



Thirty-fifth National Convention of Electronics & Telecommunication Engineers, Kurukshetra

Intelligent Electronics Systems for State-of-the-Art Healthcare System

The Thirty-fifth National Convention of Electronics & Telecommunication Engineers was organised by Haryana State Centre during October 19-20, 2019 at Technology Education and Research Integrated Institute (TERII), Kurukshetra on the theme, "Intelligent Electronics Systems for State-of-the-Art Healthcare System" under the aegis of Electronics & Telecommunication Engineering Division Board (ETDB) of the Institution. The Chief Guest, Dr M P Gupta, former Director of Technical Education, Govt. of Haryana inaugurated the Convention. While delivering his address, the Chief Guest elaborated the historical evolution of Electronic Engineering discipline for the last four decades and he highlighted that how the concept of artificial intelligence has been inducted in engineering & technology. Dr T M Gunaraja, President, IEI presided over the function and Mr Narendra Singh, President-Elect, IEI and members of ETDB graced the occasion with their kind presence. President, IEI informed about various events that have been organised by the Institution on the occasion of Centenary Celebrations. Mr Narendra Singh, President-Elect, IEI focussed on the theme of the Convention. Earlier, Mr Ajay Mahajan, Chairman, Haryana State Centre welcomed the gathering. Dr Vrinda Gupta, Convenor, briefed

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Thirty-third National Convention of Aerospace Engineers, Pune

Emerging Technologies in Aerospace Structures, Materials and Propulsion Systems

Pune Local Centre of the Institution, in association with Defence Institute of Advanced Technology, Pune and ASM International, Pune Chapter organized Thirty-third National Convention of Aerospace Engineers during November 16-17, 2019 at Pune on the theme 'Emerging Technologies in Aerospace Structures, Materials and Propulsion Systems' under the aegis of Aerospace Engineering Division Board of the Institution. Mr V V Parlikar, Director, Research and Development Establishment (Engrs), DRDO graced the occasion as Chief Guest. During his address, Mr Parlikar stressed on emerging areas of aircraft industry including hypersonic aircraft, reusable launch vehicle, autonomous flight system, zero fuel aircrafts, unmanned aircraft, multi-copter drones, electromagnetic aircraft launch systems, development of advanced weapon and launcher base etc. Mr Parlikar further emphasized on enhanced applications of smart, multi functional light weight materials, more exploration on advancement of aircraft technologies and explained the significance of start ups in R&D in advancement of aircraft technology. Mr G K Pillai, MD & CEO, Walchandnagar Industries Limited, Pune addressed the audience as Guest of Honour. During his address, Mr Pillai stressed on the strong need to have industry and institute collaborative

research and development programs in the area of aviation. He further emphasized on indigenous mission and import substitution in space and nuclear industries and sustainable development of self reliant technology in space sector. Mr Rajinder Singh Bhatia, President and CEO, Defence and Aerospace, Bharat Forge Limited, Mundhwa delivered the Keynote



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Opportunities & Challenges of Blockchain Technology

The Institution of Engineers (India) Tamilnadu State Centre organized the International Conference on the theme 'Opportunities & Challenges of Blockchain Technology' under the aegis of Computer Engineering Division Board during 17 & 18 October 2019 at Hotel Le Royal Meridien, Chennai. Mr Thiru Santhosh K Misra, IAS, Commissioner / MD, Commissionerate of e-Governance TamilNadu e - Governance Agency, Government of Tamil Nadu graced the occasion as Chief Guest.



In his address, the Chief Guest mentioned that the Blockchain Technology brings trust, transparency at the best cost. He further explained the significance of setting up Blockchain Highway that will enable many startups & business to setup processes and ideas for greater benefit of Tamilnadu. He also highlighted the fact that Blockchain Technology will help to energise India's digital economy which is able to increase productivity and output in near future. Dr T M Gunaraja, President, IEI with his august presence during the occasion delivered a Special Address to the gathering and congratulated Tamilnadu State Centre for organizing the International Conference on a very contemporary topic.

Mr N P Singh Brar, Chairman, Computer Engineering Division Board (CPDB), IEI presided over the function. In his address, Mr Brar highlighted the major developments in Blockchain Technology. He mentioned that as an emerging superpower, India needs true solutions to tackle major problems including middlemen intervention, data breaches, corruption, and tampering of financial ledgers when Blockchain seems to be the most feasible solution.

Earlier, Mr R Ramdoss, Chairman, TNSC, IEI welcomed the august audience. Mr P Gomathi Nayagam, Honorary Secretary, TNSC, IEI proposed the vote of thanks. A Souvenir was released during the occasion by the Chief Guest and other dignitaries present on the dais.

Prof. Sandeep Kumar Shukla, Department of Computer Science and Engineering, Interdisciplinary Center for Cyber Security and Cyber Defence of Critical Infrastructures, IIT Kanpur in his address explained Blockchain as an emerging technology platform for developing decentralized applications and data storage, over and beyond its role as the technology underlying the cryptocurrencies.

Mr Deepak Lalan, Associate Director, Accenture elaborated that Internet of Things (IoT), Artificial Intelligence (AI), and Blockchain represent an unprecedented opportunity for the enterprise and the public sector and every organisation capable of exploiting these technologies will have a chance to radically streamline and enhance existing processes, create entirely new business models, and develop innovative products and services for a new generation of consumers.

Mr Narayan Neelakantan, Co-founder & CEO, Block Armour mentioned that organizations and governments across the world including India are evaluating the potential of blockchain to provide greater transparency and efficiency.

Mr Sunil Aggarwal, Dean, Blockchain Programs, TalentSprint explained Blockchains as peer-to-peer (P2P) driven governance protocols and functional aspects of Geoeconomics of Blockchains.

Mr Pankaj Mittal, COO, InstoreIn Technologies explained different aspects of Blockchain Ecosystem. Mr Gokul Alex, Associate Director, PwC lucidly explained Blockchain Technology as the convergence of decentralization, peer to peer networks, game theory, distributed computing, consensus algorithms and so on. During technical sessions, number of papers were presented addressing application domains of Blockchain Technology in infrastructure, source based deduplication in Cloud Computing by means of Blockchain Technology, Data Security at Cloud Computing using face recognition etc. Large number of delegates and participants from industry, academia and R&D attended the Conference.

