



IEI NEWS



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A CENTURY OF SERVICE TO THE NATION

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Commemoration Ceremony of Inauguration of IEI

The Commemoration Ceremony of Inauguration of IEI was observed at Asiatic Society, Kolkata on February 23, 2020. Hon'ble Minister in Charge, Department of Power, Government of West Bengal, Mr Sobhandeb Chattopadhyay graced the occasion as Chief Guest. Hon'ble Minister in his address provided a realistic assessment of the glorious era of the Institution and mentioned that the economic growth of the country is depending on the sincerity, dedication, contribution of the engineering community. He further emphasized on more research and development in engineering and technology and effective utilization of energy to achieve optimum power economy.

Vice Chancellor, Maulana Abul Kalam Azad University of Technology, West Bengal, Prof Saikat Maitra was present during the occasion as Guest of Honour. Prof Maitra, while delivering his address on the topic 'Engineering Imperatives in the Next Century', explained different phases of industrial revolutions and the subsequent changes in human civilization in different perspectives including education, production systems, civilization and phenomenal growth; Prof Maitra mentioned the changes and way forward in engineering practices due



to induction of digitization and focused on man machine interface as the next phase of industrial revolution. The speaker lucidly explained different aspects of Industry 5.0 including transformation of physical design of product and processes to logical thinking through machine and further mentioned that automation and analytics are the two major verticals, that can change the industrial scenario. Prof Maitra in his speech further emphasized on precision agriculture and smart farming for better agricultural productivity; modern technological aspects in healthcare including wide applications of image processing and bio medical operations in digital health; applications of digital marketing and e-commerce etc. The speaker recommended establishment of massive eco system with high degree of cultural coordination.

Prof S S Chakraborty, Chairman-Emeritus, CES, delivered the Keynote Address during the occasion on historical perspectives of the Institution and engineering development through the decades. During his address, Prof Chakraborty explained contribution of Sir Rajendra Nath Mookerjee, the Inaugural President of the Institution in different phases of industrial

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From the President's Desk.....



Immediately after the first World War, as India embarked on its industrial development, the status of engineering as a profession gained momentum in India. To meet the surge in industrial activities, the Government of India then formed then Indian Industrial Commission under the Chairmanship of Sir Thomas Holland, the then Commerce Member of the Government of India. On basis of the recommendations of the Commission, a decision for establishing a professional body of engineers was taken and The Institution of Engineers was registered on 13 September 1920 in Madras and subsequently moved to Calcutta with Sir Thomas Ward as its first President. He was succeeded by Sir Rajendra Nath Mookerjee, an eminent engineer cum entrepreneur who took over as President of the Institution at the Inaugural Ceremony of the Institution held in the Hall of Asiatic Society of Bengal on 23 February, 1921, in the august presence of His Excellency Lord Chelmsford, then Viceroy and Governor General of India.

To mark the significant event, IEI commemorated this event at the Hall of Asiatic Society on 23 February, 2020 in the same venue where 99 years ago the Inauguration function of the Institution had taken place. Standing at the cross roads of a Century of its glorious existence, it is time to uphold the rich legacy paved by eminent engineers through their relentless efforts, visionary approach and leadership.

We are presently in the grip of pandemic COVID-19 outbreak as declared by WHO. I am sure that you would be taking suitable precautions as directed by medical authorities.

I look forward to meet you at the various events scheduled in the Centenary Year.

Climate Responsive Technologies vis-a-vis Iron and Steel Production Scenario

Durgapur Local Centre of the Institution organized Thirty-third National Convention of Metallurgical & Materials Engineers and National Conference on the theme 'Climate Responsive Technologies vis-a-vis Iron and Steel Production Scenario' under the aegis of Metallurgical & Materials Engineering Division Board (MMDB) of IEI during January 17-18, 2020 at Durgapur. The Convention was inaugurated by the Chief Guest, Mr Manabendra Debdas, Chief Engineer & Head of the Project, Damodar Valley Corporation (DVC), Durgapur Steel Thermal Power Station, (DSTPS) Durgapur. In his address, Mr Debdas highlighted how clean technology adopted in DVC. He further emphasized upon the environmental hazards due to the steel production and also stressed on the optimization of low carbon emission in steel industry. The Guest-of-Honour on the occasion, Mr Sisir Kumar Banerjee,

and Improving Sustainability in Indian Steel Plants'. The IEI Young Engineers Award for the year 2020 in Metallurgical & Materials Engineering Division was presented to Mr K Prakash, Welding Engineer, L&T Ltd, Kanchipuram and Dr Indu Elizabeth, Scientist, CSIR- National Physical Laboratory, New Delhi. A Proceeding was released during the occasion by the Chief Guest and other dignitaries present on the dais. A Panel Discussion was held on "Future of Metallurgical & Materials Engineering" during the National Convention. The Invited Lectures were delivered by Prof Santanu Kumar Ray, former Steel Chair Professor, IIT Madras; Prof Amit Ganguly, former Chief of Business Excellence, Mukund Group and other eminent engineering fraternities. Vote of thanks was proposed by Mr M K Biswal, Honorary Secretary, Durgapur Local Centre. A large numbers of papers embracing the theme of the Seminar were presented and discussed during four technical sessions of the National Conference, that include; Clean Development Mechanism for steel sector, the challenging aspects for global steel industry scenario, Non destructive testing as an important quality control tool for performance assessment of industrial components, role of in-situ metallography for damage assessment of thermal power components etc.

Recommendations came out during the Convention are as follows:

Related to the Greenhouse gas, the most relevance to the world steel industry is carbon dioxide (CO₂). In an average 1.82 tonnes of CO₂ were emitted for every tonne of steel produced. The steel industry generates 7% to 9% of direct emissions from the global use of fossil fuel; In order to drastically reduce the overall CO₂ emissions from the production of steel, the development of Breakthrough Technologies is crucial. Today, a large number of promising projects are ongoing in different parts of the world. Some projects are in the early research stage while others are in pilot or demonstration phase. Although their goals are similar, approaches differ and can be categorized as follows:

Hydrogen as a reducing agent - Avoids carbon and uses Hydrogen to reduce iron ore thereby averting the creation of CO₂ and producing H₂O (water); Carbon Capture and Storage (CCS) - Generates a clean and concentrated CO₂ stream that can be captured and stored. The process involves retrofitting steel plants with capture Technology and requires the development of transportation networks and access to storage sites; Carbon Capture and Utilisation (CCU) - Uses the components of the co-product gases from existing processes to produce fuels or input material for the chemical industry; Biomass as a reducing agent - Can partially substitute coal for biomass such as charcoal; Electrolysis - Reduces iron ore using electricity.



Past President, IEI, in his address detailed about the various activities of IEI especially on the occasion of its Centenary Celebration. He further stressed upon the impact of steel industry for societal development. Prof (Dr) N R Bandyopadhyay, Chairman, Metallurgical & Materials Engineering Division Board, (MMDB), IEI explained the development of Metallurgical & Materials Engineering from the era of quantum mechanics and highlighted about the interfacing of materials with steel. Earlier, Prof K C Ghanta, Chairman, Durgapur Local Centre welcomed the august gathering and briefly explained the engineering solution to obtain green environment in the steel industry. Dr Debasish Ghosh, Convener of the Convention elaborated the background of the theme. On this occasion, three Eminent Engineering personalities, namely, Mr A V Kamlakar, Chief Executive Officer, IISCO Steel Plant, Burnpur & SAIL-Durgapur Steel Plant; Mr Kanak Kumar Ghosh, Director (Projects), Rashtriya Ispat Nigam Ltd, Visakhapatnam Steel Plant and Prof B K Mishra, Director, IIT Goa (in absentia) were felicitated for their immense contribution to the Metallurgical & Materials Engineering profession. The prestigious 'V Subramony Memorial Lecture' was delivered by Dr Debasish Mukherjee, Chair Professor, Ministry of Steel, National Institute of Foundry & Forge Technology, Ranchi on the topic "Options for Lowering Carbon Footprint

Commemoration Ceremony of Inauguration of IEI

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development in India during pre and post independence and the changing requirement and subsequent development of skilled manpower during those periods. Prof Chakraborty, in his address enumerated the contribution of IEI in professional accreditation, emphasized on technical activities organized regularly by Engineering Divisions and For a of the Institution. The erudite speaker opined that IEI should address the national issues for nation building. Dr S B Chakrabarti, General Secretary, The Asiatic Society in his address briefed about the cultural encapsulation and enlighten journey of history of Asiatic Society including historical perspectives and relevance of Asiatic Society with IEI. Er Narendra Singh, President IEI in his address highlighted the mission and vision of Sir R N Mookerjee and mentioned

that number of significant milestones have achieved by the Institution thereafter. President, IEI in his address emphasized on different aspects of sustainable innovations and recommended to look forward to fulfill the dream of the Inaugural President of the Institution. Earlier, Mr Sandip Kumar Deb, Chairman, West Bengal State Centre and Council Member, IEI delivered the Welcome Address. Maj Gen (Dr) S Bhattacharya, VSM (Retd), Secretary & Director General, IEI proposed the vote of thanks. The event was well attended by the dignitaries from industry and academia, illustrious Past Presidents and Council Members of IEI. During this auspicious occasion, the Past Presidents and Council Members of the Institution were felicitated for their remarkable contribution towards advancement of IEI.

