Dr) Khiroda Kumar Rout, Chairman, Odisha State Centre welcomed the audience. Prof (Dr) Sudhansu Sekhar Dash, Honorary Secretary, Odisha State Centre narrated the life sketch of Sir M Visvesvaraya. Mr Sulekha Chandra Nayak, Chairman, Odisha Technicians Chapter proposed the vote of thanks.

Telangana

The Chief Guest on the occasion, Dr Sailendra Kumar Joshi, IAS, Chief Secretary, Government of Telangana, in his address mentioned that the services of engineers are very much essential and important to the development of nation and state as well. Earlier, the Celebrations commenced with the garlanding of Statue of Sir Mokshagundam Visvesvaraya by Dr T M Gunaraja, President, IEI and Dr G Rameshwar Rao, Chairman, Telangana State Centre. Dr S Satyanarayana, Immediate Past Chairman, Telangana State Centre addressed the audience. Dr G Rameshwar Rao, Chairman Telangana State Centre welcomed the august gathering. Mr T Anjaiah, Honorary Secretary, Telangana State Centre proposed the vote of thanks.

Local Centres

Agra

The Chief Guest of the function, Prof V Swamidas, Dean of Faculty, Dayalbagh Educational Institute, Agra during his address emphasized on more Research & Development for betterment of human society. Earlier, Prof (Dr) B Dushmanta Kumar Patro, Chairman, Agra Local Centre welcomed the audience. Dr Ashok Yadav, Honorary Secretary, Agra Local Centre proposed the vote of thanks.



Aligarh

Mr K B Varshney, Chief Engineer, Nagar Nigam, Aligarh, graced the occasion as Chief Guest and Mr H C Tripathi, Manager (Production), Unilever India Ltd, Etah graced the occasion as Guest-of-Honor and addressed the gathering. Mr Vikram Singh, Retd. Executive Engineer, Uttar Pradesh Power Corporation Limited, Aligarh delivered a lecture on 'Water Conservation'. Ms Savita



Gautam, University Women's Polytechnic, Aligarh Muslim University, Aligarh also spoke during the occasion. Earlier, Dr Gyan Prakash, Chairman, Aligarh Local Centre welcomed the guests and dignitaries. Dr (Ms) Salma

Shaheen, Honorary Secretary, Aligarh Local Centre proposed the vote of thanks.

Angul

Mr V Balasubramanyam, Director (Production), National Aluminium Company Limited (NALCO), Angul graced the occasion as the Chief Guest and stressed on sustainable and beneficial change to the society at large. Mr M P Mishra, Executive Director, Smelter & Power Complex, NALCO, Angul, Mr Y Pattnaik,



Vice President, Nava Bharat Ventures Limited, Prof Sunit Kumar Sarangi and Dr Ashok Kumar Rath graced the function as Guests-of-Honour. Prof Suresh Kumar Satapathy, School of

Computer Engineering, Kalinga Institute of Industrial Technology Deemed to be University delivered the Keynote Address. Earlier, Mr Surendra Kumar Dogra, Chairman, Angul Local Centre welcomed the august gathering. Mr Satyabadi Mishra, Honorary Secretary, Angul Local Centre proposed the vote of thanks.

Bareilly

Mr N C Upadhyay, Chief Engineer, Label-1, Irrigation department, Bareilly and Mr Pramesh Gupta, Chief Engineer, PWD, Bareilly graced the occasion as the Chief Guest and Guest-of-Honour respectively. Other speakers graced the occasion included Mr K K Rana, Senior Manager (Instrument) and Mr Shivanshu Pathak, Deputy Manager (Instrument), KRIBCO Shyam Fertilizer Ltd., Shahjanapur. Earlier, Mr S C Mehra, Chairman, Bareilly Local Centre, welcomed the august audience.



Brahmapur

The Chief Guest during the occasion, Mr Chandra Sekhar Sahu, Hon'ble Member of Parliament stressed on innovation and value added technology for eradication of socio-infrastructure problems. Mr Bikram Kumar Panda, Hon'ble Member of Legislative Assembly, Brahmapur Constituency and Mr Akshya Kumar



Banerjee, Engineer-in-Chief, Water Resources Department, Government of Odisha were the Guest of Honours. Mr Nanda Kumar Mahapatra, Former Chief Engineer, DOWR, Government of Odisha was the theme speaker. Earlier, Dr Arun Kumar Padhi, Chairman, Brahmapur Local Centre welcomed the audience. Mr Surendra Kumar Panigrahi, Honorary Secretary, Brahmapur Local Centre proposed the vote of thanks.

Coimbatore

Dr Nithyanandan Devaraj, Chief Executive Officer, Foundry Business and Member, Executive



Management Council, CRI Group, Coimbatore graced the occasion as the Chief Guest and addressed the august gathering. Earlier, Mr P R Natarajan, Chairman, Coimbatore Local Centre delivered the welcome address. Dr H Ram Mohan, Honorary Secretary, Coimbatore Local Centre proposed the vote of thanks.

Davangere



Dr Basavaraja Banakara, Registrar (Academics & Evaluation), Davangere University graced the occasion as the Chief Guest and addressed

the gathering. Earlier, Prof (Dr) H B Aravind, Chairman, Davangere Local Centre welcomed the audience. Dr Gururajrao Desai, Honorary Secretary, Davangere Local Centre proposed the vote of thanks.

Dhanbad

Mr R N Singh, Deputy Director General of Mines Safety (Mech)HQ, DGMS, Dhanbad and Prof V M S R Murthy, Department of Mining Engineering, IIT-ISM, Dhanbad graced the occasion as the Chief Guest and the Keynote Speaker respectively and addressed the august gathering. Other dignitaries graced the occasion included Dr T N Singh, Former Director, CSIR-Central Institute of Mining and Fuel Research (CIMFR). Earlier, Dr Satyendra Kumar Singh, Honorary Secretary, Dhanbad Local Centre delivered the welcome address. Dr M K Singh, Past Chairman, Dhanbad Local Centre proposed the vote of thanks.



Durgapur

The Chief Guest, Mr P K Pradhan, Executive Director (P&A), SAIL, Durgapur Steel Plant & Executive Director, SAIL-Alloy Steel Plant, Durgapur addressed the engineering professionals about the challenges ahead in multidisciplinary facets, which needs initiative & innovative solutions to make every body's life easier to face it. He emphasized upon Ready to Change and Change Management in Engineering and allied areas.



The Guest-of-Honor, Mr S G Khune, Executive Vice President (Works), Graphite India Ltd mentioned that the need for a better life forced professionals to dive into useful engineering inventions that have eventually changed our world today. Guest-of-Honor, Dr Amalendu Sinha, Former Director, CSIR-CIMFR mentioned different aspects of engineering specializations and advanced areas of engineering developments leads to Mine Safety. Special Guest, Dr Ajay Kumar Singh, Former Senior Scientist, CSIR-CIMFR spoke on 'Engineering Help for Climate Change: Coal Bed Methane Recovery and Utilization in Indian Context'. Special Guest, Mr R K Bhattacharyya, Jt. General Manager, M/s MECON Limited, Durgapur addressed the gathering on theme of the Day. Earlier, Prof (Dr) Kartik Chandra Ghanta, Chairman, Durgapur Local Centre and Council Member, IEI welcomed the guests and dignitaries. Mr Manoj Kumar Biswal, Honorary Secretary, Durgapur Local Centre proposed the vote of thanks.

Faridabad



Mr Harbans Lal Bhutani, CEO, Hyfit Engineers Pvt. Ltd, Haryana graced the occasion as the Guest-of-Honor. Mr V K Malik, Chairman cum Managing Director, MELCO India Pvt

Ltd, was present during the occasion and spoke on the theme. Earlier, Mr Subhash Chander, Chairman, Faridabad Local Centre, welcomed the audience. Mr Sandeep Handa, Honorary Secretary, Faridabad Local Centre proposed the vote of thanks.

Gwalior

Prof Manisha Pattanaik, Atal Bihari Vajpayee Indian Institute of Information Technology & Management (ABV-IIITM) Gwalior was the Chief Guest and Mr Chandra Kant Gupta, Hindustan Urvarak and Rasayan Limited, Gorakhpur was the Guest of Honour. Earlier, Prof (Dr) Pramod Kumar Singhal, Chairman, Gwalior Local Centre welcomed the audience. Mr Vinay Kumar Shukla, Honorary Secretary, Gwalior Local Centre proposed the vote of thanks.



Jabalpur



The Chief Guest of the function, Dr Pritee Khanna, Chairperson, Placement & Women Cell, Pandit Dwarka Prasad Mishra Indian

Institute of Information Technology, Design and Manufacturing, Jabalpur during her speech expressed happiness over the increasing participation of girls in Engineering field. The Guest-of-Honor on the occasion, Ms Nidhi Mathur, General Manager, Bharat Ratna Bhim Rao Ambedkar Institute of Telecom Training, Jabalpur explained communication as a foremost important tool for revolution. Mr Rakesh Kumar Rathore, Council Member, IEI was present during the occasion and addressed the gathering. Earlier, Mr Tarun Kumar Anand, Chairman, Jabalpur Local Centre delivered the welcome address. Mr Prakash Chandra Dubey, Honorary Secretary, Jabalpur Local Centre proposed the vote of thanks.