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about the theme of the Convention. The Keynote Address was delivered by Dr. Shakti Kumar, Director, Panipat Institute of Engineering & Technology (PIET), Panipat, Haryana on the topic, "Artificial Intelligence in Healthcare". During the auspicious occasion, Prof K K Agarwal, Chairman, National Board of Accreditation (in absentia), Dr Shakti Kumar, Director, PIET Panipat and Mr P K Sansi, former Deputy General Manager, Air India were felicitated as Eminent Engineers in the field of Electronics & Telecommunication Engineering. The prestigious "Prof S K Mitra Memorial Lecture" was delivered by Prof (Dr) T S Kamal, former Professor, Punjab Engineering College, Chandigarh and Council Member IEI. The IEI Young Engineers award was awarded to Dr M K Patel, Scientist, CSIR-Central Scientific Instruments Organisation, Chandigarh and Dr R K Chaudhary, Assistant Professor, Department of Electronics Engineering, IIT-ISM Dhanbad in the field of Electronics & Telecommunication Engineering for their significant contributions. Mr A K Sharma, Honorary Secretary, Haryana State Centre

proposed vote of thanks. Twenty two Technical Papers were presented during five technical sessions. The Valedictory session was chaired by Mr Pardeep Kumar, Chairman, IT Cell, Kurukshetra University, Kurukshetra. Mr K C Sethi, Council Member, IEI, presented the vote of thanks in the end of valedictory session.

The following recommendations have been emanated from the National Conference:

The artificial intelligence techniques should be properly utilised in the healthcare systems; The digital methodology should be adopted in advanced health monitoring system; Wireless sensor network based telemetry must be properly utilised in medical diagnosis process especially in ICU at the hospitals; Information security system should be properly handled for which neural cryptography may be used; Big Data Analysis in healthcare system will focus the future trends of diagnosis process; Concept of Humanoid Robot may be adopted in next generation.

Storing Energy for a Sustainable Future – Future Energy in any Isolated World

The Institution of Engineers (India), Tamilnadu State Centre organized the 35th National Convention of Electrical Engineers on the theme 'Storing Energy for a Sustainable Future – Future Energy in any Isolated World' at Chennai during 07-09 November 2019 under the aegis of Electrical Engineering Division Board of the Institution. The programme was inaugurated by Mr K Pandiarajan, Hon'ble Minister of Tamil Development, Culture and Archaeology, Government of Tamilnadu on the evening of 07 November 2019 in presence of dignitaries from industry and academia. While delivering the inaugural address on a philosophical note, Mr



Pandiarajan mentioned that technology is gradually transforming the elliptical world into a flat one. He also spoke about the Electrical Act 2003 which had for the first time created separate provisions for transmission, generation and distribution and the subsequent developments till date. The Chief Guest also touched upon the taxation policies for storage equipment manufacturers and their amendments from time to time. He concluded stating that the nature of technologies proposed to be discussed during the Conference is hugely relevant to Tamilnadu as well as the nation. Mr R R Tanwar, Chairman, Electrical Engineering Division Board, while presiding on the occasion, mentioned that the topic is of paramount importance. He also said that the deliberations by eminent engineers, professionals and practitioners will throw light on the best practices in the area of energy storage and suitable recommendations will emanate which may be placed before policy-makers for consideration. While speaking on the theme, Mr P Rajamani, Convener and Council Member, IEI mentioned that indigenous technologies aimed at mitigating challenges in storage and transmission needs to be encouraged in order to stay relevant and deploy them suitably. He also spoke about various state-of-the-art energy storage systems. Dr T M Gunaraja, President, IEI graced the inaugural function and mentioned that the professional societies need to play an important role for shaping the engineering education in the next century. He informed the audience about the views expressed by Mr Nitin Gadkari, Hon'ble Union Minister of Road Transport and Highways and MSME on the occasion of recently concluded IEI Centenary Industry Excellence Awards ceremony held at New Delhi on engineering education undergoing a paradigm shift and the role of disruptive technology. He also mentioned that it is imperative for the engineers to think beyond silos. On this occasion four eminent engineers namely, Mr M Umapathi, Chairman and Managing Director, Voltech Group of Companies, Chennai; Dr R A Gupta, Vice Chancellor, Rajasthan Technical University, Kota; Mr Srinivasan S, Vice President and Head, Engineering – Power Transmission and Distribution IC, Larsen & Toubro Ltd and Ms Vandana Singhal, Chief Engineer, Distribution Policy and Regulations Division, Central Electricity Authority, New Delhi (in absentia) were felicitated for their outstanding contribution to the profession of electrical engineering. Dr Bharath H Aithal, Assistant Professor, RCG School of Infrastructure Design and Management, Indian Institute of Technology Kharagpur, West Bengal; Dr (Ms) Ankita Samui, Senior Engineer, GE Power, Bangalore, Karnataka

and Mr Giriraj R Uttarwar, Manager, GMR Chhattisgarh Energy Ltd., Raipur, Chhattisgarh were the recipients of the IEI Young Engineers Award in Electrical Engineering Division and also presented papers in the National Conference. Earlier, the welcome address was delivered by Mr R Ramdoss, Chairman, Tamil Nadu State Centre and Mr P Gomathi Nayagam, Honorary Secretary proposed the vote of thanks.

The inaugural session also included the prestigious M S Thacker Memorial Lecture delivered by Prof Ashok Jhunjhunwala from IIT Madras on the topic 'Grid Storage: What is it: What will it cost?' While delivering the lecture, Prof Jhunjhunwala stated that the conventional sources of energy continue to be the first choice of energy generation owing to its ease of storage; however, for others we don't have proper storage technology thus escalating the cost. He mentioned that energy storage for non-conventional sources of energy is possible through decentralized storage through roof-top solar energy devices in office complexes and commercial spaces. He also mentioned about the efforts of the research group at IIT Madras in extracting valuable metals like, cobalt, nickel, manganese from discarded mobile batteries for indigenous manufacture of storage devices economically.