Innovative Engineering Design

Uttarakhand State Centre of the Institution organised an International Conference on the theme 'Innovative Engineering Design' in association with Design Innovation Centre, National Institute of Technology Uttarakhand & Design Innovation Centre, Indian Institute of Technology Roorkee during January 18-20, 2020 at Dehradun under the aegis of Mechanical Engineering Division Board of the Institution. The objective of the International Conference is to provide an excellent initiative that leads to an extra ordinary platform for sharing and thinking globally about the interdisciplinary innovative

General, Uttarakhand State Council for Science and Technology graced the occasion as Guest of Honour. Prof (Dr) R C Joshi, Chancellor, Graphic Era (Deemed to be University), Dehradun graced the occasion as Guest of Honour. Prof K K Raina, Vice-Chancellor, DIT University, Dehradun graced the occasion as Guest of Honour. Prof Apurbba Kumar Sharma, Department of Mechanical and Industrial Engineering and Coordinator, Design Innovation Centre, IIT Roorkee, the Guest of Honour and Plenary Speaker during the occasion delivered Lecture on the topic 'Innovative



ideas for upliftment of quality of life by aiming the current challenges encountered by the society. Hon'ble Dr Dhan Singh Rawat, State Minister (Independent Charge), Cooperatives, Higher Education, Dairy Development, Protocols, Government of Uttarakhand graced the occasion as Chief Guest. Addressing the participants during the occasion, the Chief Guest explained about the importance of innovation and emphasized that the International Conference would inculcate the same within the research scholars and promote innovation culture amongst young creative minds. Prof Shyam Lal Soni, Director, National Institute of Technology, Uttarakhand, the Guest of Honour during the occasion, mentioned that Design Innovation Centre, NIT Uttarakhand provides the platform to showcase the talent and creativity in students and scholars towards innovation. Dr Rajendra Dobhal, Director

Applications of Microwave Energy in Manufacturing'. Prof Anantharajan Senthil Kumar, Associate Professor, Department of Mechanical Engineering, National University of Singapore, Singapore, the Guest of Honour and Plenary Speaker during the occasion delivered talk on the topic 'Ultra-Precision Machining of Functional Optics'. Dr Pawan Kumar Rakesh, Department of Mechanical Engineering, NIT Uttarakhand addressed the audience as Theme Speaker. Prof Inderdeep Singh, Department of Mechanical and Industrial Engineering, IIT Roorkee, the Plenary Speaker during the occasion delivered Lecture on the topic 'Development of Sustainable Polymeric Composites'. Prof Satinder Paul Singh, Department of Mechanical Engineering, IIT Delhi, the Plenary Speaker during the occasion, delivered Lecture on the topic 'Explorations into New Silk based

Materials for Biomedical Applications'. Dr Rajat Agrawal, Associate Professor, Department of Management Studies, IIT Roorkee, the Plenary Speaker during the occasion delivered his address on the topic 'Achieving Sustainability through Innovative Engineering Design'. Prof Gaurav Raheja, Department of Architecture and Planning, IIT Roorkee delivered Plenary Lecture during the occasion. Mr Narendra Singh, President, IEI, graced the occasion as Guest of Honour and addressed the audience. Mr Jagroop Singh, Chairman, MCDB, IEI was present during the occasion and address the audience. Earlier, Mr A K Dinkar, Chairman, Uttarakhand State Centre, IEI, delivered the Welcome Address. Prof (Dr) MP Jain, Former Chancellor, IMS Unison University, Dehradun also addressed the gathering. Mr Dharm

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Honour to Vadodara Local Centre

Emerging Technology – Its Social Impact

For the first time, Vadodara Local Centre of the Institution has been invited by the Lawmakers of Gujarat State to deliver Technical Lecture on the topic 'Emerging Technology – Its Social Impact' on February 11, 2020 at Gujarat Legislative Assembly (Vidhansabha), Ahmedabad. Hon'ble Speaker, Gujarat Legislative Assembly, Mr Rajendra Trivedi and Ministers of Government of Gujarat were present during the occasion. Mr Navinchandra B Vasoya, Past President, IEI and Mr N P Singh Brar, Chairman, Vadodara Local Centre, Chairman, Computer Engineering Division Board, and Council Member, IEI shared the dais with Lawmakers of Gujarat State and delivered the Lecture on the subject. Mr Vasoya, in his speech enlightened the august gathering about IEI – its history, origin, Pan-India Presence and about the Fora and Overseas Chapters of IEI, which was highly appreciated. Mr Bharat S Patel, Member, Computer Engineering Division Board and Council Member, IEI, also shared his thoughts during the occasion. The programme was well attended by the bureaucrats, members of Vadodara Local Centre, IEI and others.



Digital Manufacturing towards Industry 4.0

Karnataka State Centre of the Institution organized All India Seminar on the topic 'Digital Manufacturing towards Industry 4.0' under the aegis of Mechanical Engineering Division Board of IEI during October 18-19, 2019 at Bengaluru. The Chief Guest on the occasion, Dr Ramesh Raju, Professor and Head, Department of Mechanical Engineering, Santhiram Engineering College, Nandyal, AP, in his address explained different aspects of digital transformation. 'The automation or digital revolution has struck the manufacturing sector by storm and it has streamlined the processes, reduced both time and human efforts, minimized errors and enhanced the overall productivity', added Dr Raju. He further enumerated the application



of fourth technological revolution in manufacturing, healthcare, consumer goods, finance, media and so on. 'It is expected that the unleashing of innovative ideas and sophisticated technologies will definitely change the nature of manufacturing', he opined. Dr Suresha, Principal, Sri Venkateshwara College of Engineering (SVCE), Bangalore graced the occasion as the Guest-of-Honour. While addressing the gathering, Dr Suresha mentioned the role of advancement of technologies in different areas of applications. 'Digital manufacturing cannot be just considered as an advancement in the process of manufacturing but it is rather a transformation and it has transformed almost every single process of manufacturing including research and development, factory procedures, supply chain, marketing, and sales',

added Dr Suresha. Mr P Vijayaraghavan, Senior Manager (Retd), Hindustan Aeronautics Limited, Bangalore delivered an Invited Lecture on the topic 'Industry 4.0'. Mr Dheeraj Baijal, Head-Strategic Engagements Solutions, TCS, Bangalore delivered an Invited Lecture on the topic 'HVAC Duct Design'. Dr Shrishail Kakkeri, Professor & Head, Mechanical Engineering Department, SVCE was present during the occasion and addressed the gathering. Earlier, Mr Jasmail Singh, Chairman, Karnataka State Centre, while welcoming the august gathering spoke about the trend towards industrial revolution, automation and data exchange in manufacturing technologies and processes including Internet of Things, Cloud Computing, Artificial Intelligence. He stretched the importance of knowledge up-gradation and innovations to meet the Industry 4.0 standards. Papers presented during technical sessions include; design of robots, 3D printing, design and development of Articulated and Cartesian robots etc.

Following are the key Recommendations arriving out of the Seminar deliberations:

Right now, there is a need to up-skill talent within industries rather than replace them. The most important action is to invest in capability building. Up-skilling in areas of analytics and digital technologies will create the workforce for the changing environment and also make them ready for future learning, thus keeping them relevant; All the product development and manufacturing activities are integrated and coordinated with the product life cycles. New synergies emerge between product development and production systems; The main premise of Industry 4.0 is to create an increasingly autonomous and highly cognitive ecosystem. It relies on technologies such as machine learning, deep learning and advanced robotics; Advanced digital technology is already used in manufacturing, but with Industry 4.0, it will transform production. It will lead to greater efficiencies and change traditional production relationships among suppliers, producers, and customers as well as between human and machine.

All India Seminar of Interdisciplinary Coordination Committee

Innovative Technology for Economic Development

Brahmapur Local Centre of the Institution in association with Sanjay Memorial Institute of Technology (SMIT) Degree Engineering College, Chandipadar organized All India Seminar on the topic 'Innovative Technology for Economic Development' under the aegis of Interdisciplinary Coordination Committee (ICC) of IEI during October 25-26, 2019. Brig. Praveen Chandra Vyas, Registrar, Indian Institute of Science Education and Research (IISER), Brahmapur graced the occasion as the Chief Guest. Brig Vyas, in his address professed on the technological innovations that should be inculcated in every sector for economical development of the country. The Guest-of-Honour on the occasion, Dr Gopal Krishna Panda, Former Professor, Mechanical Engineering Department, College of Engineering & Technology (CET), Bhubaneswar, delivered an elaborate speech on the recent technological advancements in various domains of engineering disciplines. The Chief Speaker of the function, Dr Sanjay Kumar Panda, Assistant Professor & HoD, Computer Science, Indian Institute of Information Technology, Design & Manufacturing (IIITDM), Kurnool spoke on the necessities of updated technologies and its dependence towards preservation of environment specifically and subsequently, maintaining the ecological balances. During valedictory function, Mr Surendra Nath Panda, Chairman, Jay Bharata Spices Private Limited was Chief Guest and Prof Ranjan Kumar Swain, Principal, Parala

Maharaja Engineering College, Brahmapur was the Guest of Honour. Dr B B Choudhury, Associate Professor, Mechanical Engineering Department, Indira Gandhi Institute of Technology, Sarang was the Chief Speaker during the occasion. Mr Arun Kumar Padhi, Chairman, Brahmapur Local Centre addressed the gathering. Mr Surendra Kumar Panigrahi, Honorary Secretary, Brahmapur Local Centre and Organizing Secretary of the event proposed the vote of thanks. Topics of Papers presented during the technical sessions include; Waste management; Climate change; Innovative farming technology and sustainable agriculture; Nanoparticles and green synthesis; Nanocomposite material based electromagnetic interference etc.



Safety Health and Environment-Issues and Challenges in Realistic World

Indore Local Centre of the Institution in association with Medi-Caps University, Indore (MP) organized All India Workshop on the topic 'Safety Health and Environment- Issues and Challenges in Realistic World' under the aegis of Production Engineering Division Board of IEI during November 5-6, 2019 at Indore. Dr S A Pillai, Secretary, National Safety Council, India, Madhya Pradesh Chapter, Bhopal, graced the occasion as the Chief Guest. Dr Pillai, while speaking on the topic 'Safety Challenges in Indian Industries', explained about the safety challenges and procedure in the industries. Dr Sunil K Somani, Vice Chancellor, Medi-Caps University, Indore, was present during the occasion and addressed the august gathering. Mr R B Kamath, Associate Vice President - Corporate Safety, Jubilant Organosys Ltd, Indore, spoke on the topic 'Accident Caution and Prevention Technique'. Mr Pradip Nakashe, General Manager – Safety, Symbiotec, Indore, during his address, explained about the 'Safety Health and Environment Management in Pharma Industries' and about risk identification and elimination, material handling, flammable solvent handling, hazardous area classification. Mr Bharat Singh, Head - Safety Health and Fire Services, Tata International Limited, Dewas, delivered his lecture on the topic 'Transportation & Storage of Hazardous Materials'. Mr Mayank Gaur, Deputy Manager, Health, Safety & Environment, Aavantika

Gas Ltd, Indore during his lecture focused on 'Safety Aspects in Natural Gas Transmission Pipelines of City Gas Distribution Networks'. Mr Ramesh Chouhan, President, Yolax Infranergy Pvt Ltd spoke on 'Electrical Safety Requirement for Industrial Set-up'. Earlier, Prof (Dr) Ms Shilpa Tripathi, Chairman, Indore Local Centre, IEI, welcomed the audience. Mr Deepak S Shah, Honorary Secretary, Indore Local Centre, IEI, proposed the vote of thanks.