Jamshedpur

Dr Karunesh Kumar Shukla, Director, National Institute of Technology, Jamshedpur graced the occasion as Chief Guest and Mr S Sridharan, Vice President, TCE, Guest of Honour. 'Newer technologies or Disruptive Technologies is one that displaces an established or existing technology and stir up the industry or a ground-breaking product that creates a completely new industry and one major driver in this journey will be the collection, collation, management and analysis of huge volume of data through digital tools', Mr Sridharan opined. Mr Anurag Saxena, Chairman, Jamshedpur Local Centre, welcomed the audience.



Kadapa



Mr Sravana Kumar Reddy Kamana, Chief Engineer, Quality Control, Water Resources Department, Rayalaseema Region,

Kadapa graced the occasion as Chief Guest. Earlier, Dr V Adinarayana Reddy, Honorary Secretary, Kadapa Local Centre, in his welcome address enlightened the significance of the day and advised the budding engineers to imbibe the character of Sir M Visvesvaraya.

Kanyakumari

Prof (Dr) C Ganapathy Chettiar, Department of Civil Engineering, IIT Madras, graced the occasion as Chief Guest. Earlier, Mr V Sivathanu Pillai, Chairman



Kanyakumari Local Centre welcomed the audience. Mr V Muthum Perumal, Honorary Secretary, Kanyakumari Local Centre proposed the vote of thanks.

Kochi

The Chief Guest on the occasion, Prof (Dr) K N Madhu Soodanan, Vice Chancellor, Cochin University for Science and Technology (CUSAT), in his address delved deep into the theme of the day. The Chief Guest narrated that



since independence, lot of research and developments in the field of space, defence and agricultural sectors were carried out and substantial economic growth too. He

opined that quality of engineering education need to be upgraded to compete the world market and further recommended developments in micro and nano scale technologies. Earlier, Mr V Vijayachandran Nair, Council Member, IEI welcomed the august gathering. Mr T P Raveendran, Chairman, Kochi Local Centre and Council Member, IEI delivered the presidential address. Prof (Dr) G Madhu, Past Chairman, Kochi Local Centre delivered the commemorative speech on Sir M Visvesvaraya. Mr M P Eldhose, Honorary Secretary, Kochi Local Centre proposed the vote of thanks.

Madurai

The Chief Guest on the occasion, Mr Lalit Kumar Mansukhani, Additional Divisional Railway Manager, Madurai Division, in his address highlighted



India's contribution to engineering and science and further explained the technological transformation in Indian Railways including infrastructure expansion. He lucidly explained

functional aspects of electronic interlocking and introduction to indigenous development train collision avoidance system (TCAS) which is an Automatic Train Protection (ATP) System with Cab Signaling features. Earlier, Mr S Rajagopal, Chairman, Madurai Local Centre and Council Member, IEI delivered the welcome address. Mr R Narayanasamy, Honorary Secretary, Madurai Local Centre proposed the vote of thanks.

Mangalore



The speaker of the day, Mr Girish Bharadwaj, Padmashri Awardee and a renowned expert on hanging bridge called on the engineers to determine practical, economic and eco

friendly solutions to the problems of rural population and further stressed on boosting the economy of the rural area by means of engineering and technology solutions and thereby reduced the pressure on urban population. Earlier, Dr K S Babu Narayan, Honorary Secretary, Mangalore Local Centre welcomed the audience.

Munirabad

Dr S M Shashidhar, Principal, Proudhaveveraya Institute of Technology, Hospet was the Chief Guest and Mr Katta Akil was Guest of Honour during the Day. Earlier, Mr E Prahalada, Chairman,



Munirabad Local Centre welcomed the audience and Mr W Lalitha Prasad, Honorary Secretary, Munirabad Local Centre proposed the vote of thanks.

Muzaffarpur

Mr Subhash Verma, CEO, Genuine Image Build, New Delhi was the Chief



Guest and Mr Umakant Thakur, Superintending Engineer, N H Circle, Muzaffarpur was the Guest of Honour. Prof (Dr) Jagadanand Jha, Principal, Muzaffarpur Institute of

Technology Muzaffarpur was also present on the dais and addressed the gathering. Earlier, Dr Anjani Kumar Mishra, Chairman, Muzaffarpur Local Centre delivered the welcome address. Mr Narendra Kumar Jha, Honorary Secretary, Muzaffarpur Local Centre proposed the vote of thanks.

Nashik

Mr Pradip Deshmukh, Vice President – Operations (Plant-1 & Tool & Die Plant), Mahindra & Mahindra Ltd., Nashik and Mr Ashok Katariya, Chairman, Ashoka



Buildcon Limited, Ashoka Group, Nashik graced the occasion as the Guests and addressed the gathering. Earlier, Mr Santoshkumar Surajmal Mutha, Chairman, Nashik Local Centre and Council Member, IEI, welcomed the audience. Mr Ajit Vishwasrao Patil, Honorary Secretary, Nashik Local Centre proposed the vote of thanks.

North Bengal

The Theme Speaker of the day, Mr Jhuma Dutta, Assistant Professor, Computer Science and Engineering Department, Jalpaiguri Government Engineering College, Jalpaiguri stated that Change is the most important

challenge faced by the Engineers in developing India by means of changing climate and ever increasing population. 'Extensive research is being



carried out in all engineering disciplines to cope up with such emerging challenges', she added. Ms Dutta further enumerated that Information, Electronics & Communication Technology

are playing a key role in several initiatives such as Digital India, Make in India, Start up India and Smart Cities. The speaker concluded that engineering for change calls upon the engineers to be the forerunner for the change by exploring the disruptive technologies in all engineering sectors to enable India to lead the campaign of mitigation of climate change. Mr Sandipan Ganguly, Assistant Professor, Civil Engineering Department, Jalpaiguri Govt. Engineering College, Jalpaiguri threw lights on the life sketch of Sir M Visvesvaraya. Earlier, Dr Santanu Das, Honorary Secretary, North Bengal Local Centre welcomed the gathering.

Pantnagar



Mr Rajesh Kumar Sharma, General Manager and Head-manufacturing Technology, Fiat India Automobiles Private Limited and Dr S S Gupta, Head, Department of Civil Engineering, College

of Technology ,Govind Ballabh Pant University of Agriculture & Technology (GBPUA&T) graced the occasion as the Chief Guest and Guest-of-Honour respectively. The Chief Guest, in his address explained functional aspects of Robotics and Mechatronics. Dr S S Gupta expressed his views on the contribution of Sir M. Visvesvaraya in the building of the Nation. Earlier, Dr V K Verma, Honorary Secretary, Pantnagar Local Centre delivered the welcome address. Dr Sanjay Mathur, Chairman, Pantnagar Local Centre proposed the vote of thanks.

Saurashtra

Mr Jagadish D Halai, Chairman, HJD Institute of Technical Education and Research, Kutchh was the Chief Guest and Dr Paresh



Kariya, Founder and Director, Asian Institute of Quality India was the theme speaker of the Day. Mr Ranchhod Kanjibhai Babaria, Honorary Secretary, Saurashtra Local Centre welcomed the audience and Mr Navin Kalaria from Saurashtra Local Centre proposed the vote of thanks.

Tirunelveli



Dr R Vaidyanathan, Former Principal, Government College of Engineering, Tirunelveli, graced the occasion as the Resource Person and delivered the lecture on the theme of the day. Dr S Baburengarajan,

Chairman, Tirunelveli Local Centre welcomed the gathering. Dr R Velayutham, Honorary Secretary, Tirunelveli Local Centre proposed the vote of thanks.

Tirupati

Prof V Durga Bhavani, Vice-Chancellor, Sri Padmavathi Mahila Viswa Vidyalayam, Tirupati graced the function as he Chief Guest. Dr M Ramasubba



Reddy, Professor, Head of Laboratory, Biomedical Engineering Group, Department of Applied Mechanics, IIT Madras, the speaker of the Day, mentioned that Engineers play a very important role in

every walk of life by converting knowledge of basic sciences into products. and help improve living conditions of common people by applying their professional knowledge to develop important engineering infrastructural projects. Earlier, Prof (Dr) S Narayana Reddy, Chairman, Tirupati Local Centre delivered the welcome address.

Tuticorin

The Chief Guest on the occasion, Mr P Bakthavatsalam, Chief Engineer, Tuticorin Thermal Power Station remembered the struggle encountered

by Sir M Viswesvaraya at an early age and how he overcame all barriers to becoming an outstanding engineer and statesman, with worldwide recognition and further recollected the



excellent contribution of Sir M Viswesvaraya towards water conservation, drip irrigation and building of dams in various states and countries across the world. The Key-note Speaker of the function, Mr I Maria Michael Raj, former Scientific Officer/G, Heavy Water Board was emphasized upon the fact that Change is inevitable in everyday world and cited various challenges such as depletion of conventional fuel resources, widening gap between the existing education modules & expectations of employers and accelerated application of digitization in every sector. Earlier, Mr S Aribu Sulthan, Chairman, Tuticorin Local Centre welcomed the guests.

Upper Assam

The Chief Guest of the function, Mr Pranjal Changmai, General Manager (Operations), Brahmaputra



Cracker & Polymer Limited briefed about different aspects of polymer and its impact on environment. The Special Guest on the occasion, Mr Jugal Kumar

Borah, General Manager, North Eastern Coalfields, Margherita compared Engineers as Doctors of Machines. Earlier, Mr Amitava Dasgupta, Immediate Past Chairman of the Centre welcomed the august gathering. Mr Digant Goswami, Honorary Secretary, Upper Assam Local Centre threw lights on the life sketch of Sir M Visvesvaraya.