A Souvenir, containing the full text of papers presented, was also released on the occasion. The other highlights of the event included a panel discussion on 'Microgrids

and Energy Storage' with panellists from EPC contractors, energy equipment manufacturers and a debate on Suitability of Electric Vehicles in Indian context. The National

Conference was laced with several keynote addresses and presentations on the state-of-the art technologies by experts from energy storage sector as well as author presentations. The participation was from a right blend of academia like IIT Madras, Rajasthan Technical University – Kota, College of Engineering, Guindy Chennai, Prince Sultan University, Riyadh as well as prominent industries like ISRO, L&T ECC Chennai, Customized Energy Solutions, Delta Electronics, APTransc, Tata Consulting Engineers etc. The inaugural programme was well covered by print and electronic media. The Conference was also supplemented by an engrossing panel discussions on the topic 'Microgrids and Energy Storage' with panellists from EPC contractors and storage equipment manufactures.

Based on the discourses of this Conference, the following recommendations have been drawn up:-

The first objective would be to find an established mechanism to augment the technology of 'Decentralized Storage of Grid'. This can be made feasible by developing indigenous storage batteries. A viable option towards ramping up of storage battery production would involve an effluent free, economically extractive metallurgical process which would aim at extracting elements like Li, Cu, Mn from the discarded mobile phones of 1.3 billion mobile users in the country; With the advent of Vanadium Redox Flow Batteries, scaling up power and energy independently has been made possible, but pertinent and focussed research in bringing down the cost of the electrolyte needs to be encouraged through venture funding from

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Future Strategies for Sustainable Mining

Goa State Centre of the Institution in association with Mining Engineers' Association of India (MEAI), Goa Chapter organized 31st National Convention of Mining Engineers on the theme, "Future Strategies for Sustainable Mining" at Hotel Taj Vivanta, Panaji, Goa during October 04-05, 2019 under the aegis of Mining Engineering Division Board of the Institution. The Chief Guest, Mr Nilesh Cabral, Hon'ble Minister for Power & Environment, Govt. of Goa inaugurated the National Convention. On this auspicious occasion, Mr Ambar Timblo, Managing Director, Fomento Resources, Goa was the Guest-of-Honour and Mr Narendra Singh, President-Elect, IEI was the Special Invitee. Mr Cabral highlighted various aspects of mining, which Goa faces for the last few years. He also focused on the environmental issues that should be connected with the mining development in the coming years. The Chairman, MEAI, Goa Chapter, Mr Cletus D'Souza also graced the

Government Polytechnic, Bicholim, Goa and Prof G K Pradhan, Dean, Faculty of Engineering & Technology, AKS University, Satna, Madhya Pradesh were felicitated as Eminent Engineers in the field of Mining Engineering. The prestigious "Prof S K Bose Memorial Lecture" was delivered by Prof M S Venkataramayya, Dean, Industry-Institute Cell, Malla Reddy Engineering College, Hyderabad. A large number of participants were present during the two-day event and presented their papers in various technical sessions. A panel discussion on "Future of Mining Engineering" was held during the event. At the end of the function, Mr Anwar Isaac Khan, Honorary Secretary, Goa State Centre proposed the vote of thanks.

The following recommendations have been emanated from the Convention:-

Need for reforms to ensure clearing bottlenecks, single window and timely clearances amongst concerned departments; Resumption of Mining in States where, there is stoppage and a transparent and clear road map to see for the mine sector in the future, including legislative cure to remove the road block in view of any Court judgment or otherwise; With specific reference to Goa State, legislative cure is needed to correct impasse to be at par with rest of India in terms of benefits accrued by MMRD Amendment Act 2015 by rest of India; Although mineral policy is sound and well thought of, it may require need for review of allocation policy in light of successful practices globally, incentivize infrastructural solution and incentivize exploration before grants make the process of exploration easier; Need for reforms and benchmarked with other developed and developing countries as Industry is heavily burdened. Intergenerational equity concept to be carefully understood and used not merely for revenue generation; Distinction between captive and non captive mining in mining laws should be eliminated in the interest of mineral development; Public image and trust from community in the long run be improved further. Alternative livelihood opportunities within mines closure as mineral resources are finite be looked into; Additional interactions with Academics / Research and Industry need to be enhanced; Non-exclusive Reconnaissance Permit should be modified to make it exclusive. There should be seamless transition from Reconnaissance Permit to Prospective License to Mining Lease; Auctioning of the Prospecting License-cum-Mining Lease need to be relooked; Further, National Mineral Exploration Policy and the present Import-Export Policy also need to be relooked for the interests of the mineral producers.



occasion and expressed his views on the event. Earlier, Mr Chandrashekhar G Prabhudessai, Chairman, Goa State Centre welcomed the august gathering and the brief of the theme was delivered by Mr Gajanan Karkare, Convenor of the Convention. President-Elect, IEI highlighted on organization of various technical events of the Institution in national and international level on the occasion of Centenary Celebration of IEI. Mr Chandra Mohan, Chairman, Mining Engineering Division Board of the Institution presided over the function. During his address, he appreciated the efforts of Goa State Centre for organizing the event in a befitting manner. He further expressed that the mining blocks of Goa have been closed for the last few years, which issue need to be addressed with positive outcome from the National Seminar. A souvenir was released during the inaugural session. Prof M S Venkataramayya, Dean, Industry-Institute Cell, Malla Reddy Engineering College, Dhulapally, Hyderabad; Mr Aniruddha Joshi, former Vice President (Corporate Affairs) & Acting CEO, Iron Ore Business of Vedanta Ltd.; Mr K N Subhash, former Head, Department of Mining Engineering & Mine Surveying,

Inauguration of New Centre of IEI

Dr T M Gunaraja, President, IEI inaugurated the **Kattankulathur Local Centre** as the 124th Centre of the Institution at the premises of SRM Institute of Science and Technology, Mahatma Gandhi Road, Potheri, SRM Nagar, Dist Chengalpattu, Kattankulathur, Tamilnadu 603203 at a well attended function on 02 December, 2019. The first Chairman and Honorary Secretary of Kattankulathur Local Centre are Dr P T Ravichandran and Dr (Ms) S Dhanalakshmi respectively.