Silver Jubilee Year Celebration of Belapur Local Centre

Belapur Local Centre of the Institution celebrated its Silver Jubilee Year on February 28, 2020 at Belapur. Mr Narendra Singh, President, IEI graced the inaugural function as the Chief Guest. Other eminent dignitaries graced the function included Dr T M Gunaraja, Immediate Past President, IEI, Mr Sisir Kumar Banerjee and Mr S L Garg, Past Presidents, IEI, Dr H O Thakare, Mr M R Kothari, Dr H M Raje and Dr Mohan B Dagaonkar, Council Members, IEI, Mr K K Verkhedkar, Chairman, Belapur Local Centre and Council Member, IEI and Dr Samir Chandrakant Nimkar, Honorary Secretary, Belapur Local Centre. In his address, Mr Narendra Singh congratulated Belapur Local Centre for its completion of 25 years and highlighted about the importance of engineers in nation building and regarding their roles and responsibilities. Mr S L Garg recalled his memories and praised the Centre for its continuous progress. Dr Mohan B Dagaonkar explained about the activities of IEI which is in its Centenary Year and about Maharashtra State Centre. On this auspicious Silver Jubilee Documentary and a colourful Souvenir were also released by the dignitaries. Earlier, Mr K K Verkhedkar, Chairman, Belapur Local Centre welcomed the august gathering. Dr Samir Chandrakant Nimkar, Honorary Secretary, Belapur Local Centre proposed the vote of thanks.

To mark the occasion, eminent speakers enlightened the audience with their expertise. Mr Amar Jadhav Vijay, Managing Director, Innovative Infocom & IT Parks Private Limited, Mumbai delivered lecture on the topic 'Skill

Development and Innovation'. Mr Chetan R Raikar, Chairman & Managing Director, Structwel Designers and Consultants Private Limited, Navi Mumbai delivered lecture on the topic 'Engineering Solutions for the Conservation of Heritage Structures'. Mr Prakash Bajaj, Engineering Consultatnt and Structural Engineer, Computer Help, delivered his address on the topic 'Latest Softwares in Civil Engineering'. Prof (Dr) Jayesh Bellare, Chemical Engineering Department, IIT Bombay delivered his lecture on the topic 'Towards a Bio-Artificial Pancreas'. Mr Rajesh Agarwal, Senior Vice President, Delhi Integrated Multimodal Transit (REDIMTSL) presented his lecture on 'Engineering for Unique Infrastructural Projects'. Mr Upendra Maheshwari, Executive Director –Supply Chain Management- Inspection, Engineers India Limited delivered lecture on 'Supply Chain Management in Hydrocarbon Sector'.

During Valedictory function, Mr Sanjay Kumar, IPS, Commissioner of Police, Navi Mumbai was the Chief Guest. During his address, Mr Kumar advised the engineering students community to focus more on engineering solutions, that leads to benefit of society. Earlier, Mr K K Verkhedkar, Chairman, Belapur Local Centre and Council Member, IEI welcomed the audience. Dr Samir Chandrakant Nimkar, Honorary Secretary, Belapur Local Centre proposed the vote of thanks.



Sustainable Water Management and Conservation

Uttar Pradesh State Centre of the Institution in association with WaterAid (India) and National Mission for Clean Ganga (Namami Gange) with the support of WWK UK/India and Dalmia Bharat Sugar as a part of Centenary Celebrations of IEI organized All India Seminar on the topic 'Sustainable Water Management and Conservation' under the aegis of Civil Engineering Division Board (CVDB) of IEI during November 2-3, 2019 at Lucknow. Dr Mahendra Singh, Hon'ble Cabinet Minister, Jal Shakti, Government of Uttar Pradesh, graced the occasion as the Chief Guest. Hon'ble Minister, in his address related the philosophical and psychological background of the importance of water in India and thus its conservation by recharging,



reuse, reclaim and recycle management from the ancient times. Dr Singh further focused on Rain Water Harvesting in educational institutions and government establishments and restriction on water consumption through submersible pump. The Guest-of-Honour on this occasion, Mr Heera Lal, District Magistrate, Banda, UP, shared his experience of exclusive work involving the general public at grass root level for water conservation in Banda District for which he was awarded by the Government of India and Government of UP along with many other organizations. He further shared his ideology of recharging the wells and ponds that leads to prosperous and healthy living for the habitat. Mr V B Singh, Chairman, CVDB and Council Member, IEI elaborated the concern about potable waters and asked everyone to become aware and cautious about saving as well as optimal use of the water religiously and scrupulously.

Earlier, Mr Rajesh Kumar Trivedi, Chairman, UP State Centre and Council Member, IEI welcomed the august gathering. Mr D K Srivastava, Convener and Vice Chairman, Indian Institute of Chemical Engineers, Lucknow Regional

Centre elaborated the water scarcity problems scenario in near future. Mr Prabhat Kiran Chaurasia, Honorary Secretary, UP State Centre proposed the vote of thanks. Number of papers were presented during the technical sessions on diversified sub topics, which include; Automated ground water level monitoring; Ground water management; Bioaugmentation; Rainwater harvesting; Water crisis and it's remedies; Water operators partnership; Integrated water resource management and so on.

Recommendations of the Seminar are summarized as follows:

Automated ground water level monitoring system has great advantages and is capable of providing value addition to resource assessment. Use of this system needs to be encouraged and linked with Decision Support System; There is a need to reform National Ground Water Extraction Policy, develop National Ground Water Regulatory Framework and review ground water assessment norms; A well thought and meaningful policy of Ground Water Management through appropriate policy actions/interventions urgently required for over-exploited cities; Community should be involved at every backend and foreend process in pipe water supply system; For Sustainable Urban Water Supply, Water Operators Partnership may be encouraged; Bio – augmentation can play leading role in challenges faced by waste water treatment process; Creation and sustaining ponds/water bodies in every colony and diverting rain water from pavements in these ponds/ water bodies is the need of the hour; Field bunding and trenching, de silting of water bodies and plantation may be more affective and cost effective for ground water recharge; Through integrated water resource management approach in Sataon block of Rai Bareilly district in Uttar Pradesh, water, level fluctuations for various periods over three years show improvement water level and availability of more water. This approach is required to tackle depleting water resources; A well structured Jal Chaupal (democratization of water) model helps in triggering the demand and action by local rural communities for ground water recharge can be adopted by districts under Jal Shakti Abhiyan; Utilization of Irrigation potential through Minor Irrigation Schemes is only 74% and below the national average of 81%. This needs to be addressed on priority basis; Adoption of micro irrigation in the State of Uttar Pradesh is very low. Schemes related to micro irrigation need review Integrated ground water prospect map using remote sensing, GIS and resistivity survey may be used for precise identification of water resources especially in hard rock areas; As a long term strategy, Environmental Flow (efflow) network needs to be integrated into the planning and policy discourse for water resources management at different levels.

Industry –Academia Interface

Industry Academia Interaction Gap Diagnosis & Remedies

Pantnagar Local Centre of the Institution organised 'Industry-Academia Interface' on the topic 'Industry Academia Interaction-Gap Diagnosis & Remedies' on February 15, 2020 at Abhiyanta Bhawan, Pantnagar. Dr R C S Mehta, Director General, Graphic Era Hill University Bhimtal graced the occasion as the Chief Guest. Dr Mehta, in the opening ceremony emphasized upon the importance of nurturing strong industry academia linkages for the mutual benefit of both. Mr V Venkatesh, General Manager - Quality, Ashok Leyland Limited, graced the function as the Guest-of-Honour. Mr Venaktesh, in his speech emphasized that although the basic functions of both industry and academia are different, they have to supplement and nurture each other for long term gain. A Questionnaire Session under the Chairmanship of Dr R C S Mehta, Director General, Graphic Era Hill University was organized to assess the capability of participants from both Industry and Academia. Industries include Mahindra & Mahindra Limited, Ashok Leyland Limited,



TATA, JBM Auto Limited, Yazeki India Private Limited, Perfetti Van Melle India Limited. Academicians from GB Pant University of Agriculture and Technology, Bipin Tripathy Kumaon Institute of Technology, Dwarahat, Dr A P J Abdul Kalam Institute of Technology, Tanakpur and Amrapali Group of Institutes, Haldwani participated and interacted actively in the Session.

Artificial Recharge of Ground Water and its Role in Water Management

Jharkhand State Centre of the Institution organized All India Seminar on the topic 'Artificial Recharge of Ground Water and its Role in Water Management' under the aegis of Environmental Engineering Division Board of IEI during November 9-10, 2019 at Ranchi. The Chief Guest of the function, Mr M P Raval, Chief Engineer-Cum-Additional Secretary, Water Resources Department, Government of Gujarat and Chairman, Board of Governors, Water Management Forum, IEI emphasized on the vision and objectives of Water Management Forum for recharging ground water and rain water harvesting. Comparing the population increase and available water resources era wise, Mr Raval enumerated on human rights to water and sanitation, best agriculture processes, rain water harvesting in urban and rural areas. He discussed about various activities of Water Management Forum of IEI to create awareness to conserve water.

Mr Shardendu Narain, Retd. Engineer-in-Chief, Drinking Water & Sanitation Department, Government of Jharkhand, in his Keynote Address emphasized upon the requirement of artificial recharge of ground water and enlightened the audience regarding implementation of different rain water harvesting techniques. He stressed on various plans to reduce, reuse and recycle of water and also talked about historical practices of ground water and rain water harvesting system. The Guest-of-Honour on the occasion, Mr Swetabh Kumar, Engineer-in-Chief, Drinking Water & Sanitation Department, Government of Jharkhand emphasized upon the requirement of rainwater harvesting system for individual residence in India. 'When this drive gets momentum, it would resolve water crisis in summer and problems would



subside', he added. He further discussed different aspects and various measures to be taken to improve ground water level. Earlier, Mr Siya Ranjan Kumar Singh, Chairman, Jharkhand State Centre and Council Member, IEI in his welcome address, mentioned that rain water harvesting, artificial recharge is the need of the hour and ways it can be implemented. Mr Jitendra Kumar, Honorary Secretary, Jharkhand State Centre proposed the vote of thanks. A Souvenir was released in this occasion by the dignitaries present on the dais. Number of papers were presented embracing the sub theme, that include; rain water harvesting and ground water recharge, distribution of fresh water on earth and design of rain water storage tank, ground water management through artificial recharge, ground water pollution, contamination and eradication, water conservation and groundwater recharge augmentation practices in abandoned coal mine voids.