IEI Celebrates

150th Birth Anniversary of Mahatma Gandhi

The 150th Birth Anniversary of Mahatma Gandhi was celebrated by the Institution all over the country on October 02, 2019. Brief accounts of the celebration as received from various Centres and Fora are highlighted hereunder.



Rural Development Forum

150th Birth Anniversary of Mahatma Gandhi on the topic 'Rural Reconstruction with Science & Technology' was organized by Rural Development Forum (RDF) of IEI jointly with Sanjiban Hospital and College, Fuleswar, Howrah, West Bengal on 2 October 2019 at Sanjiban Hospital and College, Fuleswar, Howrah. Prof Ajoy Kumar Ray, Former Director, IEST, Shibpur, Howrah graced the occasion as Chief Guest and Mr Sisir Kumar Banerjee, Immediate Past President, IEI as Guest-of-Honour. Other dignitaries present on the occasion included Mr



Tapabrata Sanyal, Former Chief Hydraulic Engineer, Calcutta Port Trust & Former Adviser, Ministry of Textiles, Government of India, Prof Subhabrata Roy Chaudhuri, Secretary, The Science Association of Bengal, Prof Bimal Chaudhuri, Dr Aniruddha Dey, Members, BOG-RDF and Mr Amal Mukherjee, Council Member, IEI & Past Chairman, RDF. Earlier, Mr Syama Prasad Datta, Chairman, BOG-RDF welcomed the august audience.

STATE CENTRES

Delhi

Prof S K Singh, Head, Department of Environmental Engineering and Dean (Alumni Affairs), Delhi Technological University graced the function as Chief Guest. Mr Dinesh Kumar, Chairman welcomed the audience and Mr Jitendra Kumar Sharma, Honorary Secretary, Delhi State Centre proposed the vote of thanks.

Kerala

Dr N N Panicker, International Expert in Gandhian Philosophy & Practice, delivered lecture on Mahatma Gandhi. Mr N Rajkumar, Immediate Past Chairman delivered welcome address and Mr Asok Kumar K, Honorary Secretary proposed the vote of thanks.



West Bengal



Mr Sujit Kumar Banerji, Council Member, IEI spoke on the theme. Mr Sandip Kumar Deb, Chairman welcomed all present and Mr Kalipada Das, Honorary Secretary proposed the vote of thanks.

LOCAL CENTRES

Dharwad

Mr M Madan Mohan, Senior Journalist, Hubballi graced the occasion as the Chief Guest. Prof (Dr) Ramesh Laxman Chakrasali,



Chairman welcomed all and Mr Vijaykumar H Totiger, Honorary Secretary proposed the vote of thanks.

Durgapur

Prof H B Goswami, Council Member, IEI delivered the life and views of Mahatma Gandhi., Dr Arindam Ghosal, Assistant Professor, Graphic Era, Deemed to be University, Dehradun also spoke during the occasion. Prof (Dr) Kartik Chandra Ghanta, Chairman welcomed the gathering and Mr Manoj Kumar Biswal, Honorary Secretary proposed the vote of thanks..



Gwalior



Speakers on the occasion include; Mr Prabhat Bhargava, Ms Pooja Sahoo, Mr R K Khetan and Mr P Y Khanvilkar. Dr P K Singhal, Past Chairman addressed the gathering.

Kanyakumari

The Chief Guest Prof (Dr) Subramonian Arumuga Perumal, Professor and Head, South Travancore Hindu College, Nagercoil & Chairman, IETE, Trivandrum delivered the Keynote Address. Mr V Sivathanu Pillai, Chairman welcomed all and Mr V Muthum Perumal, Honorary Secretary proposed the vote of thanks.



Contd. on page 27

News-in-Brief

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

STATE CENTRES

Andhra Pradesh

Celebrated Birth Day of Dr APJ Abdul Kalam as Students Day on October 15, 2019.

Delhi

Celebrated Birth Day of Dr A P J Abdul Kalam on October 15, 2019.

Celebrated Annual Day Function on October 31, 2019.

Karnataka

Lecture on 'Artificial Intelligence in Engineering & Education Sector' delivered by Mr Abhinand Chincholi, CEO- One Origin Bangalore on September 24, 2019.

Lecture on 'Garbage Management in City' delivered by Mr P L Rao, Retired Chief Engineer, NHPC on September 27, 2019.

Lecture on 'Latest Position of Suburban Railway in Bengaluru' delivered by M. Sanjeev V Dyamannavar, Civic Expert on Railway Network on October 19, 2019.

Lecture 'Improving Traffic Movement in Bengaluru' delivered by Ms Kavitha, Assistant Commissioner, Traffic & Planning and Dr Anil Kumar, Inspector of Police, Traffic & Planning on October 22, 2019.

Lecture on 'ANTARCTICA - Some Reflections of my Expedition Experience and Thoughts' delivered by Dr G Raghava, Former Chief Scientist & Head, Fatigue & Fracture Laboratory, CSIR - Structural Engineering Research Centre, Chennai and presently Professor, Dept. of Civil Engineering, Nitte Meenakshi Institute of Technology, Bengaluru on October 26, 2019.

Kerala

Celebrated Birth Day of Dr A P J Abdul Kalam on October 15, 2019.

Twenty-seventh Er S K Sundaram Memorial Lecture on 'Construction Practices & Detailing in RC Structures' delivered by Mr N Gopakumar, Rtd. Deputy Director - DRIQ, Kerala PWD, and former Senior Project manager - NCTC, Sharjah on October 20, 2019.

Lecture on 'The Impact of Robotics on Future Society' delivered by Mr M Hari Kumar, former Head of Computers Group of Vikram Sarabhai Space Centre on October 23, 2019.

Telangana

Dr Narla Tata Rao Eighteenth Endowment Lecture delivered by Mr D Prabhakar Rao, Chairman and Managing Director, Transmission Corporation of Telangana Limited and Telangana State Power Generation Corporation Limited, Hyderabad on September 4, 2019.

Er Matur Gopal Rao Twenty Second Endowment Lecture on 'Design and Construction Aspects of Important Barrage Structures' delivered by Dr B Umashankar, Associate Professor, Department of Civil Engineering, IIT Hyderabad on September 10, 2019.

Lecture on 'Power Charges of Lift Irrigation Schemes of Telangana State' delivered by Mr K Penta Reddy, Superintending Engineer (Retd), Lift Irrigation Schemes, Govt. of Telangana on September 10, 2019.

Er Gurram Koti Reddy First Endowment Lecture on 'A Scenario of Telangana Irrigation Projects' on September 23, 2019.

Second Dr NVRLN Rao Endowment Lecture on 'Geosynthetics for Better Highways' delivered by Prof G.Venkatappa Rao, former Professor and Head, Department of Civil Engineering, IIT Delhi, presently Guest Professor, IIT Gandhi Nagar on October 26, 2019.

Uttar Pradesh

Lecture on 'Financial Engineering: Innovative Tools and Techniques for Investors' delivered by Mr Praveen Kumar Dwivedi, Chairman, Awoke India Foundation on October 5, 2019.

Lecture on 'Asset Integrity of Aging Infrastructure' delivered by Mr Ankit Bajpai, Vice President, Global BD Russel NDE Systems on October 10, 2019.

LOCAL CENTRES

Dharwad

Celebrated Students Day commemorating the Birthday of Dr APJ Abdul Kalam on October 16, 2019.

Bokaro Steel City

Lecture on 'Management for Technocrats' delivered by Mr Arunesh Kumar on October 25, 2019.

Durgapur

Lecture on 'Development of Science in History and Contemporary Science Cultivation in India' delivered by Dr Radhakanta Konar, Assistant Professor, IIT (ISM), Dhanbad on September 29, 2019.

Gwalior

Lecture Meeting on 'Artificial Neural Networks Concepts & Application' on July 26, 2019.

Celebrated Birth Day of Dr A P J Abdul Kalam as Students Day on October 15, 2019.

Organized an Awareness Programme on 'Integrity- A Way of Life' on October 31, 2019.

Kalaburagi

Lecture on 'Working of Relays in Power Systems' delivered by Mr Subhash Bhosale, Superintending Engineer (EI) RT Circle, KPTCL, Kalaburagi on October 4, 2019.

Lecture on 'Ubiquity of Ceramics: What every Engineer should know about Ceramics' delivered by Dr Arun M Umarji, Professor, Materials Research Centre (MRC), Indian Institute of Science (IISc) Bengaluru on October 12, 2019.

Kanyakumari

Celebrated Birth Day of Dr A P J Abdul Kalam as Students Day on October 15, 2019.

Kollam

Seminar on 'Electric Vehicles – For Sustainable Environment' during August 30-31, 2019.

Madurai

Lecture on 'Engineering – The Mind for Health, Wealth and Happiness' delivered by Dr Venkat Sivagnanam, Transformation & Success Coach, Human Potential Expert, Associate Director, Marketing CoE, Merck Group on October 12, 2019.

Mysore

Organized a Curtain Raiser Event in association with Indian Railways on the themes 'Legal and Technical Aspects of Contract Manufacturing in Indian Railways' and 'Industrial and Occupational Safety and Standards in Indian Railways' on September 26, 2019.

Ranipet

Lecture on 'Energy Efficiency' delivered by Mr C Boopalan, Assistant Professor, EEE Department, C Abdul Hakeem College of Engineering & Technology, Vellore, on October 18, 2019.

Lecture on 'Prospects of Electric Cars' delivered by Mr M G Rajasankar, Additional General Manager/OP&C, BHEL, Ranipet on October 31, 2019.

Sunabeda

Workshop on 'Student Solar Ambassador' on October 2, 2019.