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address. In his thought provoking speech, Mr Bhatia stressed on the scope of market openings in the area of aviation sector as the big players like Boeing, Air Bus etc are eyeing at Indian market from manufacturing of the aero components point of view. Mr Bhatia further mentioned that India can avail the opportunities of growing Aero Sector and may become a major hub of aero components manufacturing sector and further stressed upon incubation of start ups centres in the area of aviation. Mr Manish Mahendra Kothari, Chairman, Aerospace Engineering Division Board [ASDB] presided over the function. Chairman, ASDB during his address mentioned that aerospace structure differs from others due to higher endurance limit, higher performance index and lightweight. He mentioned that new structural design paradigms are fast changing to achieve effective weight and corresponding aero-vehicle performance. During the occasion, Dr Rajkumar S Pant, Professor, Department of Aerospace Engineering, IIT Bombay, Mumbai (in absentia), Mr R Sundaram, MD & CEO, Aerospace Engineers Private Limited, The Salem Aeropark, Salem and Mr R V Huliraj, Chief Designer, Aircraft Upgrade Research & Design Centre, Nashik were felicitated as eminent engineering personalities for their outstanding contribution in the field of Aerospace Engineering. The prestigious Dr Vikram Sarabhai Memorial Lecture was delivered by Dr C P Ramanarayanan, Vice Chancellor, Defence Institute of Advanced Technology, Pune on the theme 'Development of Aero Gas Turbine Engines and Technologies in India – Present and Future. A State of the Art Lecture was delivered during the occasion by Dr Himanshu Shekhar, Scientist G, DRDO, Pune on the topic 'Advances in Solid Rocket Propellants'. The IEI Young Engineers Award in Aerospace Engineering Division 2019-20 was presented to Dr Sahil Kalra, Assistant Professor, Department of Mechanical Engineering, IIT Jammu, Mr Tom Thampy, Scientist D, Aerospace Laboratory, CMTI, Bangalore and Mr Karna Jayaprakash Reddy, Senior Scientist, Centre for Societal Missions & Special Technologies, CSIR-National Aerospace Laboratories, Bangalore for their significant contributions in the field of Aerospace Engineering. Earlier, Prof K K Ghosh, Chairman Pune Local Centre and Member, ASDB welcomed the august audience. Dr Dinesh Singh G Thakur, Organising Secretary briefed the audience about the theme of the Convention. Prof Ms A Deshmukh, Honorary Secretary, Pune Local Centre proposed the vote of thanks. Dignitaries from industry, R&D and academia were present during the two day National Conference in which 12 invited Lectures and 21 technical papers were presented embracing the theme and sub theme. *Recommendations emanated from the two-day deliberations have summed up and placed in Valedictory Function as follows.*

For a sustainable economy, acceleration of start ups in defence and

aerospace, more scientific analysis in interdisciplinary areas of aerospace industry and more industry academia interface is the need of the hour; Low cost composite materials need to be explored further for cost effective aerospace structures. For new materials, Material Data Banks are recommended to meet the design requirement of fifth generation aircrafts; Furthering air transport, applications of electrical planes, autonomous aircrafts, autopilots need to be stressed further; It is high time to concentrate on development of higher efficiency aircraft engines through more emphasis on design and process capability enhancement. Research base and expertise in development of gas turbine materials, processes, manufacturing and development for aeronautical applications need to be enhanced further; Augmentation and development of skilled manpower in aviation sector is of prime importance as it is still inadequate; More research and development are required for development of solid rocket propellants to overcome the limitations of application of liquid propellants, which should be initiated by ballisticians, structural integrity experts, R&D Cell and manufacturers; Cavity based supersonic combustor must be explored to design new scramjet engines to be applied for fighter aircrafts in future; Further research on scramjet engines must be carried out in a systematic manner involving technocrats and scientists for a sustainable period of time; Reliability, Availability, Maintainability and Safety be integrated as a part of inherent system design function, which leads to better risk assessment and enhanced system efficiency; Boron based solid fuel may be recommended as an economic alternative for application in ducted rocket/ramjet. Further research and exploration also required to evaluate the combustion performance of boron with subsequent energy release; For better communications and also to overcome the limitations of signal transmission systems of traditional radar antennas, application of reconfigurable antenna structure in space be explored further; Societal applications for space technology to be implemented in further directions including navigations, application of GPS, telemedicine, environmental monitoring, agricultural applications, railways navigation and so on; Aerospace Class Autoclave and Multi Zone Hot Bonder provides a larger application area for aircraft structure fabrication and maintenance of composite materials respectively; Hydraulic actuators and allied hydraulic systems have important application areas in Aeronautics. Rated performance of hydraulic actuators should be full proofed in all respects to achieve the optimum operational efficiency of the aircraft operational system; Structural health monitoring of aerospace structure, which refers to the damage detection strategy to measure aerospace infrastructure system health has a wide domain of application and further implementation.

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direct beneficiaries. The application of this technology and its functioning needs to be explored in sub-zero temperature condition as well as its integration with other technologies should be facilitated; The mainstay of Li-ion batteries is Cobalt which is primarily obtained from Congo, which is an extremely volatile zone thereby rendering an element of uncertainty to the global supply chain of Cobalt. Research aimed at replacing Cobalt with a more available and economical element 'Manganese' needs to be encouraged as they have the potential to provide real technological breakthrough in the competitive storage technology market; Despite inherent difficulties, the statistics suggest that EV – penetration has been

highest in recent years owing to congruent government policies. Keeping with the pace, the parking spaces need to be EV – ready and also agile policies are to be formulated to recycle / dispose the batteries beyond their 'shelf – life'; Peak shaving technology has the potential to be a saviour in the form of delivering effective cooling solutions in the form of 'intelligent air-conditioning' through 'Smart Thermal energy Storage System' thereby providing long battery life and reducing generator load for commercial buildings with cooling requirement of 100T and above; Dedicated research towards optimizing fuel cell performance using other noble materials, instead of something as premium as platinum, needs to be taken up which will augment our space programs in near future.