Future Mobility and Connected Car Technologies Challenges and Opportunities

Coimbatore Local Centre of the Institution organized All India Seminar on the topic 'Future Mobility and Connected Car Technologies - Challenges and Opportunities' under the aegis of Mechanical Engineering Division Board of IEI during November 14-15, 2019 at Coimbatore. Mr P Manikandan, Head of Engineering, E-Mobility Solutions and President, Society for Smart E-Mobility, Robert Bosch Engineering & Business Solutions (P) Ltd,



Coimbatore graced the occasion as Chief Guest and delivered the inaugural address. Further, during his technical presentation, Mr Manikandan explained the state of art technologies of connected vehicles specified by highly automated driving, smartphone integration, driving navigation, Electronic

Stability Program, automatic emergency braking etc. Dr N Neelakrishnan, Professor & HoD, Department of Automobile Engineering, PSG College of Technology, Coimbatore delivered the Keynote Address on the topic 'Future Mobility and Connected Car Technologies'. Earlier, Mr P R Natarajan, Chairman, Coimbatore Local Centre and Council Member, IEI, delivered the welcome address. Dr H Rammohan, Honorary Secretary, Coimbatore Local Centre proposed the vote of thanks. A Souvenir was also released during the occasion.

Eminent speakers delivered lectures on various sub-themes, which include; Dr M Subramanian, Associate Professor, Department of Automobile Engineering, PSG College of Technology, Coimbatore on 'Connected Cars', Dr Ramakrishnan Ekambaram, Technical Expert, Power Train Electronics, Robert Bosch Engineering & Business Solutions on 'Wireless Communication between Vehicles - A Brief Discussion'; and Dr D Sivaraj, Assistant Professor, Department of Electronics & Communication Engineering PSG College of Technology, Coimbatore on 'Communication Protocols'. Papers presented embracing the sub theme include; study on effect of electric vehicle charging on distribution network, conversion of IC Engine to Electric Vehicle, Hybrid vehicles with V2X communication protocol, application of power electronics in automotive electrical and electronic systems, study on the implementation of hybrid two wheelers in Indian market, product development on digital fuel indication system for automobiles, study on Hyperloop, design and analysis of crankshaft design, regenerative braking system etc.

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Chandra, Honorary Secretary, Uttarakhand State Centre, IEI proposed the Vote of Thanks.

Prof Amar Patnaik, Associate Professor & Associate Dean, International Affairs, Malaviya National Institute of Technology, Jaipur the Key Note Speaker during the occasion delivered Lecture on the topic 'Role of Innovative Materials in Engineering Applications for Sustainable Economic Development'. Dr Tej Singh, Faculty of Informatics, Savaria Institute of Technology, Eotvos Lorand University, Hungary, the Key Note speaker delivered Lecture on the topic 'Waste and Natural Recourses Utilization in the Development of Innovative Products'. Dr Deepak Joshi, Centre for Biomedical Engineering, IIT Delhi, the Key Note Speaker during the occasion delivered Lecture on the topic 'Design in Health Care: A Focus on Rehabilitation Engineering'. Mr Benjamin Lionel, Outstanding Scientist & Director, Instruments R&D Establishments, Dehradun, Ministry of Defence, Government of India, delivered Key Note Address on the topic 'Innovative Evolution of Military Systems'. Prof Subir Das, Principal Faculty, Ergonomics & Human Factors and Activity Chairperson, Integrated Design Services, National Institute of Design, Ahmedabad delivered Key Note Address on the topic 'Design Intervention for the Indian Industry'.

Dr Sarbjit Singh, Associate Professor, Punjab Engineering College, (Deemed to be University), Chandigarh the Key Note Speaker during the occasion delivered Lecture on the topic 'Electrochemical Discharge Machining: Preceding and Perspectives Research'.

During the Valedictory Function, Prof Narendra S Chaudhari, Vice Chancellor, Uttarakhand Technical University, Dehradun graced the occasion as the Chief Guest. The function was presided by Dr Narendra Singh, Technical Advisor, Hon'ble Chief Minister, Uttarakhand.

Er. Narendra Singh, President, IEI, was present during the occasion and addressed the audience. Other dignitaries during the function include; Prof Shyam Lal Soni, Director, NIT Uttarakhand, Mr N Ravi Shanker, Chancellor, DIT University, Prof (Dr) Sandip Vijay, Director, Shivalik College of Engineering, Dehradun, Prof Amit Aggrawal, Director, Dr APJ Abdul Kalam Institute of Technology, Tanakpur, Dr Dharmendra Tripathi, Associate Professor, NIT Uttarakhand, Dr Hariharan Muthusamy, Associate Professor and Dean, Department of Electronics Engineering, NIT Uttarakhand, Dr Pawan Kumar Rakesh, Department of Mechanical Engineering, NIT Uttarakhand, Prof (Dr) MP Jain, Former Chancellor, IMS Unison University, Dehradun and so on.

Mr A K Dinkar, Chairman, Uttarakhand State Centre and Council Member, IEI and Mr Dharm Chandra, Honorary Secretary, Uttarakhand State Centre, IEI shared their thoughts and encouraged researchers to do the best in their field of expertise. The Event was well attended by the engineering professionals from India and foreign countries. Papers were presented with diverse disciplines including Design Process, Antenna/Microwave, Artificial Intelligence, Composites Materials, Internet of Things, Network Security, Smart Buildings, Sustainable Manufacturing etc from India, as well as abroad.



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One Day Seminars/Workshops Conducted by Various Centres of IEI

STATE CENTRE

Gujarat

Gujarat State Centre of the Institution in association with Government Engineering College (GEC), Gandhinagar & International Institute of Welding – Pandit Deendayal Petroleum University Student Chapter organized One Day Seminar on the topic 'Friction Stir Processing' under the aegis of Metallurgical & Materials Engineering Division Board of IEI on February 15, 2020 at Ahmedabad.



The objective of the One Day Seminar is to focus the recent advancements of Friction Stir Processing Technology in different

domains including material of constructions, improvement in mechanical properties of materials, i.e. corrosion resistance, friction, wear resistance etc. Mr B J Panchal, Joint Director, Directorate of Technical Education, Government of Gujarat graced the occasion as the Chief Guest and addressed the august gathering. Other dignitaries addressed the gathering included Prof R J Dave, Former Joint Director, DTE, Mr Vijay Solanki, Water Management Forum, IEI, Dr S P Dave, Principal, GEC Gandhinagar and Prof (Dr) I B Dave, Head, Metallurgy Department, GEC Gandhinagar. Mr Shyam Varghese, Honorary Secretary, Gujarat State Centre proposed the vote of thanks.

LOCAL CENTRES

Bokaro Steel City

Bokaro Steel City Local Centre of Institution in association with SAIL, Bokaro Steel Plant, ONGC, Bokaro Unit & Bokaro Power Supply Company Limited (BPSCL), Bokaro Steel City organized One Day Workshop on 'Energy Conservation & Management in Process Industries' under the aegis of Electrical Engineering



Division Board of IEI on February 23, 2020 at Bokaro. The Chief Guest on the occasion, Mr Atanu Bhowmick, Executive Director (Works), SAIL, Bokaro Steel Plant, in his inaugural address emphasized on energy efficiency and more application of energy efficient technologies in iron and steel industry to reduce energy consumption and production cost. The Guest-of-Honour, Mr A K Singh, CEO, BPSCL, in his address spoke about energy conservation strategy in power plants and detailed about various actions under implementation towards energy conservation including thermal energy. Mr N P Srivastava, General Manager, Environment Department, SAIL, Bokaro Steel Plant, in his Keynote Address emphasized upon the use of alternate renewable energy resources and utilization of thermal energy in process industries.

Durgapur

Durgapur Local Centre of the Institution organized One Day Seminar on the topic 'Energy Conservation through Energy Integrity - Strategy vis-a-vis Challenges on Resources and Affordability' under the aegis of Interdisciplinary Coordination Committee of IEI on February 1, 2020 at Durgapur. The Chief



Guest on the occasion, Dr H S Sarkar, Professor & Principal, Calcutta Institute of Technology, Howrah, while addressed the audience on 'Energy Conservation', mentioned that renewable energy generate practically without decay of the resource, which include solar energy, wind energy, geothermal energy and hydro energy. The Guest-of-Honour in the function, Mr S K Srivastava, Director, National Power Training Institute (Eastern Region), Durgapur stated that the renewable energy is making enormous progress in India, but it is driven more by targets, governmental support and economics than consumer push. Prof (Dr) Apurba Layek, Department of Mechanical Engineering, NIT Durgapur, Guest of Honour in the occasion intensified that human activities produce greenhouse gases and other air pollution that significantly affect climate, ecosystems and public health. During technical sessions, Dr Sudip Ghosh, Associate Professor, Mechanical Engineering Department, IEST Shibpur delivered lecture on 'Prospects of Fuel Cells and it's Comparative Analysis with Conventional Batteries', Mr Sanjoy Kumar Ghosh, Dy Chief Engineer (Mechanical), Damodar Valley Corporation, Durgapur Steel Thermal Power Station, delivered lecture on 'Flexibilisation of Thermal Power Generation for Renewable Energy Integration in Grid and Energy Resource Planning Challenges'. Dr Asim Kumar Bhattacharya, Founder and Executive Director, Academy of Water Technology and Environ Management, Kolkata presented paper on 'Water and Waste Water Treatment with Energy Efficient Technology Solution –A Sustainable Approach'. Mr Kamal Nasir, Dy Director, National Power Training Institute (NPTI) (Eastern Region), Durgapur presented his paper on the topic 'Efficiency Management in Electrical Grid – Present Status and Future Demands'. Earlier, Prof (Dr) K C Ghanta, Chairman, Durgapur Local Centre and Council Member, IEI welcomed the august audience. Dr Chittatosh Bhattacharya, Deputy Director, NPTI, brief the audience regarding the theme. Mr M K Biswal, Honorary Secretary, Durgapur Local Centre, IEI, proposed the vote of thanks.