Contd. on page 28

Restoration and Maintenance of Structures and Water Bodies for Sustainability

Contd. from page 5

former Member, Uttar Pradesh Public Service Commission were felicitated during the occasion for their outstanding contribution in the field of Civil Engineering. The prestigious Prof Jai Krishna Memorial Lecture was delivered by Dr A K Singh, Director, Indus University, Ahmedabad on the topic, "Greening Strategies for Restoration, and Renovation of Water Bodies for Sustainability". The Panel Discussion on 'Future of Civil Engineering' was mentored by Prof (Dr) Amit Prashant, Department of Civil Engineering, IIT Gandhinagar. A State-of-the-Art Lecture on the topic, "Case Studies of Failures in Earthen Dams" was delivered by Prof (Dr) S R Gandhi, Director, SVNIT Surat. On this occasion, 'IEI Young Engineers Award' for the year 2019-20 in Civil Engineering Division was presented to, Dr (Ms) Sowmiya Chawla, Assistant Professor, Department of Civil Engineering, IIT-ISM Dhanbad; Dr Digesh Dilipkumar Joshi, Assistant Professor, Department of Civil Engineering, School of Engineering, Institute of Technology, Nirma University, Ahmedabad and Dr Sreevalsa Kolathayar, Associate Professor, School of Civil Engineering, Vellore Institute of Technology, Vellore. Two Keynote Addresses were delivered by Mr Saurabh Vyas, Head-Technical Services, Tech-fab India Industries Ltd., Vadodara on the topic, "River Front Protection Work around Statue of Unity" and Mr Ashok Kumar Basa, Past President of IEI on the topic, "Disaster Management & India's Approach". During the occasion, a Proceeding was released by the dignitaries. A Handbook on "Development of Hydropower Projects in India" authored by Mr N D Arora, Vice President (Hydro), CESC Ltd. was released during the occasion by the Chief Guest and other dignitaries. Earlier, Mr H U

Kalyani, Chairman of the Centre welcomed the august gathering. Mr Shyam Varghese, Honorary Secretary of the Centre proposed the vote of thanks. A large number of participants from various parts of the country were present during the Convention. There were quite a large number of papers presented during two days National Convention in various technical sessions. The recommendations emanated from the Convention are given hereunder:-

The syllabus & teaching approach in engineering colleges must be revised so that fresh engineering graduates are acceptable to the industry, research organization, society etc; Newer materials and technologies could make the restoration and maintenance techniques faster and more economical; Restoration of structures requires more knowledge and skills as compared to designing new structures. India needs to introduce structural health monitoring and restoration as exclusive subjects in the curriculum at Master's level. In the public administration these subjects need special importance and application to avoid disasters which have become routine affair; Damage mitigation in earthquake hit areas is always difficult. So, Micro-zonation technique may be adopted in earthquake prone zones. India needs to adopt this practice to avoid large scale damages; Regular inspection of important major dams must be carried out by Dam Safety Council & their recommendations must be implemented for safety of structures & all human lives; Natural Water Bodies found in our country must also have to be maintained by frequent inspection and regular maintenance whenever required.

News-in-Brief

Contd. from page 12

Lecture on 'Engineering Experience in Aerospace Industry' delivered by Mr Gantayat Gouda, Sc-H, Associate Director, RCM on October 24, 2019.

Tiruchirappalli

Organized a Programme on 'Mahatmaji's Contribution towards National Building & His Views on Educational Policy and Practice' on October 1, 2019.

Lecture on 'Effect of Tie - Rod anchors on the behavior of Berthing Structures' delivered by Dr P V Premalatha, Professor and Head, Civil Engineering Department, CARE Group of Institutions on October 22, 2019.

Lecture on 'Decentralized Supply Chain Management' delivered by Ms M J Jayasheela Rakmini, Assistant Professor, CSE Department, SASTRA Deemed University, Thanjavur on October 29, 2019.

Udaipur

Workshop on 'Disaster Mitigation' on October 15, 2019.

Upper Assam

An Awareness Programme on 'Avoid Single Use of Plastic' on October 2, 2019.

Vadodara

Celebrated Annual Day with a theme lecture on 'Engineering for Change' on October 20, 2019.

Visakhapatnam

Celebrated Birth Day of Dr A P J Abdul Kalam and Students Day on October 15, 2019.

IEI Celebrates 150th Birth Anniversary of Mahatma Gandhi

Contd. from page 26

Kochi

Dr M P Sukumaran Nair, Council Member, IEI, Mr P M Chacko, Past President, IEI, Mr M P Eldhose and Mr P A Salahudeen, Honorary Secretary and Joint Honorary Secretary of the Centre spoke on the occasion.



Kota

Prof P K Sharma, HOD, Business Management, Vardhaman Mahaveer Open University Kota, graced the occasion as the Keynote Speaker. Mr P K Jain, Chairman, Indian Buildings Congress, Kota Chapter was also present and spoke during the occasion. Mr Anand Bardava, Chairman welcomed the audience.



Roorkee

The Chief Guest of the function was Mr Narendra Singh, President (Elect), IEI. Mr N K Yadav, Chief Engineer (Mechanical), Irrigation Department, Uttarakhand was also present and addressed the audience. Earlier, Prof (Dr) Achal Kumar Mittal, Chairman welcomed all.



Visakhapatnam



Dr O R M Rao, Chairman, Visakhapatnam Local Centre & Deputy General Manager (HRD), RINL-VSP and Mr A Boobathy, Assistant General Manager (Trg), RINL, VSP graced the occasion and

spoke on the life of Mahatma Gandhi.

The reports on the technical activities held under the auspices of various State/Local Centres of the Institution during the year 2018-2019 have been circulated through these pages from time to time. The abridged versions of the Institution's Balance Sheet as at 31st March, 2019 along with the Auditor's Report to the Corporate Members of IEI are given hereunder. The detailed text of the above and also the Annual Report of the Council are available on demand at all State/Local Centres/Fora of IEI including the Overseas Chapters and IEI Headquarters.

ABRIDGED BALANCE SHEET AS AT 31st MARCH 2019

31.03.2018			31.03.2019
	SOURCES OF FUND		
1,001,907,638	Permanent Reserve	1,045,735,348	
349,925,681	Capital Reserve	360,619,146	
23,267,976	Revenue Reserve	23,267,976	
	Surplus from Income and		
1,179,056,107	Expenditure Account	1,334,249,653	
362,033,474	Earmarked Fund	369,810,325	
2,916,190,876			3,133,682,448
	APPLICATION OF FUND		
	Fixed Assets		
787,853,332	Gross Block	843,576,448	
225,542,031	Less : Depreciation	250,281,819	
562,311,301	Net Block		593,294,629
1,001,907,638	Investment of P R Fund	1,045,735,348	
910,961,085	Other Investments	985,936,109	
1,912,868,723			2,031,671,457
729,772,328	Current Assets, Loans and Advances	811,277,913	
288,761,476	Less : Current Liabilities	302,561,551	
441,010,852	Net Current Assets/Liabilities		508,716,362
2,916,190,876			3,133,682,448

ABRIDGED INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st MARCH 2019

31.03.2018			31.03.2019
R&D	Education	INCOME	R&D Education Total
65,510,794	16,377,698	Registration Fees	71,815,460 17,953,865 89,769,325
123,872	30,968	Subscription	48,125 12,031 60,156
	261,887,733	Examination Fees	226,692,926 226,692,926
4,711,195	1,493,472	Advertisement	- 3,991,958 3,991,958
141,101,128	39,003,659	Income from Investments	180,325,141 35,205,707 215,530,848
41,381,890	10,304,952	E-Learning solution etc.	26,058,662 6,512,517 32,571,179
63,503,832	5,205,555	National Conventions/ Seminars, Technical Activities etc.	60,849,999 60,849,999
47,400,204		Hall/Retiring Room Rent etc.	52,707,428 52,707,428
6,182,659	13,247,109	Other Income	2,030,069 13,683,085 15,713,154
369,915,574	347,551,146		393,834,884 304,052,089
	717,466,720	Sub-Total	697,886,973
	717,466,720	Total Income	697,886,973
		EXPENDITURE	
186,351,683	44,248,989	Salaries and Staff Expenses	159,688,779 86,280,457 245,969,236
4,236,706	2,320,293	Printing and Stationery	6,674,549 1,668,637 8,343,186
	40,179,509	Direct Expenses for Exam.	35,746,490 35,746,490
1,946,475		Technical Publications	2,749,273 2,749,273
66,030,794	2,434,894	Expenses on National Conventions, Seminars, Technical Activities etc.	61,738,552 61,738,552
8,484,807		Prize Awarded & Lectures	3,720,050 3,720,050
8,302,737	3,307,157	Postage, Telephone & Telex	6,007,597 1,501,899 7,509,496
6,578,363	7,768,913	Electricity	11,920,187 2,980,047 14,900,234
4,792,837	4,420,735	Rent, Rates & Taxes	8,596,940 2,149,236 10,746,176
2,333,336	668,502	Legal Expenses	3,063,345 765,836 3,829,181
1,597,293		Election Expenses	7,802,122 7,802,122
1,113,924	655,807	Audit Fee	1,826,373 456,594 2,282,967
314,160	78,540	Internal Audit Fee	396,174 99,044 495,218
23,672,856	18,115,754	Repairs and Maintenance	25,367,787 6,341,946 31,709,733
9,256,391	449,872	Meeting Expenses	21,209,988 83,238 21,293,226
		Travelling Expenses	
11,519,816	2,879,954	i) Council Members	9,389,789 3,091,192 12,480,981
4,584,061	2,921,394	ii) Others	5,629,509 1,407,377 7,036,886
3,941,938	985,484	Delegation Expenses	2,759,427 689,857 3,449,284
268,682	67,170	Subscription to Other Institutions	2,945,195 736,299 3,681,494
3,573,019	893,255	Computer Expenses	3,502,378 875,595 4,377,973
9,683,906	5,483,976	Miscellaneous Expenses	14,645,265 3,661,317 18,306,582
1,813,780	1,077,169	Expenses for Libraries	1,187,605 3,273,951 4,461,556
2,050,000		Grant to Peripheral Bodies	2,581,452 2,581,452
25,531,957		Depreciation	25,397,048 25,397,048
3,885		Fixed assets written off	1,072 1,072
877,917		Provision for doubtful debts and adva	- -
596,104	8,100	Bad Debts written off	319,640 9,319 328,959
389,457,427	138,965,467	Sub-Total	389,120,096 151,818,331 540,938,427
		Prior Period Expenses and Appropriation to Capital Expenditure Fund	
	37,218,024		1,755,000
	565,640,918	Total Expenditure	542,693,427
	717,466,720	Total Income	697,886,973
	565,640,918	Total Expenditure	542,693,427
	151,825,802	Surplus (+)/ Deficit (-)	155,193,546
	1,027,230,305	Balance brought forward from previous year	1,179,056,107
	1,179,056,107	Balance carried to Balance Sheet	1,334,249,653