Twenty-seventh IEI Convocation and Technicians'/Students' Convention

Rajasthan State Centre of the Institution organised the Twenty-seventh IEI Convocation and Technicians'/Students' Convention during November 09-10, 2019 at Jaipur. The theme of the Convention was "Industry 4.0 – Transforming Industrial Productivity". Dr Subhash Garg, Hon'ble Minister for Technical Education, Government of Rajasthan and Prof Achintya Chaudhury, Vice Chancellor, Bharatiya Skill Development University, Rajasthan were present in the function as Chief Guest and Guest-of-Honour, respectively, to inaugurate the Convocation. The Chief Guest of the function, Dr Garg in his address complimented IEI for being committed to the holistic development of an engineer and also encouraged strengthening the interface

Maharashtra; Department of Electrical and Electronics Engineering, Mepco Schlenk Engineering College, Sivakasi, Tamil Nadu, and Department of Electronics and Telecommunication Engineering, RMK Engineering College, Kavaraipettai, Tamil Nadu respectively. The Best, Second Best and Third best Polytechnic Students' Chapter Award for the session 2018-2019 were presented to Sri Ramakrishna Polytechnic College, Coimbatore, Tamil Nadu; Thiagarajar Polytechnic College, Salem, Tamil Nadu, and GRG Polytechnic College, Coimbatore, Tamil Nadu respectively. President, IEI presented the Awards and Prizes to the members, who secured Highest/Second highest/Third highest marks in Section A and Section B examinations in different engineering disciplines and the 50th All India Students' Design Competition Awards – 2019 for promoting the advancement of engineering and technology in the country.

Further, four papers were adjudged and awarded as best papers in two categories: In Polytechnic category, Mr T Kathir Praveen in Civil Engineering Division, Mr N Mohammed Farid in Mechanical Engineering Division and Ms S Reshma & Ms S Arulambika in Electrical & Electronics Engineering Division from Thiagarajar Polytechnic College, Salem, TN. In Technicians category, Mr K K Shukla & Mr Pinki Shukla from Tata Motors Limited, Jamshedpur.

The Sections A and B examinations Pass Certificates were presented to 2517 candidates (1197 candidates of Summer 2018 and 1320 candidates of Winter 2018) who passed Sections A and B examinations in ten engineering disciplines during the year 2018 were awarded certificates in person and in absentia during the Convocation.

Earlier, Mr O P Saxena, Chairman, Organizing Committee and Council Member, IEI, welcomed the august gathering. The Convocation was concluded with the vote of thanks by Maj Gen (Dr) S Bhattacharya, Secretary and Director General, IEI.

The All-India Technicians' / Students' Seminar was held on 09 Nov 2019 at Rajasthan State Centre on the theme, "Industry 4.0 – Transforming Industrial Productivity". Mr S C Rudra, Chairman, All India Technicians' Committee and Council Member, IEI and Mr E R Reddy, Member, All India Technicians' Committee and Council Member, IEI were the Chief Guest and Guest-of-Honour, respectively, on the occasion of Technicians'/Students' Seminar and Technical session.. A large number of Student members of Engineering Colleges and Polytechnics attended the event of Twenty-seventh IEI Convocation and Technicians'/Students' Convention.

The Chief Guest on the occasion, Mr Rudra emphasized on industry integrated curriculum to be designed for the engineering students as well as for Technician Members for employment opportunities as per the need of current scenario of the country. Guest-of-Honour, Mr Reddy also highlighted the need of Digital Learning System to be introduced in the present curriculum of AMIE. The student members of the Engineering Colleges and Polytechnics attached to various Engineering Colleges Students' Chapters of IEI presented technical papers that invoked interest in the audience comprising Students of Engineering Colleges and Polytechnics, Senior engineers, Guests and other Delegates. Altogether thirty-six technical papers were presented and discussed based on the above-mentioned theme and on diverse field of engineering that covered various engineering disciplines. Earlier, Mr Sajjan Singh Yadav, Chairman, Rajasthan State Centre welcomed the august gathering. The programme ended with a vote of thanks by Mr Gautam Raj Bhansali, Honorary Secretary, Rajasthan State Centre, IEI.

between engineers from academic field as well as industry. He emphasized on the fact that there is a tectonic shift in the way technology is leveraged to spread into every aspect of human life and it is imperative for engineers to equip themselves with agility to remain relevant and be able to contribute to the developmental needs of the society. The Guest-of-honour, Prof Achintya Chaudhury delivered a very motivating speech to the graduating engineers where he highlighted that the modern engineering workplace requires soft skills other than technical skills. He mentioned that recruiters are often looking for a combination of technical ability and soft skills. He added that technical skills alone are not enough to ensure a successful engineering career, as engineers need to be able to function as a member of a team, think in a creative way, and have a strong work ethics.

Dr T M Gunaraja, President, IEI presided over the function. Dr Gunaraja in his Presidential address recounted that The Institution of Engineers (India) in its long journey of 100 years have been instrumental in enhancing the status of the engineering fraternity and now it is time to plan for the century ahead. He briefly acquainted the gathering with the twin objective with which the Institution was established, Industrialization and Indianisation which have now translated into Innovation and Indigenization. He also highlighted that the aspect of innovative thinking and innovation at every stage of professional development of an engineer has to be nurtured in a graded and continuous manner.

The speeches of the dignitaries were followed by presentation of Best Technicians' Chapter at State Centre Award to Jharkhand Technicians' Chapter, Best Technicians Chapter at Local Centre Award to Kota Technicians' Chapter, Second Best Technicians Chapter at Local Centre Award to Durgapur Technicians' Chapter and Third Best Technicians Chapter at Local Centre Award to Nashik Technicians' Chapter for the session 2018-2019. The Best, Second Best and Third Best Engineering College Students' Chapter Award for the session 2018-2019 were presented to the Department of Electronics Engineering, AISSMS College of Engineering and Technology, Pune,



Cyber Security and Image Processing

Telangana State Centre of the Institution organized the All India Seminar on the theme Cyber Security and Image Processing under the aegis of Electronics & Telecommunication Engineering Division Board (ETDB) of IET during August 10-11, 2019 at Hyderabad. Mr G Kishan Reddy, Hon'ble



Union Minister of State for Home Affairs, Government of India graced the occasion as Chief Guest. The Hon'ble Minister in his speech mentioned the significance of constant upgradation of crimes and criminals tracking network and further narrated that digitization of data and development of a National Data Base of Crimes and Criminals would help enhancement of the operational efficiency of the crime investigating agencies. 'With growing use

of Information Technology, there is a need of simultaneous protection of the public and private infrastructure from cyber attacks and cyber incidents', Mr Reddy mentioned. He informed that the Ministry of Home Affairs has set up the Indian Cybercrime Coordination Centre to tackle internet-related crimes.