Faridabad

Faridabad Local Centre of the Institution organized One Day Workshop on the topic 'Rigging & Hoisting, Crane and Pressure Vessel Accidents Prevention' under the aegis Interdisciplinary



Coordination Committee of IEI on February 18, 2020 at Faridabad. The Chief Guest on the occasion, Mr Sumit Roy, Director (Safety), Regional Labour Institute, Faridabad urged to create awareness about Industrial Safety and Accident Prevention. Mr J P Malhotra, Chairman & CEO., Bharatiya Valves Pvt Ltd, Faridabad in his theme speech highlighted about the general hoisting and rigging practices for the crane operators. He also threw lights on the causes of accidents in pressure vessels due to faulty design and manufacturing of vessels and operator negligence. During technical session, papers were presented embracing the sub theme, that include; necessity of safety practice in material handling, different aspects of accidental hazards from Cranes and safety precautions, Rigging as the most important safety and risk exposure considerations in material handling, safety and security budget etc. Earlier, Mr Sandip Handa, Chairman, Faridabad Local Centre, IEI, welcomed the audience. Mr Kuldeep Raj Gupta, Honorary Secretary, Faridabad Local Centre, IEI, proposed the vote of thanks.

Gwalior

Gwalior Local Centre of the Institution in association with Amity University, Gwalior organized One Day Workshop on the topic 'Reverse Engineering' under



the aegis of Mechanical Engineering Division Board of IEI on February 23, 2020 at Gwalior. The Chief Guest of the function, Dr C P Jawahar, Professor and Head, Mechanical Engineering Department, Amity School of Engineering and Technology, Gwalior

in his address explained the working principle and significance of reverse engineering, the process by which a man-made object is deconstructed to reveal its designs, architecture, or to extract knowledge from the object; similar to scientific research, the only difference being that scientific research is about a natural phenomenon. During technical sessions, papers were presented embracing the sub theme, which include; application of Reverse Engineering through design, manufacturing, difference between forward and reverse engineering etc. Earlier, Mr Prabhat Kumar Bhargava, Chairman, Gwalior Local Centre delivered the welcome address. Mr P Y Khanwilkar, Honorary Secretary, Gwalior Local Centre, IEI, proposed the vote of thanks.

Kancheipuram

Kancheipuram Local Centre of the Institution in collaboration with the Department of Electrical and Electronics Engineering, Jerusalem College of Engineering (JEC), Chennai organized One Day Seminar on the topic 'Design Challenges in E-Vehicles' under the aegis of Electrical Engineering Division Board of IEI on January 23, 2020 at Chennai. The Chief Guest



of the function, Mr S Selvakumar, Head - Design and Engineering, Power Projects, Chennai shared about his contribution in the field of E-Mobility and explained his own experience about the challenge in the infrastructure he came across and how it was solved by him. Dr S Prince Arockia Doss, Principal, Jerusalem College of Engineering, Chennai in his address presented a detailed explanation about the policy challenges, economic challenges and environmental challenges prevailing today and talked about the sustainability, reliability and efficiency of the E-Vehicles. Dr S Rama Reddy, Professor and Dean, Department of Electrical & Electronics Engineering, JEC, in his address discussed about the motors used in E-Vehicles and explained briefly about the types of motor used in E-Vehicles based on the efficiency comparing with the normal vehicles. Dr D Elango, Honorary Secretary, Kancheipuram Local Centre proposed the vote of thanks. Topics discussed embracing the sub theme include; architecture of electric vehicles, application of different batteries in electric vehicles, significance of National Electric Mobility Mission Plan etc.

Kancheipuram Local Centre of the Institution in collaboration with the Department of Information Technology, Sri Sai Ram Engineering College Institute of Technology (SSIT), Chennai organized One Day Seminar on the topic 'Virtual Reality and Augmented Reality In Robot Training' under the aegis of Computer Engineering Division Board of IEI on February 13, 2020 at Chennai. The objective of the Seminar is to disseminate in- depth knowledge on Augmented Reality and Virtual Reality. Mr Senthamizh, AR VR Technologist, DreamX, Chennai, graced the occasion as the Chief Guest. Keynote Address was delivered by Mr Karthick B, Managing Partner, DreamX, Chennai. Earlier, Dr K Palanikumar, Chairman, Kancheipuram Local Centre delivered the welcome address. The Seminar highlighted different important aspects of Augmented Reality components, Robotic programming applying Augmented and Virtual Reality etc.

Kattankulathur

Kattankulathur Local Centre of the Institution in association with the Department of Electrical & Electronics Engineering, SRM Institute of Science and Technology (SRMIST),



Kattankulathur organized One Day Seminar on the topic 'Standalone Photovoltaic Power Conversion Systems for Rural Electrification' under the aegis of Electrical Engineering Division Board of IEI on February 14, 2020 at Kattankulathur. The Chief Guest of the function, Mr K Boopathi, Director & Division Head, National Institute of Wind Energy, Chennai inaugurated the Seminar. Mr Boopathi, in his address expressed the importance of photovoltaic systems as a valuable source of energy, particularly, in the renewable sector and rural electrification. Dr K Vijayakumar, Professor and Head, Electrical & Electronics Engineering, SRMIST, graced the occasion as the Guest-of-Honour and addressed the audience. Earlier, Prof (Dr) P T Ravichandran, Chairman, Kattankulathur Local Centre welcomed the august gathering. Mr R Ramdoss, Chairman, Tamilnadu State Centre, IEI, in his address highlighted about IEI - its various programs aimed for the development of students and opportunities that IEI presents to its members. The Seminar highlighted different aspects of solar energy mapping and associated terminologies, Photovoltaic power conversion system, implementation techniques and skills for rural electrification etc.

Pune

Pune Local Centre of the Institution in association with with Defence Institute of Advanced Technology (DIAT), Pune organized One Day Workshop on the topic 'Additive Manufacturing' under the aegis of Mechanical Engineering Division Board of IEI on 15 February, 2020 at Pune. The Chief Guest on the occasion, Mr Anil Kulkarni, Chairman and Managing Director, Jayshree Group of Companies, Pune, in his address shared his experiences as entrepreneur and explained the future prospects for start ups. Dr D G Thakur,



Professor, Department of Mechanical Engineering, Defence Institute of Advanced Technology (DIAT), Pune, in his address briefed the audience about the importance of Additive Manufacturing. Other dignitaries spoke on the occasion included Dr Arati V Mulya, Associate Professor,

Production Engineering and Industrial Management, College of Engineering, Pune; Dr Vijay Hiwarkar, Associate Professor, Department of Materials Engineering, DIAT, Pune, Mr Ravi Kumar Patil, National Manager, Design Tech Systems Limited, Pune; Mr Abhishek Shete, Deputy Application Manager, Adroitec Information Systems Private Limited, Pune and Mr Mahesh Naik, Research Scholar, DIAT. Topics discussed during the technical sessions include; overview of additive manufacturing, metal additive manufacturing, 3D Printing, additive manufacturing application for Jigs and Fixture, Topology Optimization and Software application in 3D Printing etc. Earlier, Prof K K Ghosh, Chairman, Pune Local Centre and Council Member, IEI welcomed the audience.

Salem

Salem Local Centre of the Institution in association with the Department of Civil Engineering, Knowledge Institute of Technology (KIT), Salem organized One Day



Seminar on the topic 'Retrofitting and Rehabilitation of Existing Structures using Modern Technologies' under the aegis of Civil Engineering Division Board of IEI on January 24, 2020 at Salem. The Chief Guest of the function, Mr M A Asokan, Managing Director, Care and Cure Associates, Salem & Permanent Trustee of Salem Civil Engineers Charitable Trust, shared his vast experience in the field of Retrofitting and Rehabilitation and various technologies that are being used for repair and maintenance of the existing structures. Dr PSS Srinivasan, Principal, Knowledge Institute of Technology (KIT), Salem, in his address mentioned the impact of scarce land in urban areas and the importance of renovation of old buildings. Prof T Sarathivelan, Head, Department of Civil Engineering, Geo and Environmental Sciences, KIT emphasized upon the importance of retrofitting and rehabilitation of buildings in the current scenario. Dr L Krishnan, KIT, Salem in his address explained about retrofitting techniques for the buildings subjected to seismic conditions. Earlier, Mr D Arul Selvan, Chairman, Salem Local Centre welcomed the audience.

Salem Local Centre of the Institution in association with the Department of Electrical and Electronics Engineering, Muthayammal Engineering College (MEC), Namakkal, Tamilnadu organized One Day Seminar on the topic 'Artificial Intelligence in Distributed Generation and Power Quality' under the aegis of Electrical Engineering Division Board of IEI on January 29, 2020 at Salem. Dr B Gopi,

Professor, Department of Electronics & Communication Engineering and Dean (Products & Consultancy), Muthayammal Engineering College (MEC), in his address touched upon the key areas of conservation and mitigation techniques, new technological advances based on software, hardware and further opined that new materials must be implemented in smart grids. Dr S Saravanan, Professor and HoD, Department of Electrical and Electronics Engineering, MEC and Organizing Secretary of the event stated that energy conservation is the effort made to reduce the consumption of energy by using less of an energy service. Other dignitaries spoke on the occasion included Dr V Shanmugasundaram, Department of Electrical & Electronics Engineering, Sona College of Technology, Salem; Dr M Ramasamy, Associate Professor, Department of Electrical & Electronics Engineering, KSR College of Engineering, Tiruchengode; Dr R Bala Murugan, Associate Professor, Department of Electrical & Electronics Engineering, K S Rangasamy College of Technology, Chennai and Dr G Vijayakumar, Associate Professor, Department of Electrical & Electronics Engineering, MEC. Earlier, Mr D Arul Selvan, Chairman, Salem Local Centre welcomed the audience. Papers presented during technical sessions embracing the sub theme include; technological advances in smart grids through incorporation of Artificial Intelligence, Energy conservation and eco-sufficiency etc.

Salem Local Centre of the Institution in association with the Department of Civil Engineering, Mahendra Engineering College, Namakkal, Tamilnadu organized One Day Seminar on the topic 'Novelty in Urban Waste Water Management Strategies' under the aegis of Environmental Engineering Division Board of IEI on January 30, 2020 at Salem. The Chief Guest of the function, Mr J Harsha, Director, Monitoring Directorate, Central Water Commission, Government of India, shared his experience



about the waste water management in each and every municipal and gave an insight about treatment of waste water in a large scale. 'Wastewater management should consider the sustainable management of wastewater from source to re-entry into the environment and not only concentrate on single or selected areas or segments of the service provision process' he opined. The Guest-of-Honour on the occasion, Dr G Baskar, Associate Professor, Head, Department of Civil Engineering, Institute of Road and Transport Technology, Erode, Tamilnadu shared his knowledge on current strategies of waste water management. 'Ignoring wastewater management leads to two principle water quality impacts, namely chemical (and specifically nutrient) contamination and microbial pollution', he added. Dr R V Mahendra Gowda, Principal, Mahendra Engineering College, in his address briefed about the importance of waste water management and recycling of waste water in urban areas. Mr S Loganathan, Honorary Secretary, Salem Local Centre, IEI proposed the vote of thanks.