Report on the Financial Statements

Opinion

We have audited the accompanying financial statements of The Institution of Engineers (India) ("the Institution"), which comprise the Balance Sheet as at 31st March, 2019 signed by us under reference to this report and the related Income and Expenditure Account and the Cash Flow Statement for the year then ended, including a summary of the significant accounting policies and other explanatory information (hereinafter referred to as 'financial statements'), in which have been incorporated the returns /accounts received from the various State Centres and Local Centres (also collectively referred to as Centres) of the Institution for the year ended 31st March, 2019 as audited by other auditors and which have been relied upon by us, as mentioned in paragraph 6 in Schedule 13.

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid financial statements of the Institution give the information in accordance with the generally accepted accounting principles and the applicable Accounting Standards issued by the Institute of Chartered Accountants of India and read with the Other Matters paragraph below, give a true and fair view of the state of affairs of the Institution as at March 31, 2019 its surplus and its cash flows for the year ended on that date.

Basis for Opinion

We conducted our audit of the financial statements in accordance with the Standards on Auditing (SA) issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Institution in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India (ICAI) together with the independence requirements that are relevant to our audit of the financial statements and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ICAI's Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the financial statements.

Management's Responsibility for the Financial Statements

The Management is responsible for the preparation of these financial statements that give a true and fair view of the state of affairs and result of operation of the Institution in accordance with the accounting principles generally accepted in India, including the applicable Accounting Standards. This responsibility also includes maintenance of adequate accounting records for safeguarding the assets of the Institution and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statement that give a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Institution's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Institution or to cease operations, or has no realistic alternative but to do so.

The management of the Institution is responsible for overseeing the Institution's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to

provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal financial controls relevant to the audit in order to design audit procedures that are appropriate in the circumstances.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Institution's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Institution to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

Other Matters

We did not audit the financial statements of 123 centres that are included in the financial statements of the Institution, whose financial statements reflect total assets of Rs.118,30,77,629/- as at 31st March, 2019 and total revenues of Rs 17,87,03,796/- for the year ended on that date. The financial statements / information of these centres have been audited by the other auditors whose reports have been furnished to us and our opinion, in so far as it relates to the amounts and disclosures included in respect of these centres, is based solely on the report of such centre auditors. Attention is also drawn to the following matters;

- In case of the local centres of Dhanbad, Ghaziabad, Jabalpur, Kanpur the lease deeds have expired. Lease deed of Bhilai Centre expired on 18th February, 2003 and the Centre had applied for renewal of the same. Building of Dhanbad Centre has been seized by the Zila Parishad.
- Note 11 of Schedule 13 of the notes to accounts regarding review by the All India Council for Technical Education (AICTE) of Section A & B examination of the 15 recognized engineering courses conducted by the Institution and a bar on fresh enrolment with effect from 1st June, 2013 which has been stayed by the Hon'ble Delhi High Court.
- Bihar State Centre has not included the name of the Muzaffarpur local centre as an additional place of business in their GST registration and Madhya Pradesh state centre has not taken GST registration.
- Note no. 12 of Schedule 12 regarding fund misappropriation at Kanpur Local Centre.
- Note 1.10 in Schedule 13 regarding accounting of certain income on cash basis, Note 1.11 in Schedule 13 regarding accounting of certain expense on cash basis, Note 1.13 in Schedule 13 regarding coverage of certain funds by investments.
- Report of other auditors of the various Centres who have reported, inter-alia, on certain matters as mentioned in Schedule 12.

Our opinion is not modified in respect of these matters.

Report on Other Legal and Regulatory Requirements

This report does not contain a statement on the matters specified by the Companies (Auditor's Report) Order 2016 ("the Order") issued by the Central Government of India in terms of sub section (11) of section 143 of the Companies Act 2013 as the said Order is not applicable to the Institution.

We further report that:

- We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of the audit;
- In our opinion proper books of accounts as required by law have been kept by the Institution so far as appears from our examination of those books;
- The Balance Sheet, the Statement of Income and Expenditure and the Cash Flow Statement dealt with in this Report are in agreement with the books of account and with the returns received from the Centres not visited by us.
- The reports on the accounts of the Centres audited by the various centre auditors have been sent to us and have been properly dealt with by us in preparing this report.
- We further report that according to the information and explanation given to us:
 - The Institution has disclosed the impact of pending litigations on its financial position in its financial statements – Refer Note 2 of Schedule 13 to the Financial Statements.
 - The Institution did not have any long-term contracts including derivative contracts for which there may be any material foreseeable losses.

For and on behalf of

RAY & RAY

Chartered Accountants

Firm Registration No. 301072E

Sd/-

K.K.Ghosh

Partner

Membership No. 059781

Kolkata

16th September, 2019

UDIN: 19059781AAAAA03450

ANNEXURE TO AUDITORS REPORT REFERRED TO OTHER MATTERS IN PARAGRAPH 7 OF OUR REPORT TO THE MEMBERS OF THE INSTITUTION OF ENGINEERS (INDIA) ON THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31-03-2019 (BASED ON THE REPORT OF OTHER AUDITORS)

SCHEDULE-12

1. AGRA LOCAL CENTRE

Electricity charges was required to be paid in addition to rent wef 01/12/2016. However, till 31/3/19 no amount has been paid towards electricity charges and no provision has been made.

Agra local centre has not been making separate entry in respect of GST paid on inward supplies and the same has been considered as part of the cost of the inward supply.

2. ANDHRA PRADESH STATE CENTRE

Service tax of Rs 7948/- which was outstanding for the previous year has been written off during the current year.

3. ASSAM STATE CENTRE

Fixed asset register is under updation.

4. BHILAI LOCAL CENTRE

Lease deed expired on 18/02/2003. The lease was taken from SAIL Bhilai. Renewal pending. No fixed asset register maintained.

5. BIHAR STATE CENTRE

State centre has not included the names of the local centres as additional place of business for GST registration.

6. COIMBATORE LOCAL CENTRE

Confirmation letter for balance outstanding as on 31/03/2019 in case of advances to be obtained for verification.

7. DHANBAD LOCAL CENTRE

Building of the Centre was sealed by the Dhanbad Zila Parishad based on the order of the Jharkhand High Court. The Centre is contesting the order for reopening of the office building.

A suit has been filed by the Dhanbad Zila Parishad against which liability has not been ascertained.

8. GHAZIABAD LOCAL CENTRE

Lease deed expired on 31/7/2015.

9. JABALPUR LOCAL CENTRE

Balances of some advances and security deposits are subject to reconciliation. Excess deduction of Rs 43005/- by HO in previous year which is still recoverable and shown under loans and advances.

During the year 2017-18 a civil suit filed by 3 members of the Institute against present Executive body alleging their election to be improper, thus be declared null and void. Case is pending and Rs 12000/- paid to legal counsel.

As per closing circular dated 13/2/2019 cash in hand not to exceed Rs1000/- but on 31/3/2019 it is Rs 9652.43.

Rs 23,700/- balance in advance schedule lying unadjusted for quite some time .Out of this Rs.12700/- should be written off.

Land is under lease from Nazrul whose renewal is pending.

Fixed asset register in old and torn out condition. As informed a new register is being prepared as per required particulars.

State centre was to include names of all local centres for GST registration but same was not done.

In the case instituted by Mr. Kailash Sen before presiding officer Labour Court the Institute has raised preliminary objections but an ex parte order was issued on 11.01.2016. Against this Institute has filed an application on 26.02.2016 for setting aside the order. The order was set aside and case adjourned for further proceedings. Case is under process and amount of liability not yet ascertained.

10. JHARKHAND STATE CENTRE

Audit guidelines issued state a point that staff advance shall be recovered or squared up within same financial year. But certain staff advances amounting to Rs 26000/- continue to appear in the accounts as reflected in the Balance sheet.

There were some instances in which provision of Section 40A(3) of IT Act 1961 has not been adhered to

11. JODHPUR LOCAL CENTRE

In respect of Jodhpur Local Centre there was a contingent liability amounting to Rs. 843,284/- for land and building tax against which Rs. 72,650 /-had been deposited by the Institution.