The Guest-of-Honour, Mr Anjani Kumar, IPS, Commissioner of Police, Hyderabad City, in his speech enumerated that the society has moved from cycle patrolling to cyber patrolling which helps police in detecting crimes in short span of time and nab the offender. He further stated that anything connected to internet can be hacked, so one must be aware of threats while surfing net. The Keynote Speaker on the occasion, Dr B Sriram, Chief Executive Officer, Cyber Security Centre for Excellence, Data Security Council of India, New Delhi in his address highlighted that while India is passing through a transitional phase to shift from an agrarian society into a 21st century information era, it leads to leapfrogging and adopting the best of breed new technologies. 'An entire building can be hooked up on a network using Wi-Fi, instead of having to lay out LAN cables in every part, in each room', Dr Sriram added as an example. Earlier, Dr G Rameshwar Rao, Chairman, Telangana State Centre welcomed the august gathering and presided over the Inaugural Function. Mr T Anjaiah, Honorary Secretary, Telangana State Centre proposed the vote of thanks. A number of invited talks were delivered by eminent personalities during the two-day Seminar.

Evolving Trends in Structural Monitoring and Rehabilitation

Coimbatore Local Centre of the Institution organized All India Seminar on the topic 'Evolving Trends in Structural Monitoring and Rehabilitation' under the aegis of Civil Engineering Division Board of IET during August 27-28, 2019 at Coimbatore. Mr S Pichaiya, Managing Director, S Pichaya and Associates, Coimbatore and Member of Council, Institution of Valuers, Coimbatore graced the occasion as the Chief Guest. Dr N Kathiravan, Dean (Academics), Akshaya College of Engineering and Technology, Coimbatore was present during the occasion and addressed the gathering. Earlier, Dr P R Natarajan, Chairman, Coimbatore Local Centre welcomed the august gathering. A Souvenir was released during the occasion in the august presence of dignitaries. A number of Invited Lectures were



delivered by eminent personalities namely Dr R Thenmozhi, Professor and Head, Department of Civil Engineering Government College of Technology, Coimbatore on 'Structural Assessment and Audit'; Dr G S Thirugnanam, Professor, Builders Engineering College, Coimbatore on 'Conventional and Smart Structural Health Monitoring'; Dr I Padmanabhan, Professor and HoD, Department of Civil Engineering, Sri Krishna College of Technology, Coimbatore on 'Technological Interventions of Structural Health Monitoring'; Mr A C Parthiban, Managing Director, Lakshmi Construction Chemicals, Coimbatore on 'Repair and Rehabilitation of Structures'; Mr P A Edwin Fernando, Department of Civil Engineering, Akshaya College of Engineering and Technology, Coimbatore on 'Non Destructive Testing of Structures'; etc.

Recommendations emanated from the Seminar include; Academic Institutions may conduct value added programmes for Civil Engineering students in the areas of Structural Auditing, Non Destructive Testing of Structures, Rehabilitation of RC structures etc owing to its emergence and its inept coverage in curriculum; Academic Institutions can strive towards interdisciplinary interactions, which may lead to new advances in Structural Monitoring; Short term training course for field engineers may introduce to enhance their knowledge and skills in the emerging fields of structural monitoring and rehabilitation of structures; Technology Business Incubation Centres may set up for assisting new Entrepreneurs incubate in structural monitoring devices and construction chemicals for rehabilitation; Manuals related to structural auditing and application of chemicals for structural rehabilitation may prepared and circulated; Technical participations for collaborative research with esteemed Institutions need to be encouraged.

Smart Grid for Rural Development: Challenges and Solutions

Kanchepuram Local Centre of the Institution in association with the Department of Electrical & Electronics Engineering, SRM Institute of Science and Technology (SRMIST), Kanchepuram organized Two-day All India Seminar on the topic 'Smart Grid for Rural Development: Challenges and Solutions' under the aegis of Electrical Engineering Division Board of IEI during July 25-26, 2019 at Kanchepuram. The Seminar aimed at giving an intuitive to understanding of the importance of Smart Grid, its design and procedure to develop cost effective solutions for rural smart grid applications. Mr G Rajaganesan, Director, Technical Operations, VATIO Energy India Pvt Ltd, Chennai graced the occasion as the Guest-of-Honour. His valuable address expressed the importance of Smart Grid Applications in the present situation and its future prospects. Dr K Vijayakumar, Professor and Head, Department of Electrical and Electronics Engineering, SRM Institute of Science and Technology, Coimbatore was present and addressed the audience. Earlier, Mr R Ramdoss, Chairman, Tamilnadu State Centre, welcomed the audience. Dr J Preetha Roselyn, Associate Professor, Department of Electrical and Electronics Engineering, SRMIST, in her presentation threw some lights on overview of Smart Grid systems and its need, and the issues in the



grid connected PV systems during the implementation of smart grid. She discussed about the problems during implementing the smart grid for grid connected solar PV systems due to their inconsistent output. Dr B Saravanan, Associate professor, Vellore Institute of Technology, in his presentation stated about implementation and future prospects of smart grid. Mr D Maharajan, Department of Electrical & Electronics Engineering, SRMIST focused on the Simulation of Smart Grid functionalities using Digsilent Powerfactory Software. Dr S K Doifode, Government College of Engineering, Amravathi, emphasized upon the GPS and GIS applications in renewable energy promoting.

Structural Aspects of Architectural Engineering

Rajasthan State Centre of the Institution organized All India Seminar on the topic 'Structural Aspects of Architectural Engineering' under the aegis of Architectural Engineering Division Board of IEI during August 17-18, 2019 at Jaipur. The Chief Guest of the function, Mr D R Dhariwal, in his address stated that architects are using new composite materials, high strength, & heat proof glasses, innovations and advanced technologies for preparing architectural design plans today. 'Industry 4.0 standards are transforming production process and industrial productivity, as well as improvements in relationship between supplier, manufacturers and customers', he added. He further enumerated that expectations from the clients globally are changing rapidly which requires shedding of ego at individual/ professional level to give out the best. 'Challenges are increasing in every field and experts need to rise to new levels of innovation and creativity, speed, quality innovation, cost, resource optimization, space optimization, reliability and longer life are the buzz words for Engineers in every field', Mr Dhariwal opined. The Guest-of-Honour on the occasion, Prof Rajeev Shirngi, Professor, MNIT, Jaipur stated that Architectural Engineering, technology and societal developmental aspects are interrelated and inter-dependent on each other. 'Social, economic, political and cultural development continues to lag behind the advancements in physical sciences and technological development', he added. Guest-of-Honour, Prof Meenu Varshney, HOD, Department of Architecture, MNIT, Jaipur, while speaking on the subject 'Determinants of Architectural Forms' stated that some factors affect the Architectural designs i.e., environment of the building, functional aspects of particular regions, climate, landscape and natural lighting conditions,



particular materials, psychological demands of the space, spirit of the times etc. Guest-of-Honour, Prof Mayank Varshney, Structural Consultant, Jagannath University, Jaipur focused on few points on 'Role of Structures in creating Architectural Spaces'. Earlier, Sajjan Singh Yadav, Chairman Rajasthan State Centre, in his welcome address stated that Architectural Engineering is a broad field of engineering which required team work of structural, civil, electrical, ET and all related branches of Engineering. Dr J L Sehgal proposed the vote of thanks on behalf of Rajasthan State Centre.