Tiruchirappalli

Tiruchirappalli Local Centre in association with the Department of Mechanical Engineering, MAM College of Engineering and Technology Tiruchirappalli organized a One Day Workshop on the topic "Nanotechnology in Solar Energy Applications" under the aegis of Interdisciplinary Coordination Committee of IEI on 14 February, 2020 at Tiruchirappalli. The Chief Guest of the function, Dr S Suresh, Associate Professor, Department of Mechanical Engineering, National Institute of Technology, Tiruchirappalli, in his inaugural address spoke about various recent advances in nanotechnology domain. Earlier, Prof (Dr) N Kumaresan, Chairman, Tiruchirappalli Local Centre welcomed the august gathering. Eminent resource persons delivered lectures during the technical sessions embracing the sub theme, which include applications of nano fluid technology in heat transfer for harvesting solar energy, applications of phase change materials in energy conservation etc.



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 April 2020.

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

News-in-Brief

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

STATE CENTRES

Karnataka

Lecture on 'Cold Storages for Rural Regions' delivered by Mr Srikanth N Seelin, Chairman, Solar Agricultural Institute of India on February 1, 2020.

Lecture on 'Application of Blockchain Technology for Sustainability Reporting - Model Proposal: Advantages and Challenges' delivered by Mr Ben D Radhakrishnan, Faculty, Department of Engineering & Computing Chair, Department Assessment Committee, National University, SAN DIEGO on February 11, 2020.

Lecture on 'More Funds for Development of Bengaluru' delivered by Ms Tara Krishnaswamy, Co-Founder of Citizens for Bengaluru on February 12, 2020.

Kerala

Lecture on 'Rocket Science at Microscopic Scale - The Self-Propelled Colloids' delivered by Dr Akhil Varma, a Post Doctoral Research Fellow on February 5, 2020.

Er C S Padmanabha Iyer Memorial Lecture on the topic 'Efficient Use of Energy and its Conservation' delivered by Mr K G Chandrasekharan, Former Member (Civil) - Kerala State Electricity Board on February 12, 2020.

Lecture on 'Dynamics of Two Phase Flow – Modelling Challenges and Road Forward' delivered by Prof (Dr) P Pradeep Kumar, Department of Aerospace Engineering, Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram on February 19, 2020.

Lecture on 'Precision Farming' delivered by Dr Abdul Hakkim VM, Professor, Soil & Water Conservation Engineering, College of Agriculture, Kerala, on February 26, 2020.

Maharashtra

Lecture on 'Air Separation Plants and Its Application in Steel Melt Shop' delivered by Mr R C Mandal, Ex HOD, Gases and Utility, Universal Mining and Chemical Industries Ltd, Jambia, Africa on February 15, 2020.

Tamilnadu

Lecture Meeting on 'Transformation of Electric Vehicles with Normal Vehicles' on February 12, 2020.

Lecture Meeting on 'Experiences in Grid Operation with Integration of Renewable Power' on February 26, 2020.

LOCAL CENTRES

Bokaro Steel City

Lecture on 'CCTV Technology' delivered by Mr Sunil Kumar, General Manager (ET & TC), SAIL, Bokaro Steel Plant on February 15, 2020.

Coimbatore

Seminar on 'Impact of Computational Intelligence in Wireless Sensor Networks' on January 31, 2020.

Lecture on 'Engineering Interventions for Sustainable Agriculture' delivered by Dr B Shridar, Dean (Engineering), Agricultural Engineering College and Research Institute, Tamil Nadu Agricultural University, Coimbatore on February 17, 2020.

Lecture on 'E-Waste Management - Insights and Policies' delivered by Mr Prasanth Omanakuttan, Managing Partner, Green Era Recyclers, Coimbatore on February 27, 2020.

Gorakhpur

Seminar on 'Planning & Design of Flood Works in Gorakhpur Region' on February 19, 2020.

Gwalior

Lecture Meeting on 'Green Mobility With Renewable Power Generation' on February 2, 2020.

Kanyakumari

Workshop on 'Advances in Production Technology' during February 19-20, 2020.

Organized One Day 'Doctoral Colloquium (DC 2020)' on February 21, 2020.

Kollam

Organized an Industrial Visit to 'Oil Palm India Ltd., Bharatheepuram, Kollam' on February 22, 2020.

Kolar

Lecture on 'The Importance of Tool Design in Modern Manufacturing and Its Relevance to Industry 4.0' delivered by Mr Jayarajan, General Manager and Head, EIGEN Engineering Ltd, KDDL Group, Bengaluru on February 14, 2020.

Lecture on 'Structural Analysis and Design of Steel Structures' delivered by Mr Dharmesh N, Assistant Professor, Department of Civil Engineering, RNSIT, Bangalore on February 26, 2020.

Madurai

Lecture on 'Air Conditioning Projects in India' delivered by Mr R Kishore, Consulting Engineer, HVAC Projects on January 25, 2020.

Meerut

Lecture on 'Article 21 and our Gas Chamber' delivered by Mr S K Kumar, Chairman, Indian Water Resources Society, Meerut on February 1, 2020.

Palghat

Lecture on 'Bioenergy Options for Climate Change Mitigation' delivered by Dr Shaji James P, Professor, Farm Power, Machinery and Energy Department, Kerala Agricultural University on February 13, 2020.

Roorkee

Lecture on 'Life in the Universe' delivered by Dr Siddharth Pandey, The Project Coordinator, NASA Spaceward Bound India on January 24, 2020.

Saurashtra

Lecture on 'Innovation in Concrete Technology' delivered by Mr B V Harsada, Deputy Engineer (Retired), Roads & Buildings Department, Govt of Gujarat on February 1, 2020.

Workshop on 'Advance Welding Technology' on February 4, 2020.

Silchar

Lecture on 'Computer Engineering in Medical Diagnosis using Artificial intelligence and Machine Learning' delivered by Dr Saroj Kumar Biswas, Assistant Professor, Department of CSE, NIT, Silchar on February 22, 2020.

Celebrated 'National Science Day 2020' on February 28, 2020.

Trichur

Lecture on 'Inorganic Polymer Concrete Products Using Industrial Waste' delivered by Mr Thomas John V, Head of the Department, Civil Engineering, Maharaja's Technological Institute, Thrissur on February 15, 2020.

Tumakuru

Organized Workshops on 'Industrial Robotisation'; 'Practical Machine Learning'; 'Environment and Water Management Systems' and 'Digital Manufacturing and Industry 4.0' during January 31 to February 1, 2020.

Udaipur

Lecture on 'Pressure Irrigation - Need of the Day' delivered by Mr Bhuvan Bhasker, Additional Chief Engineer, Water Resources Department, Govt of Rajasthan, Udaipur on February 27, 2020.

Bridging Industry Academia Skill Gap 2020

The One Day Summit on the topic 'Bridging Industry Academia Skill Gap 2020' was organised by Gorakhpur Local Centre of the Institution in association with Department of Mechanical Engineering & Department of Computer Science and Engineering, Institute of Technology and Management (ITM), Gida, Gorakhpur on 22 February 2020 at ITM, Gorakhpur. Mr S K Gupta, General Manager - Corporate HR, Tata Steel BSL Limited (Formerly Bhushan Steel Ltd) graced the function as the Chief Guest and Keynote Speaker and addressed the audience on the topic 'Industry Institute Interface'. Mr Gupta during his address stressed on the development of communication skills of young engineers to meet the requirement of industries. The Guest-of-Honour on the occasion, Mr Mahavir Prasad Kandoi, spoke on the topic 'Role of Standards, Codes, Rules, etc. and Regulation in Bridging the Skill Gap between Industry and Academia' and stressed on the importance of the instruments and methodology to obtain the necessary competence of the budding engineers to meet the requirement of industry. Mr Gaurav Sinha, Managing Director, Concept Ventures (a start up), spoke on the

topic 'Industry Ready Engineers Requirements' and explained in details about the principal industrial sectors. He highlighted various types of skills required to meet the requirements of various segments of Industry and explain the method by which these can be achieved. Mr V K Srivastava, Past Honorary Secretary, Gorakhpur Local Centre stressed on the need



of engineering students about development of the habit of listening and increased attentiveness in the lectures, not only in class rooms, but also in other places and should develop the skill to interact with the speakers regarding doubt clearing. Mr Anuj Agarwal, Joint Secretary, Management Committee, ITM, Gorakhpur extended the vote of thanks.



The Institution of Engineers (India)

Notification for R&D Grant-in-Aid (2020-21)

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

Like every year, the Institution invites applications for the session 2020-2021 for funding R&D projects and research initiatives aimed at improving the life-style of common people from engineering students pursuing full time Diploma/UG/PG/PhD engineering program in AICTE/UGC/NAAC approved Institutions/Colleges/Universities. The application form and guidelines are available in our website <https://www.ieindia.org>. The projects should be carried out under the guidance of faculty members who are Corporate Members of IEI. Membership criteria for student(s), guide(s) and Institution(s) are as follows:

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

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

Director (Technical)

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

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

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

One Hundredth Annual General Meeting of The Institution of Engineers (India)

PROCEEDINGS

The 100th Annual General Meeting (AGM) of The Institution of Engineers (India) was held at 1430 hrs on 29 Dec 2019 at Cyberabad Convention Centre Pvt Ltd, Novotel & HICC Complex (NearHITEC City), Cyberabad Post Office, Hyderabad 500081.

Attended by 228 Corporate Members, the meeting was chaired by Dr T M Gunaraja, FIE, President of IEI. The President welcomed the Past Presidents, President-elect and Corporate members of IEI present at the meeting.

The President announced that Telangana State Centre and Durgapur Local Centre of The Institution of Engineers (India) had been adjudged the best State Centre and best Local Centre respectively for their all-round performance during the year 2018-2019. President presented the trophies of the best State and Local Centre Awards, Certificates and cheques of Rs. 50,000/- each to the Chairmen of the Centres.