12. KANPUR LOCAL CENTRE

Rs.245,000/- in Other Assets Recoverable represents and relates to embezzlement of Rs.3,21,527/- by way of fraudulent encashment of Fixed Deposit Receipts from Mr V K Chaudhry and withdrawal of cash from a savings bank Account during the years 2000-01 and 2001-02 for which litigation is pending. Out of this Rs.11,000/- recovered. Rs.65,527 has been written off during the year 2010-11 vide management decision in their meeting dated 20/02/2011.

Lease deed expired on 26/10/2017 and under renewal process.

13. KARNATAKA STATE CENTRE

Suits are filed against the centre for which the amount is not ascertainable.

14. KERALA STATE CENTRE

In case of fixed deposits an amount of Rs.137145.03 has been noted as difference between maturity amount and reinvested amount. This is adjusted against interest received on fixed deposit.

A demand of Rs.3,22,38,652/- has been raised for lease rent against which a case was filed and subsequently a stay order was issued vide no WP(c) No 18931/2016(N) dated 29th August 2016.

Bank balance as on 31.03.2019 subject to reconciliation

15. KOCHI LOCAL CENTRE

Sundry creditors are subject to confirmation.

16. KOTA LOCAL CENTRE

Difference of Rs 1119 in trial balance.

17. KOZHIKODE LOCAL CENTRE

During the FY 2018-19 rent Rs.44400/- and salary Rs 54000/- was paid in cash.

18. LUDHIANA LOCAL CENTRE

Details of cheque issued but not presented amounting to Rs.2339.75/- is not clear.

Fixed asset register maintained but not as per specified format.

19. MANGALORE LOCAL CENTRE

The property has been surrendered to the lessor. The new Mangalore Port Trust, the owner of the land has appropriated the value of the building towards the arrears of land rent claimed by NMPT retrospectively from 01/10/1991 to 31/08/2011. The centre has handed over the lease land back to NMPT on 13/08/2010 as per the Charge list dated 13/08/2010 confirmed by the Estate Officer. The centre has moved the Court of law against the demand raised by NMPT by an order under sub section (1) and (2A) of Section 7 of the Public Premises (Eviction of Unauthorised Occupants) Act 1971 dated 06/04/2016 for arrears of rent amounting to Rs.18,94,056/-, was contended as erroneous by the IEI Mangalore Local Centre and a miscellaneous appeal no. 6/2016 was preferred in the court of IV Additional District and Sessions Judge Dakshina Kannada, Mangalore. The Honourable Court has disposed off the appeal favouring the IEI, Mangalore Local Centre by and order dated 12.02.2018 and the order of the Estate Officer mentioned above has been set aside. The court has opined that the IEI Mangalore Local centre is at liberty to approach the competent court for the recovery of Rs.936000/- from the New Mangalore Port Trust.

20. MYSORE LOCAL CENTRE

A suit has been filed in High Court by an ex-employee, the quantum for which is not ascertainable.

21. NASIK LOCAL CENTRE

The centre has Rs.413,195/- balance as unadjusted advance with Nasik Municipal Corporation.

Centre has given advance to one of its employees amounting to Rs 20000/- balance outstanding as on 31.03.2019 is Rs.7500/- and the same has not been closed till 31.03.2019.

22. NEYVELLI LOCAL CENTRE

Several payments aggregating to Rs.358884/- was paid in cash in excess of Rs.10000/- in violation of Section 40A(3) of Income tax Act, 1961.

23. PUNE LOCAL CENTRE

Fixed asset register not made available for verification.

Rs 5013/- transfer by bank to RBI as dormant account.

24. ROORKEE LOCAL CENTRE

Employees contribution to NPS amounting to Rs 5856/- has been deducted from the recurring grant as deduction on account of NPS. The same is liability of the institution and should not be deducted from grant amount.

Deductions from salary on account of mediclaim during the year was Rs. 2208/-. It should have been Rs. 2428/-. Amount short deducted Rs. 220/-. The amount deducted from grant on this account was Rs.3060/- instead Rs.2428/-. Rs 632/- is excess deducted.

25. TIRUNELVELLI LOCAL CENTRE

Annexure III not attached and hence we could not comment on the same.

26. TIRUPATI LOCAL CENTRE

Advance of Rs.18,612/- which needs to be adjusted.

Fixed asset register needs to be updated.

27. UTTAR PRADESH STATE CENTRE

Following cases against the Institution pending since long are as follows:

- M/s D N Brothers for labour charges since 1976.
- M/S Ramjas Ramdayal for material supply since 1976
- Instituion vs Mahapalika for demand of house tax of Rs.51.13 lakhs raised on Institution during FY 2018-19

28. VADODARA LOCAL CENTRE

There is a contingent liability on account of service tax on renting of property and it is shown under Auditorium Charges. Since trust deed required for registration and trust deed not found future liability for service tax may arise. Annexure III not attached so we could not comment on the same.

IEI DIARY



Aerospace Engineering Division

All India Seminar on "Computational & Non-Computational Tools Involved in Aircraft Engine and Structural Health Monitoring System"

Coimbatore, February 05-06, 2020

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

All India Seminar on "Issues and Challenges in Aviation Industry"

Jaipur, February 08-09, 2020

The Honorary Secretary, IEI, Rajasthan State Centre, Gandhi Nagar, Tonk Road, Jaipur 302015 [☎: (0141) 2706327; Telefax: (0141) 2700413; e-mail: rajasthansc@ieindia.org]

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

Kanpur, November 09-10, 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

National Conference on "Smart Village and Agriculture"

Bengaluru, February 07-08, 2020

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]

International Conference on "Prospects and Challenges of Mechanization towards Economy and Sustenance of Global Sugarcane and Sugar Production"

Bangalore, July 03 - 04, 2020

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]

Architectural Engineering Division

Thirty-fifth National Convention of Architectural Engineers on "Re-Engineering of Buildings"

Trichur, 07 - 08 December 2019

The Honorary Secretary, IEI, Trichur Local Centre, ISTE Building, PO: Viyyur, Trichur 680010, [☎: (0487) 2321738; e-mail: trichurhc@ieindia.org]

Chemical Engineering Division

One Day Workshop on "Guideline for Safety Measurement in Petrochemical Industries"

Salem, January 07, 2020

The Honorary Secretary, IEI, Salem Local Centre, 104/7, Manivannan Street, 3rd Floor, SPC Bhawan, Opp to Salem New Bus Stand, Salem 636004 [☎: (0427) 2415224; e-mail: salemhc@ieindia.org]

All India Seminar on "Existing Scenario in Chemical and Petrochemical Engineering Sources for Sustainable Development"

Salem, February 17-18, 2020

The Honorary Secretary, IEI, Salem Local Centre, 104/7, Manivannan Street, 3rd Floor, SPC Bhawan, Opp to Salem New Bus Stand, Salem 636004 [☎: (0427) 2415224; e-mail: salemhc@ieindia.org]

International Conference on "Technologies for Manufacturing Less Polluting and Green Crackers"

Madurai, July 03-04, 2020

The Honorary Secretary, IEI, Madurai Local Centre, Er T M Jambulingam Bhavan, No. 1, Vivekananda Nagar, 120 Feet Road, Surveyor Colony, K Pudur, Madurai 625007 [☎: (0452) 4373067; e-mail: madurailc@ieindia.org]

Thirty-sixth National Convention of Chemical Engineers on "Frontier Technologies for 21st Centuries Process Industries"

Durgapur, September 11-12, 2020

The Honorary Secretary, IEI, Durgapur Local Centre, Nehru Avenue, B-Zone, Durgapur 713205 [Telefax: (0343) 2564770; e-mail: durgapurhc@ieindia.org]

Civil Engineering Division

All India Seminar on "Alternative Highways Construction Material"

Ranchi, December 14-15, 2019

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, Doranda, Ranchi 834002 [☎: (0651) 2491344; e-mail: jharkhandsc@ieindia.org; website: www.ieijsc.org]

One Day Seminar on "Retrofitting and Rehabilitation of Existing Structures using Modern Technologies"

Salem, January 24, 2020

The Honorary Secretary, IEI, Salem Local Centre, 104/7, Manivannan Street, 3rd Floor, SPC Bhawan, Opp to Salem New Bus Stand, Salem 636004 [☎: (0427) 2415224; e-mail: salemhc@ieindia.org]

One Day Workshop on "QGIS for Hydrological Applications"

Surat, January 30 2020

Honorary Secretary, IEI, South Gujarat Local Centre, Mahida Bhavan, Ichchhanath, Surat 395007 [☎: (0261) 2227340; e-mail: sgcl@ieindia.org]

One Day Seminar on "Drone Technology in Construction Engineering"

Salem, January 31, 2020

The Honorary Secretary, IEI, Salem Local Centre, 104/7, Manivannan Street, 3rd Floor, SPC Bhawan, Opp to Salem New Bus Stand, Salem 636004 [☎: (0427) 2415224; e-mail: salemhc@ieindia.org]

International Conference on "Building the Disaster Resilient Society in BIMSTEC Countries: Role of Nations"

Agartala, February 28-March 01, 2020

The Honorary Secretary, IEI, Tripura State Centre, Pandit Nehru Complex, Near Tripura Housing Board, P.O.: Kunjaban, PB No. 139, Agartala 799006, Telefax: (0381)-2304700; e-mail: tripurasc@ieindia.org]

All India Seminar on "Novel Technologies On Artificial Ground Water Recharge Methods And Applications"