Following recommendations were made by the experts:

Structural Design plan and architectural design plan should be in harmony with each other; All the determinants of structural design should be considered for preparing a viable and sustainable structural design plan; Foundations should be designed to withstand the seismic zone and geological conditions of the area.

Role of Embedded Systems in Industry 4.0: The Fourth Industrial Revolution

Coimbatore Local Centre of the Institution in association with PSG College of Technology, Coimbatore organized All India Seminar on the theme 'Role of Embedded Systems In Industry 4.0: The Fourth Industrial Revolution' under the aegis of Interdisciplinary Coordination Committee of IEI during August 30-31, 2019 at Coimbatore. The Chief Guest on the occasion, Mr V Kamalakannan, Secretary, Indian Association of Energy Management Professionals (IAEMP), Coimbatore Local Chapter, South Zone, in his address explained about the application domain of Industry 4.0 in the organisations. Later, Mr Kamalakannan also delivered a Keynote Address on the theme 'Industry 4.0 Digitalization - The Future of Pumps'. Dr J Kanakaraj, Professor (CAS) and Head In-charge, Department of Electrical & Electronics Engineering (EEE), PSG College of Technology, Coimbatore in



his address highlighted the history and evolution of Industry 4.0. Dr L Ashok Kumar, Professor and Associate Head, Department of EEE, PSG College of Technology, Coimbatore briefed about the Seminar.

Earlier, Mr P R Natarajan, Chairman, Coimbatore Local Centre, in his welcome address spoke about Industry 4.0, its importance and effects on day-to-day life. Dr H Rammohan, Honorary Secretary Coimbatore Local Centre proposed the vote of thanks. A number of Keynote Addresses were also delivered by resource persons namely, Dr M Subramanian, Associate Professor, Department of Automobile Engineering, PSG College of Technology, Coimbatore on 'Automotive Digital Twin for Industry 4.0'; Mr M Selvaraju, Director, Handson Technologies, Coimbatore on 'Automotive Embedded Systems in Industry 4.0'; Dr Somasundaram Balasubramaniam, Digital Transformation Consultant, Chennai on 'Data Analytics and Industry 4.0'.

The following recommendations are emanated from the Seminar:

There should be diversified applications of Embedded Systems including Aerospace, Architecture, Automation, Energy, Infrastructure, Marine, Defence, Healthcare, Sports etc; Set up of Centre of Excellence in Academic Institutions be initiated in association with the Composites Research Laboratories of premier engineering Institutions in the country; Employment opportunities be provided more through global embedded industries platform; Conducting certificate courses from the eminent personalities from the MHRD / IITs and NITs through IEI; May help the Institutions to set up Technology Business Incubation Centre for assisting new Entrepreneurs incubate in Industry 4.0.

Reverse Manufacturing

Kanpur Local Centre of the Institution in association with the Imagineering Laboratory, IIT, Kanpur, organized All India Seminar on the topic 'Reverse Manufacturing' under the aegis of Mechanical Engineering Division Board of IEI during August 24-25, 2019 at Kanpur. The Chief Guest on the occasion, Prof Mukesh Kumar Singh, Director, Uttar Pradesh Textile Technology Institute, Kanpur, in his address stated that the reverse manufacturing is driven by decoding of various finished products and it will create new opportunities for both manufactures and consumers, as human being is entering in robotic driven world. 'Reverse manufacturing will prove as an antidote to fear of typical manufacturing', he added. He further enumerated that in this realm of digital world, the boundaries are broken, the border lines have vanished and reverse manufacturing is motivating to set new goals in manufacturing field. 'The reverse manufacturing process needs commitment of skilled operator to manager with high professional potentials and it has sufficient power to integrate the value management system enabling the functioning of the trustworthy enterprise, for seamless transition of establishing a committed manufacturing unit', Prof Singh opined. The Guest-of-Honour and Keynote Speaker of the function, Prof Y N Singh, Dean, Infrastructure and Planning, IIT, Kanpur, while speaking on 'Recycling and Re-engineering' emphasized upon the importance on engineering for re-cycling. 'Whether it is an equipment, hardware, or software, when failure happens, or a new functional requirement is there, it is possible to re-engineer the only certain specific components while reusing the remaining components and this saves times and allows for reuse of material', he added. He further enumerated that one of the important requirements to achieve the recycling and re-engineering of

systems is open specification of interfaces. Prof Keshav Kant, Department of Mechanical Engineering, IIT Kanpur (Retd), delivered the second Keynote address on 'Reverse Engineering in Manufacturing'. Prof Narendra Kohli, Department of Computer Science and Engineering, Harcourt Butler Technological University, Kanpur delivered the third Key Note Address on the theme 'Reverse Engineering of Software'. The fourth Keynote speaker during the technical session, Dr Ajit Kumar N Shukla, Director, Pranveer Singh Institute of Technology College of Engineering, Kanpur presented his paper on the theme Reverse Engineering Applied to Practicals'. Mr Abhishek Verma, IIT Kanpur, the fifth Key Note speaker presented the paper on the theme 'Subtract and Operate Methodology for Feature Extraction and Force Flow Diagram'. Dr Amandeep Singh, IIT Kanpur was the sixth Keynote speaker, presented the paper on the theme 'Reverse Engineering in Business Practices'. During technical sessions large number of resource papers embracing the sub theme were presented and deliberated. Earlier, Prof (Dr) J Ramkumar, Chairman Kanpur Local Centre welcomed the august audience. Dr Rajat Kumar Khare, Honorary Secretary, Kanpur Local Centre proposed the vote of thanks.