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

Thereafter, on being invited by the President, the Secretary and Director General read out the Notice of the meeting published in November 2019 issue of IEI News.

ITEM 1 Confirmation of Minutes of the 99th Annual General Meeting held on 23 December 2018 at Udaipur

The Minutes of the 99th Annual General Meeting held on 23 December 2018 at Udaipur were circulated to all Corporate Members through March 2019 issue [Vol. 25, No.12] of IEI News. President invited comments on the Minutes from the members present.

The Corporate Members present unanimously Resolved that the Minutes of the 99th Annual General Meeting of The Institution of Engineers (India) held on 23 December 2018 at Udaipur be confirmed.

ITEM 2 To receive the Annual Report of the Council and the Audited Accounts of The Institution of Engineers (India) for the year ended on 31 March 2019

(a) Annual Report

President invited comments from the members present on the Annual Report of the Council for the year 2018-2019 as circulated.

The Corporate Members present unanimously Resolved that the Annual Report of the Council for the year 2018-2019 be received.

(b) Audited Accounts

President then invited comments on the Audited Accounts of The Institution of Engineers (India) for the year ended on 31 March 2019.

The Corporate Members present unanimously Resolved that the Audited Accounts of The Institution of Engineers (India) for the year ended on 31 March 2019 be received.

ITEM 3 To receive the report of the Council on election of the President and composition of the Council for the Session 2019-2020

The President announced that the Council had unanimously elected Mr Narendra Singh, FIE as President of The Institution of Engineers (India) for the Session 2019-2020. The members welcomed the announcement. Mr Narendra Singh then took over charge from Dr T M Gunaraja and presided over the meeting.

Mr Narendra Singh, President presented the Scroll of Honour to Dr T M Gunaraja, Immediate Past President.

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

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

On being requested by Mr Narendra Singh, President, the Secretary and Director General reported the following composition of the Council for the Session 2019-2020:

Mr Narendra Singh, President.

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

The following, by virtue of their being the two Immediate Past Presidents, shall become Members of the Council for the Session 2019-2020:

Dr T M Gunaraja

Mr Sisir Kumar Banerjee

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

(17)

The following Corporate Members have been declared elected to the Council from the respective State Centre seat for the Sessions 2019-

2020 to 2022-2023 and shall be Member of the Council for the Session 2019-2020:

Haryana :: Ashwani Kumar Sharma
Punjab & Chandigarh :: Sukhvir Singh Mundi

The Corporate Members elected to the Council from the following State Centres shall continue as Members of the Council for the Session 2019-2020:

Elected for the Sessions 2018-2019 to 2021-2022:

Bihar :: Dr Arun Kumar Shrivastava
Jharkhand :: Shivanand Roy
Madhya Pradesh :: Rakesh Kumar Rathore
Rajasthan :: Dr S K Calla
West Bengal :: S K Banerji

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

Kerala :: V Vijayachandran Nair

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

Andhra Pradesh :: Dr K Brahma Raju
Delhi :: Pradeep Chaturvedi
Gujarat :: Sandeep B Vasava
Karnataka :: Dr M Chowde Gowda
Maharashtra :: Dr M B Dagaonkar
Odisha :: Dr Nutan Kumar Dash
Tamilnadu :: Dr T M Gunaraja
Telangana :: G Sudhakar
Uttar Pradesh :: V B Singh

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

(31)

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

Aerospace (1) :: Prof R Manickavasagam
Agricultural (1) :: D V Nagabhushan
Architectural (1) :: H K Mittal
Chemical (2) :: Navinchandra B Vasoya
:: Dr M P Sukumaran Nair
Civil (5) :: Sisir Kumar Banerjee
:: P S Bhogal
:: Dr H O Thakare
:: O P Saxena
:: Narendra Singh

Computer (2) :: B S Patel
:: K Rajanikanth

Electrical (4) :: H B Goswami
:: M R Kothari
:: P Rajamani
:: R R Tanwar

Electronics & Telecommunication (4) :: Dr T S Kamal
:: Dr G Padmavathi
:: B Brahma Reddy
:: S C Rudra

Environmental (1) :: Dr M Velan

Marine (1) :: Dr K Gopalakrishnan

Mechanical (5) :: Dr Swapan Bhaumik
:: Dr Wooday P Krishna
:: Dr Enti Ranga Reddy
:: Jagroop Singh
:: Dr K Venkatasubbaiah

Metallurgical & Materials (1) :: K K Mehrotra

Mining (1) :: D V Pichamuthu

Production (1) :: Dr D K Tripathi

Textile (1) :: Dr G Thilagavathi

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

(32)

By virtue of being elected/nominated as Chairmen of the following State Centres for the Sessions 2019-2020 and 2020-2021 and installed at the Annual General Meeting of the respective State Centres, the following persons shall become members of the Council for its Session 2019-2020:

Andhra Pradesh :: Dr K H Reddy
Haryana :: Dr (Ms) V K Gupta
Himachal Pradesh :: Pankaj Dadwal
Nagaland :: D A Shishak
Tripura :: Chinmay Debnath
Punjab & Chandigarh :: Sukhvir Singh Mundi
Sikkim :: G P Sharma

By virtue of being elected as Chairmen of the following State Centres

for the Sessions 2018-2019 and 2019-2020, following persons shall continue as members of the Council for its Session 2019-2020:

Andaman & Nicobar	::	J I Koilraj
Arunachal Pradesh	::	Dr R K Prasad
Assam	::	Dr S K Kakoty
Bihar	::	N K P Sinha
Chhattisgarh	::	Anil Kumar Sharma
Delhi	::	Dinesh Kumar
Goa	::	Chandrashekhar G P Dessai
Gujarat	::	H U Kalyani
Jammu & Kashmir	::	Aamir Ali Mir
Jharkhand	::	S K Singh
Karnataka	::	Jasmail Singh
Kerala	::	K K G Nair
Maharashtra	::	Dr H M Raje
Manipur	::	N S Singh
Meghalaya	::	M Marbaniang
Mizoram	::	Prof (Dr) Rajat Gupta
Odisha	::	Prof (Dr) K K Rout
Puducherry	::	Prof (Dr) Raman Saravanane
Rajasthan	::	S S Yadav
Tamilnadu	::	R Ramdoss
Telangana	::	Dr G Rameshwar Rao
Uttarakhand	::	Aditya Kumar Dinkar
Uttar Pradesh	::	Rajesh Kumar Trivedi
West Bengal	::	Sandip Kumar Deb

It was noted that the Chairman, Madhya Pradesh State Centre for the Sessions 2019-2020 and 2020-2021, would become an ex-officio member of the Council for its Session 2019-2020 under provision of Bye-Law 4(b)(i) after taking office in the AGM of the Centre as per Regulation 7(a).

(5) Under provisions of Bye-Law 4(b)(ii) (17)

By virtue of being elected as Chairmen of the following Local Centres for the Sessions 2019-2020 and 2020-2021, the following persons shall become member of the Council for its Session 2019-2020:

Nashik	::	S K Khinvasara
Visakhapatnam	::	Dr B Venkataramana

By virtue of being elected as Chairmen of the following Local Centres for the Sessions 2018-2019 and 2019-2020, the following persons shall

continue as members of the Council for its Session 2019-2020:

Belapur	::	Keshav K Verkhedkar
Coimbatore	::	P R Natarajan
Durgapur	::	Prof (Dr) K C Ghanta
Ghaziabad	::	Jai Pal Singh
Kancheepuram	::	Dr K Palani Kumar
Kochi	::	T P Raveendran
Ludhiana	::	Rup Lal Mahajan
Madurai	::	S Rajagopal
Mysore	::	Dr Suresh R
Nagpur	::	Dr R L Shrivastava
Neyveli	::	N M Rao Nadella
Pune	::	K K Ghosh
South Gujarat	::	K H Shethna
Vadodara	::	N P Singh Brar

By virtue of being the Chairman of Tiruchirappalli Local Centre whose Corporate Membership strength exceeded 1% of the total strength of Corporate Members of IEI as on 31 Mar 2019, Prof (Dr) N Kumaresan shall be a member of the Council for its session 2019-2020 under this Bye-Law.

(6) Under provisions of Bye-Law 4(c) (04)

Following four outstanding engineering personalities have been nominated as members of the Council for its Session 2019-2020:

1. M K Jadav
2. T R Pachamuthu
3. I K Pandey
4. Padma Shri Prof Ajoy Kumar Ray

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

The Council shall co-opt appropriate Corporate Members as Council Members for the session 2019-20.

ITEM 4 To appoint Auditors for the year 2019-2020 and to fix their remuneration

As approved by the Council at its 706th (Adjourned) meeting held on 28 Dec 2019 at Hyderabad, it was proposed that M/s Ray & Ray, Chartered Accountants be appointed as Auditors of The Institution of Engineers (India) for the year 2019-2020 on a remuneration of Rs.5,50,000 + Taxes as applicable.

It was then Resolved that M/s Ray & Ray, Chartered Accountants, be appointed as Auditors of The Institution of Engineers (India) for the year 2019-2020 at a remuneration of Rs.5,50,000+ Taxes as applicable.