Salem, March 05-06, 2020

The Honorary Secretary, IEI, Salem Local Centre, 104/7, Manivannan Street, 3rd Floor, SPC Bhawan, Opp to Salem New Bus Stand, Salem 636004 [☎: (0427) 2415224; e-mail: salemhc@ieindia.org]

International Conference on "Disaster Mitigation and Management in Global Context"

Bhubaneswar, March 7-8, 2020

The Honorary Secretary, IEI, Odisha State Centre, Sachivalaya Marg, Unit-IV, Bhubaneswar 751001 [☎: (0674) 2390291, Telefax: (0674) 2390630; e-mail: odishasc@ieindia.org]

International Conference of Civil Engineers on "Smart and Sustainable Infrastructure"

Nagpur, March 20-21, 2020

The Honorary Secretary, IEI, Nagpur Local Centre, North Ambazari Road, Nagpur 440010 [☎: (0712) 2556231/2525617/2554387; e-mail: nagpurhc@ieindia.org; website: www.ieingp.org]

Thirty-sixth National Convention of Civil Engineers on "Innovation, Mechanisation and Modern Techniques in Civil Engineering"

Ranchi, September 08-09, 2020

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, Doranda, Ranchi 834002 [☎: (0651) 2491344; e-mail: jharkhandsc@ieindia.org; website: www.ieijsc.org]



Computer Engineering Division

International Conference on "Next Generation Computing Technologies"

Dehradun, December 20-21, 2019

The Honorary Secretary, IEI, Uttarakhand State Centre, Engineers Bhawan, Near ISBT Flyover, Saharanpur Road, Dehradun 248002 [☎: (0135) 2641190; Mobile: 9412056431; e-mail: uttarakhandsc@ieindia.org]

All India Workshop on "Software Testing, Audit and Quality Assurance using Open Source Tools"

Chandigarh, January 23-24, 2020
The Honorary Secretary, IEI, Punjab & Chandigarh State Centre, Madhya Marg, Sector 19-A, Chandigarh 160019 [☎: (0172) 2775418; Fax: (0172) 2540133; e-mail: pcsc@ieindia.org]

Thirty-third National Convention of Computer Engineers on "Applied Computational Intelligence and Informatics"

Jaipur, February 15-16, 2020

The Honorary Secretary, IEI, Rajasthan State Centre, Gandhi Nagar, Tonk Road, Jaipur 302015 [☎: (0141) 2706327; Telefax: (0141) 2700413; e-mail: rajasthansc@ieindia.org]

Electrical Engineering Division

International Conference on "Water, Energy and Biodiversity for Sustainable Development of BIMSTEC Countries"

Agartala, December 12-14, 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]

All India Seminar on "Role of Smart Grid for Rural Electrification"

Bhubaneswar, December 15-16, 2019

The Honorary Secretary, IEI, Odisha State Centre, Sachivalaya Marg, Unit-IV, Bhubaneswar 751001 [☎: (0674) 2390291, Telefax: 0674 2390630; e-mail: odishasc@ieindia.org]

All India Seminar on "Policies of Governments, Paradigms Challenges and Opportunities of Sustainable Electrical Power in India"

Hyderabad, January 11-12, 2020

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

All India Seminar on "Design of Efficient Power System by Applications of Optimization Techniques"

Chandigarh, January 15-16, 2020

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

One Day Seminar on "Recent Trends in Hybrid Electric Vehicle"

Salem, January 25, 2020

The Honorary Secretary, IEI, Salem Local Centre, 104/7, Manivannan Street, 3rd Floor, SPC Bhawan, Opp to Salem New Bus Stand, Salem 636004 [☎: (0427) 2415224; e-mail: salemic@ieindia.org]

All India Seminar on "Recent Trends and Development in National and International Power Sector"

Ghaziabad, February 07-08, 2020

The Honorary Secretary, IEI, Ghaziabad Local Centre, 15 Shopping Complex, A L T T Centre, Raj Nagar, Ghaziabad 201002 [☎: (0120) 2702673; e-mail: ghaziabadlc@ieindia.org; website: www.ieigl.org]

One Day Workshop on "Energy Conservation and Management in Process Industries"

Bokaro, February 23, 2020

The Honorary Secretary, IEI Bokaro Steel Local Centre, Abhiyanta Bhawan, Sector 5-A, Bokaro Steel City 827006 [☎: (06542) 267227; e-mail: bokarolc@ieindia.org]

All India Seminar on "Load Management in Electrical Power Systems in India"

Hyderabad, February 01-02, 2020

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

All India Workshop on "Smart Grid Technologies- Operation, Control and Recent Deployments"

Tiruchirappalli, June 12-13, 2020

The Honorary Secretary, IEI, Tiruchirappalli Local Centre, Near Ganesa Bus Stop, BHEL Main Office Road, Opposite to 79 Building, Tiruchirappalli 620014 [☎: (0431) 2554285 / 2574022; e-mail: tiruchirapallilc@ieindia.org]

Electronics & Telecom. Engineering Division

All India Seminar on "Advances in Mobile Communication and Challenges in Mobile Computing"

Durgapur, December 6-7, 2019

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

All India Workshop on "Nanosensors for Medical Applications"

Tiruchirappalli, January 9-10, 2020

The Honorary Secretary, IEI, Tiruchirappalli Local Centre, Near Ganesa Bus Stop, BHEL Main Office Road, Opposite to 79 Building, Tiruchirappalli 620014 [☎: (0431) 2554285 / 2574022; e-mail: tiruchirapallilc@ieindia.org]

Environmental Engineering Division

One Day Seminar on "Novelty in Urban Waste Water Management Strategies"

Salem, December 11, 2019

The Honorary Secretary, IEI, Salem Local Centre,

104/7, Manivannan Street, 3rd Floor, SPC Bhawan, Opp to Salem New Bus Stand, Salem 636004 [☎: (0427) 2415224; e-mail: salemic@ieindia.org]

All India Seminar on "Sustainability on the Conversion of Coal and Hydrocarbons"

Puducherry, December 12-13, 2019

The Honorary Secretary, IEI, Puducherry State Centre, 63 N S C Bose Salai, PWD Campus, Ground Floor, Circle - I Office, Puducherry 605001 [Mobile : 9443748471; e-mail: puducherryisc@ieindia.org]

All India Seminar on "Sources of Planet Energy Environmental Disaster Science: Impact of Non Conventional Energy Resources"

Lucknow, February 07-08, 2020

The Honorary Secretary, IEI, Uttar Pradesh State Centre, Engineers' Bhawan, River Bank Colony, Lucknow 226018 [☎: (0522) 2625322; e-mail: upsc@ieindia.org; website : www.ieiup.org]

All India Seminar on "Sustainable Energy Technologies"

Kanpur, February 08-09, 2020

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

Thirty-sixth National Convention of Environmental Engineers on "Waste Recycling and Reuse"

Kochi, August 07-08, 2020

The Honorary Secretary, IEI, Kochi Local Centre, Govt. Homeo Hospital Road, Near Pullepady Railway Over Bridge (East Side), P.O. Kaloor, Kochi 682017 [☎: (0484) 2403838 / 3993 e-mail: kochilc@ieindia.org; website: www.ieikochi.org]

Marine Engineering Division

All India Seminar on "Oil Pollution Management & Mitigation in Marine Sector"

Tuticorin, December 05-06, 2019

The Honorary Secretary, IEI, Tuticorin Local Centre, Plot No. 13 & 14, Daniel Nagar, Korampallam, Tuticorin 628101 [Mobile : 9443471599; e-mail: tuticorinlc@ieindia.org]

Mechanical Engineering Division

All India Seminar on "Pneumatic Drives and their Applications"

Bangalore, December 20-21, 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 "Advances in Materials, Design Manufacturing and Thermal Engineering"

Bhubaneswar, January 11-12, 2020

The Honorary Secretary, IEI, Odisha State Centre, Sachivalaya Marg, Unit-IV, Bhubaneswar 751001 [☎: (0674) 2390291, Telefax: 0674 2390630; e-mail: odishasc@ieindia.org]



All India Workshop on "Noise and Vibration Control using Smart materials on Engineering Applications"

Kolhapur, January 17-18, 2020

The Honorary Secretary, IEI, Kolhapur Local Centre, C/o Executive Engineer, Minor Irrigation Division, Sinchan Bhawan, Tarabai Park, Kolhapur 416003 [Mobile : 9422625485; e-mail: kolhapurlec@ieiindia.org]

All India Seminar on "Energy Optimization in HVAC & R Industry"

Ranchi, February 08-09, 2020

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, Doranda, Ranchi 834002 [☎: (0651) 2491344; e-mail: jharkhandsc@ieiindia.org; website: www.iejsc.org]

All India Seminar on "Optimization of Engine Design and Operating Variables to Control Emissions"

Coimbatore, March 19-20, 2020

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

Thirty-seventh National Convention of Mechanical Engineers on "Application of IoT and Big Data in Manufacturing and Associated Field"

Delhi, September 10-11, 2021

The Honorary Secretary, IEI, Delhi State Centre, Engineers Bhawan, 2 Bahadurshah Zafar Marg, New Delhi 110002 [☎: (011) 23379052 / 23379948; e-mail: delhisc@ieiindia.org; website: www.ieidsc.in]

Metallurgical & Materials Engg. Division

One Day Workshop on "Engineering Failure Analysis"

Bhopal, December 01, 2019

Visvesvaraya Marg, BHEL Kasturba Hospital Road, PO : Habibganj, Bhopal 462024 [☎: (0755) 2474572; e-mail: mpssc@ieiindia.org; www.mpsciei.org]