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

IEI DIARY



Aerospace Engineering Division

One Day Seminar on **"Micro and Nano Air Vehicles and their sensors"**
Gwalior, April 05, 2020

The Honorary Secretary, IEI, Gwalior Local Centre, Green Park, Engineers Road, Near New Collectorate, City Centre, Gwalior 474011; e-mail: gwaliorlc@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

Thirty-fourth National Convention of Agricultural Engineers on **"Prospects and Challenges for Agricultural Engineering to Ensure Sustainable Agricultural Production and Doubling Farmers Income"**
Goa, June 26-27, 2020

The Honorary Secretary, IEI, Goa State Centre, D Type Quarters, D-8-1 Government Polytechnic Campus, Altinho, Panaji, Goa 403001 [☎: (0832) 2434686; e-mail: ieigoasc@ieindia.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

One Day Seminar on **"Sustainable Architectural Development"**
Raipur, April 10, 2020

The Honorary Secretary, IEI, Chhattisgarh State Centre, National Institute of Technology Campus, G E Road, Raipur 492010 [☎: (0771)2254625; e-mail: chhattisgarhsc@ieindia.org; website: www.ieicg.org]

Thirty-sixth National Convention of Architectural Engineers on **"Comfort and Energy Efficiency in Built Environment"**

Tiruchirappalli, October 09-10, 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]

Chemical Engineering Division

International Conference on **"Technology for Green Fireworks: Holistic Approach towards Environmental Challenges"**

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: durgapurlc@ieindia.org]

Civil Engineering Division

One Day Workshop on **"Sustainable Construction Materials and Ground Improvement Techniques"**

Kattankulathur, April 04 2020

The Honorary IEI, Kattankulathur Local Centre, SRM Institute of Science and Technology, Mahatma Gandhi Road, Potheri, SRM Nagar, Dist Chengalpattu, Kattankulathur, Tamilnadu 603203 [☎: 044-2745 2270; kattankulathurlc@ieindia.org]

Workshop on **"Fire and Flood Induced Disaster Mitigation"**

Lucknow, April 19, 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 **"Alternate Building Materials and Methods in Civil Engineering"**

Bangalore, 24-25 April 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]

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

One Day Workshop on **"Robotics using Embedded Systems"**

Bareilly, April 09, 2020

The Honorary Secretary, IEI, Bareilly Local Centre, House No. 270, Camphor Estate, Rampur Road, Post-Clutterbuck Ganj (C.B. Ganj), Bareilly 243502 [email: bareillylc@ieindia.org]

All India Seminar on **"Explainable Artificial Intelligence SMART Wearables"**

Bareilly, April 23-24, 2020

The Honorary Secretary, IEI, Bareilly Local Centre, House No. 270, Camphor Estate, Rampur Road, Post-Clutterbuck Ganj (C.B. Ganj), Bareilly 243502 [email: bareillylc@ieindia.org]

All India Seminar on **"Security in Cyber-Physical Systems and AI : Cloud Based Digital Disruption"**

Kolkata, April 24-25, 2020

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

Electrical Engineering Division

National Seminar on **"Role of Renewable Energy for reducing Greenhouse Gas Emissions and Conservation of Energy"**

Faridabad, April 10-11, 2020

The Honorary Secretary, IEI, Faridabad Local Centre, Qtr No. 45 YMCA University of Science & Technology, 1st Floor, Sector 6, Faridabad 121006 [☎: (0129) 4100798; e-mail: faridabadlc@ieindia.org; web: www.ieifbdlc.in]

One Day Workshop on **"Green Power Renewable Energy for Sustainable Development"**

Bareilly, April 15, 2020

The Honorary Secretary, IEI, Bareilly Local Centre, House No. 270, Camphor Estate, Rampur Road, Post-Clutterbuck Ganj (C.B. Ganj), Bareilly 243502 [email: bareillylc@ieindia.org]

One Day Workshop on **"Handson Experience: Advances in Industrial Automation using Programmable Logic Controller"**

Solapur, April 15, 2020

The Honorary Secretary, IEI, Solapur Local Centre, Vastu Vaibhav, 3 North Kasaba, 4th Floor Near Laxmi Bank, Shivaji Chowk, Solapur 413001 [☎: (0217) 2727707; e-mail: solapurlc@ieindia.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, Tiruchirapalli 620014 [☎: (0431) 2554285 / 2574022; e-mail: tiruchirapallilc@ieindia.org]

All India Workshop on **"Home Energy Audit"**
Tiruvallur, June 12-13, 2020

The Honorary Secretary, IEI, Tiruvallur Local Centre, Dr MGR Educational and Research Institute University, Periyar E V R High Road (NH 4 Highway), Maduravoyal, Chennai 600095 [e-mail: tiruvallurc@ieindia.org]

All India Workshop on **"E-Bike Design Retrofitting and EV"**

Kattankulathur, August 06-07, 2020

The Honorary IEI, Kattankulathur Local Centre, SRM Institute of Science and Technology, Mahatma Gandhi Road, Potheri, SRM Nagar, Dist Chengalpattu, Kattankulathur, Tamilnadu 603203 [☎: 044-2745 2270; kattankulathurc@ieindia.org]

Thirty-sixth National Convention of Electrical Engineers on **"Future Electricity Systems: Challenges and Current Trends"**

Jodhpur, November 28-29, 2020

The Honorary Secretary, IEI, Jodhpur Local Centre, Residency Road, Jodhpur 342011 [☎: (0291)2432708; e-mail: jodphurc@ieindia.org]

Electronics and Telecom. Engineering Division

All India Seminar on **"Video Processing and Analytics"**

Bangalore, April 16-17, 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]

All India Workshop on **"Impact of Advancement in Wireless Technology (5G, 6G) on Indian Society"**

Chandigarh, April 11-15, 2020

The Honorary Secretary, IEI, Punjab & Chandigarh State Centre, Madhya Marg, Sector 19-A, Chandigarh 160009 [☎: (0172) 2775418; Fax : (0172) 2540133; e-mail: pcsc@ieindia.org]

Environmental Engineering Division

All India Seminar on **"Monitoring And Control of Air Pollution in Manufacturing Industries"**

Salem, June 19-20, 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: salemc@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

Thirty-fourth National Convention of Marine Engineers on **"Contemporary Developments in Maritime Technologies"**

Visakhapatnam, August 28-29, 2020

The Honorary Secretary, IEI, Visakhapatnam Local Centre, 9-12-31/1, Beside A U Engineering College Girls Hostel, Visakhapatnam 530003 [☎: (0891) 2747460; e-mail: visakhapatnamlc@ieindia.org; web: www.ieivisakhapatnam.org]

Mechanical Engineering Division

One Day Seminar on **"Solution of Heat Transfer and Fluid Flow Problems through CFD"**

Bareilly, April 13, 2020

The Honorary Secretary, IEI, Bareilly Local Centre, House No. 270, Camphor Estate, Rampur Road, Post-Clutterbuck Ganj (C.B. Ganj), Bareilly 243502 [email: bareillylc@ieindia.org]

All India Seminar on **"Sustainable Development and Reliability in Present Scenario"**

Durgapur, May 08-09, 2020

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

All India Seminar on **"Future Trends in Manufacturing Systems"**

Jabalpur, August 08-09, 2020

The Honorary Secretary, IEI, Jabalpur Local Centre, IEI, Jabalpur Local Centre, Visvesvaraya Marg, South Civil Lines, In front of RTO Office, Jabalpur 482001 [Telefax: (0761) 2678929; e-mail: jabalpurc@ieindia.org]

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

Agartala, September 05-06, 2020

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

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@ieindia.org; website: www.ieidsc.in]

Metallurgical & Materials Engg. Division

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@ieindia.org]

Mining Engineering Division

International Conference on **"Technological Advancement and its Management in Mining Excavation Sectors"**

Dhanbad, September 09-12, 2020

The Honorary Secretary, IEI, Dhanbad Local Centre, Camp Office: C/O Prof P Bandopadhyay, Co-operative Society Colony, Kusum Vihar, P.O.: BCCL Township, Koyla Nagar, Dhanbad 826005 [Mob: 9934896322 / 8789853083]

Production Engineering Division

All India Seminar on **"Advanced Manufacturing Strategies and Advanced Study of Composite Materials"**

Bareilly, April 03-04, 2020

The Honorary Secretary, IEI, Bareilly Local Centre, House No. 270, Camphor Estate, Rampur Road, Post-Clutterbuck Ganj (C.B. Ganj), Bareilly 243502 [email: bareillylc@ieindia.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: durgapurc@gmail.com; website : ieidurgapurc.org]

Interdisciplinary

All India Seminar on **"Strengthening Entrepreneurship in MSME through Emerging Technologies"**

Lucknow, May 30-31, 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]



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

FORM IV

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

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

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| 6. Names and addresses of individuals who own the newspaper and partners or shareholders holding more than one percent of capital | The Institution of Engineers (India)
8 Gokhale Road
Kolkata 700 020 |

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

Dated : March 01, 2020

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



The Institution of Engineers (India)

IEI YOUNG ENGINEERS AWARD 2020-21

Notification

The Institution of Engineers (India) is a multi-disciplinary professional body of engineers with 15 engineering disciplines and over 8,00,000 members in India and abroad. The Institution was established in 1920 and was incorporated by Royal Charter in 1935. It has been in the forefront of engineering profession addressing the socio engineering problems for progress of the country. IEI functions among professional engineers, academicians, research workers to update their professional knowledge through continuous professional development. With its large international linkages and a network of 125 Centres in India and Six Overseas Chapters, the Institution has built up wide reach and large infrastructure to meet its objectives of promoting engineering in all aspects.

With a view to promote the pursuit of excellence in the field of engineering, IEI has instituted 'IEI Young Engineers Award'. The Award consists of a Plaque and a Certificate. The purpose of the Award is to recognize outstanding achievements/contributions made by young engineers in engineering research, excellence in engineering technology development, technology transfer, etc. Any engineer citizen of India not older than 35 years of age as on March 31, 2020 is eligible for the Award. The IEI Young Engineers Award is presented to awardees for all the 15 Engineering Divisions of the IEI during the respective National Conventions. The awardees attending the National Convention will be provided with free accommodation & their traveling expenses (AC-3 Tier train fare by shortest route) will be reimbursed on production of original documents.

The Application Proforma may be downloaded from IEI website (<https://www.ieindia.org>). Soft copy of the filled-in application proforma should be forwarded to award@ieindia.org by March 31, 2020. Further, six copies of the duly filled application form, along with all supporting documents, endorsed by appropriate authority should be sent to the below mentioned address so as to reach us latest by April 15, 2020:

Director (Technical)

The Institution of Engineers (India)
8 Gokhale Road, Kolkata 700020

The envelope containing the application should be superscribed at the top as 'IEI Young Engineers Award 2020-2021' and name of the engineering division under which the applicant desires to be considered for the Award.

STILL NOT A MEMBER OF IEI ?

BE A CORPORATE MEMBER OF IEI. FOR FURTHER DETAILS PLEASE FOLLOW THE LINK :- <https://www.ieindia.org/webui/iei-Memb.aspx#download>

Superannuation from IEI



Mr Gourango Chandra Roy, an employee of the Institution HQ will be superannuated from the services of IEI on March 31, 2020. He joined the Institution on March 24, 1980 and rendered his services to the Institution for a period of 40 years.

IEI wishes Mr Gourango Chandra Roy and his family a happy and healthy life in future.

Mr Ramesh Chandra Barik, an employee of the Institution HQ will be superannuated from the services of IEI on March 31, 2020. He joined the Institution on March 1, 1993 and rendered his services to the Institution for a period of 27 years.

IEI wishes Mr Ramesh Chandra Barik and his family a happy and healthy life in future.



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