Thirty-third National Convention of Metallurgical & Materials Engineers on "Climate Responsive Technologies vis-a-vis Iron and Steel Production Scenario"

Durgapur, January 17-18, 2020

The Honorary Secretary, IEI, Durgapur Local Centre, Nehru Avenue, B-Zone, Durgapur 713205 [Telefax: (0343) 2564770; e-mail: durgapurlc@gmail.com; website : ieidurgapurlc.org]

One Day Seminar on "Friction Stir Processing"

Ahmedabad, February 15, 2020

The Honorary Secretary, IEI, Gujarat State Centre, Bhaikaka Bhawan, Near Law Garden, Law College Road, Ahmedabad 380006 [☎: (079) 26400811; Telefax : (079) 26561825; e-mail: gujaratssc@ieiindia.org; website : www.ieigujarat.org]

All India Seminar on "Green Technologies for Iron and Steel Production"

Bokaro, September 06-07, 2020

The Honorary Secretary, IEI Bokaro Steel Local Centre, Abhiyanta Bhawan, Sector 5-A, Bokaro Steel City 827006 [☎: (06542) 267227; e-mail: bokarolc@ieiindia.org]

Production Engineering Division

National Symposium on "Cleaner Production and Green Technology"

Surat, December 13, 2019

Honorary Secretary, IEI, South Gujarat Local Centre, Mahida Bhawan, Ichchhanath, Surat 395007 [☎: (0261) 2227340; e-mail: sglc@ieiindia.org]

One day Workshop on "Surface Engineering and Micro Machining"

Salem, December 27, 2019

The Honorary Secretary, IEI, Salem Local Centre, 104/7, Manivannan Street, 3rd Floor, SPC Bhawan, Opp to Salem New Bus Stand, Salem 636004 [☎: (0427) 2415224; e-mail: salemic@ieiindia.org]

Thirty-fifth National Convention of Production Engineers on "Emerging Technologies for Sustainable Manufacturing"

Durgapur, May 23-24, 2020

The Honorary Secretary, IEI, Durgapur Local Centre, Nehru Avenue, B-Zone, Durgapur 713205 [Telefax: (0343) 2564770; e-mail: durgapurlc@gmail.com; website : ieidurgapurlc.org]

Textile Engineering Division

International Conference on "Innovative Approaches for the Development of Sustainable Textile Products and Processes"

Kolkata, February 09-10, 2020

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

Thirty-third National Convention of Textile Engineers on "Two Decades of Nanotechnology in Textile: Progress and Prospects"

Ahmedabad, February 20-21, 2020

The Honorary Secretary, IEI, Gujarat State Centre, Bhaikaka Bhawan, Near Law Garden, Law College Road, Ahmedabad 380006 [☎: (079) 26400811; Telefax : (079) 26561825; e-mail: gujaratssc@ieiindia.org; website : www.ieigujarat.org]

All India Seminar on "Industrial Textiles and Characterisation"

Coimbatore, March 27-28, 2020

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

Interdisciplinary

One-day Seminar on "Energy Conservation through Energy Integrity - Strategy vis-a-vis Challenges on Resources and Affordability"

Durgapur, December 15, 2019

The Honorary Secretary, IEI, Durgapur Local Centre, Nehru Avenue, B-Zone, Durgapur 713205 [Telefax: (0343) 2564770; e-mail: durgapurlc@gmail.com; website : ieidurgapurlc.org]

All India Workshop on "Opportunities for Industry 4.0 Applications in Indian Industries"

Tiruchirapalli, January 03-04, 2020

The Honorary Secretary, IEI, Tiruchirapalli Local Centre, Near Ganesa Bus Stop, BHEL Main Office Road, Opposite to 79 Building, Tiruchirapalli 620014 [☎: (0431) 2554285 / 2574022; e-mail: tiruchirapallilc@ieiindia.org]

One Day Seminar on "Role of Engineers in Development of Technologies for a Better Quality of Human Life"

Gwalior, January 12, 2020

The Honorary Secretary, IEI, Gwalior Local Centre, Green Park, Engineers Road, Near New Collectorate, City Centre, Gwalior 474011 [e-mail: gwaliorlc@ieiindia.org]

One Day Workshop on "Sensor Interface and Integration for RD Work"

Coimbatore, January 24, 2020

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

International Conference on "Innovative Engineering for Smart Cities, High Speed Transport and Infrastructure"

Chennai, February 14-15, 2020

The Honorary Secretary, IEI, Tamilnadu State Centre, 19, Swami, Sivananda Salai, Chempauk, Chennai 600005 [☎: (044) 25360614 / 25369433; e-mail: tnsc@ieiindia.org; website: www.ieitamilnadu.org]

Other Events

Global Water Alliance Conference on "Achieving Water, Sanitation and Hygiene (WASH) Sustainability Goals for Developing Countries"

Kolkata, January 04-07, 2020

Organised by Global Water Alliance jointly with Rural Development Forum, IEI, for further queries write to atgwaconference2020@gmail.com

International Conference on "Energy and Sustainable Development 2020"

Kolkata, February 14-15, 2020

Jointly by IEI and Department of Mechanical Engineering, Jadavpur University under support from Rashtriya Uchchatar Shiksha Abhiyan, for further queries write to icsed20@gmail.com



Contribution for Centenary Celebrations of The Institution of Engineers (India)

The Institution of Engineers (India) has entered its next Century in September 2019 and we intend to celebrate this significant landmark in a befitting manner. Various International Seminars are being organized in India and Overseas on contemporary and innovative themes culminating in Global Engineering Congress next year. Also, IEI has launched a special outreach programme to induct new members into its' fold along with an image enhancement programme to project the Institution both nationally and globally.

For this purpose, an IEI Centenary Fund has been established and the finances accrued by way of donation/sponsorship would be utilized to organize various events in the Centenary Year.

The contribution made under this section is exempted as per Section 80G of the Income Tax Act 1961, if made by cheque/draft/NEFT.

Details of IEI Centenary Fund are as follows.

Name of the Fund	IEI Centenary Fund
Bank	HDFC Bank
A/c No	50100301303426
IFSC Code	HDFC0000469

IEI Join Hands with Various Certification Bodies to Nurture Engineers

IEI and The Institute of Cost Accountants of India have signed a MoU on 27 May 2019, Kolkata, to offer a course exclusively for engineers- "Executive Diploma in Cost & Management Accounting for Engineers". Here is a wonderful opportunity for all corporate members of IEI to enhance knowledge in the domain of finance and understand the framework of costing, accounting system etc. in various decision making processes.

IEI also ties up with Project Management Associates (PMA), on 3 Jun 2019, at Chennai, in an exclusive collaboration to build a project mindset through Project Management education "IPMA's level C and D Certification Programme" in the country. The program offers a golden opportunity for project professionals to acquire key knowledge and concepts in Project Management, based on the approach followed by the world's leading authority on competence based Project, Program & Portfolio Management-International Project Management Association (IPMA)

IEI members have the exclusive facility of enrolling in the courses at a discounted fee!

For details, Corporate Members may login to their respective dashboard (<https://www.ieindia.org/WebUI/IEI-Registration.aspx>) and submit their application under Certification --> IPMA.

Please visit www.ieindia.org under Certification for details.

For further clarification you may call at: 033-40106304 or Email at certification@ieindia.org



34th INDIAN ENGINEERING CONGRESS

Hyderabad, December 27-29, 2019

Theme:

Societal Engineering – Imperatives for Nation Building

Organized by

The Institution of Engineers (India)

Hosted by: **Telangana State Centre**

Contact : Organising Secretary, 34th Indian Engineering Congress, The Institution of Engineers (India), Telangana State Centre

Visvesvaraya Bhavan, Khairatabad, Hyderabad 500004

Phone : 040-23314969; e-mail : telanganasc@ieindia.org; website : www.ieitsc.org

To Contribute Papers, please follow the link :

https://www.ieindia.org/webui/IEI-Activities.aspx#Call_Papers

ANNOUNCEMENT



GLOBAL WATER
ALLIANCE



THIRTEENTH ANNUAL GLOBAL WATER ALLIANCE CONFERENCE

Organized jointly with

The Institution of Engineers (India) - RURAL DEVELOPMENT FORUM

In partnership with

INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY, SHIBPUR

The Institution of Engineers (India) – WATER MANAGEMENT FORUM

Achieving Water, Sanitation and Hygiene (WASH)

Sustainability Goals for Developing Countries

JANUARY 4-7, 2020 AT NOVOTEL HOTEL, KOLKATA, INDIA

IEI NEWS

ISSN 0971-3352

Owner : The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700 020
Printer : Maj Gen (Dr) S Bhattacharya, VSM (Retd), Secretary & Director General
Publisher : Maj Gen (Dr) S Bhattacharya, VSM (Retd), Secretary & Director General
Published from : 8 Gokhale Road, Kolkata 700 020
Printed from : M/s Sailee Press Pvt. Ltd.
4A Manicktala Main Road, Kolkata 700054
Editor : Maj Gen (Dr) S Bhattacharya, VSM (Retd), Secretary & Director General

President : **Dr T M Gunaraja**

Editor : **Maj Gen (Dr) S Bhattacharya, VSM (Retd)**

Associate Editor: **Mr Kingshuk Sen**

Special Contributors: Dr N Sengupta, Dr S Ghosh,
Mr T Chakraborty, Ms A Dutta, Mr P Mukhopadhyay,
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