Natural Gas – Fuel for Future'

Jharkhand State Centre of the Institution organized Two-day All India Seminar on the topic 'Natural Gas – Fuel for Future' under the aegis of Chemical Engineering Division Board of IEI during September 13-14, 2019 at Ranchi. The Chief Guest on the occasion, Mr Atul Bhatt, Chairman and Managing Director, MECON Limited, Ranchi, in his address enumerated that today; the natural gas sector is at the threshold of rapid growth in India supported by ever increasing demand for natural gas in the country, and projected upcoming LNG terminals and the Government's initiatives in the direction of development of a nationwide natural gas pipeline grid. He further stressed upon the fact that there is a need to provide a proactive enabling environment to support the fast-paced development of natural gas infrastructure. 'An enabling environment includes providing desired policy support and the correct pricing signals for investment in the sector,

of gas consumption', Mr Mahto added. He further stressed upon the fact that this increase in consumption is expected to be supplemented by an alteration in the primary energy mix of oil by natural gas. Mr Salil Kumar, Director (Project), MECON Limited, while speaking on the theme explained that natural gas is a major fuel for multiple end-uses *ie.* electricity, industry, heating and is increasingly consider as a potential pathway to reduced oil dependence for transportation. Citing example, he pointed out that there are currently more than 20 million vehicles in the world running on Compressed Natural Gas (CNG), which is identical to the gas used to heat our houses. Mr Rajendra Harbhagwan Singh Juneja, Director (Finance), MECON Limited highlighted that the world's energy system is going through a transition phase and forecasted that after 2030, energy demand will flatten, mainly due to increased efficiencies in the use of energy. 'Industry across energy



sources and throughout the energy value chain will continue to make energy available, affordable and clean', Mr Juneja added. Mr J P Singh, Chief General Manager, GAIL (India) Limited pointed out that India, with less well-established gas infrastructure, is also set to take more gas from imports, thus investment is bound to increase in the gas infrastructure. He further proposed that the present energy consumption through natural gas which is presently at 6.2 % is targeted to reach 14% in next 3-4 years. Earlier, Mr Siyaranjan Kumar Singh, Chairman, Jharkhand State Centre and Council Member, IEI, in his welcome address urged the participants to open heartedly embrace the emerging technologies and exchanges to take

India forward for adaptation of most energy efficient, environment friendly optimal technology. Mr Jitendra Kumar, Honorary Secretary, Jharkhand State Centre proposed the vote of thanks.

reforming the present set of regulations to adopt to changing needs and making them more robust and addressing the distortions in the fiscal regime applicable for natural gas', Mr Bhatt added. The Guest-of-Honour, Mr M P Mahto, Chief General Manager, (Construction & CGD) GAIL (India) Limited, Ranchi during his address pointed out that in recent years, the demand for natural gas in India has increased significantly due to its higher availability, development of transmission and distribution infrastructure, the savings from the usage of natural gas in place of alternate fuels, the environment friendly characteristics of natural gas as a fuel and the overall favourable economics of supplying gas at reasonable prices to end consumers. 'Power and Fertilizer sector remain the two biggest contributors to natural gas demand in India and continue to account for more than 55%

Corrigendum

In the Report published in November 2019 issue of IEI News regarding Celebration of Royal Charter Day by Jharkhand State Centre, designation of Chief Guest was Mr Arun, IAS, Retd Former Secretary, Government of Jharkhand.

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 January 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

OVERSEAS CHAPTER

Panel Speech Session on 'BIG DATA Evolution' organized by The Institution of Engineers (India), Qatar Overseas Chapter

Qatar Overseas Chapter of The Institution of Engineers (India) organized a Panel Speech Session on the topic 'Big Data Evolution' at Doha on 7 December, 2019. Mr Ahmed Al Jolo, President, Arab Engineers Federation graced the occasion as Chief Guest. Dr Shady Khalil, Department of Electrical and Computer Engineering, Texas A&M University, Qatar addressed the audience with the topic 'The Role of Big Data in the Evolution of Smart Grid Era'. Earlier, Mr Abdul Sathar, Chairman, Qatar Overseas Chapter welcomed the audience. Dr P Abdul Hameed, Honorary Secretary, Qatar Overseas Chapter proposed the vote of thanks.

STATE CENTRES

Andhra Pradesh

Celebrated 'GIS Day 2019' on November 20, 2019.

Delhi

Organized 'Lecture-cum-Interaction' with TAI and INSTI on November 1, 2019.

Karnataka

Lecture on 'Vande Bharath Express' delivered by Mr V Anand, Former General Manager - Southern Railways on November 18, 2019.

Maharashtra

Celebrated 'Engineers' Day' on November 8, 2019.

Lecture on 'Design Thinking- Advance and Effective Problem Solving Technique' delivered by Mr Karunesh Kumar, Corporate Trainer, Mentor, Design Coach & Consultant of Zenonyx Academy of Training and Development LLP, Belapur, Navi Mumbai on November 1, 2019.

Telangana

'Er Atluri Venkateswara Rao Twelfth Endowment Lecture' delivered by Bharatheeyam G Satyavani on September 28, 2019.

Celebrated 150th Birth Anniversary of Mahatma Gandhi on October 2, 2019.

Er R L Raju Fifth Endowment Lecture on 'Green Building – Energy Efficiency' delivered by Prof R Ramesh Reddy, Former Dean and Principal, College of Engineering, Osmania University, Hyderabad on October 10, 2019.

Celebrated World Students' Day in honour of Dr A P J Abdul Kalam on October 15, 2019.

Organized 'Poster Presentation Contest' on October 28, 2019.

Celebrated 'GIS Day 2019' on November 13, 2019.

Celebrated 'Telangana Irrigation Day' on November 14, 2019.

West Bengal

Celebrated World Habitat Day on November 19, 2019.

LOCAL CENTRES

Anpara

Seminar on 'Air Pollution: Challenges and Control' on October 20, 2019.

Bhilai

Celebrated 'Engineers' Day' on September 15, 2019.

Bokaro Steel City

Lecture on 'Refractory Technology and current practice – 4s in Steel Industry' delivered by Mr Anand Verma, Senior Manager(RED), SAIL, Bokaro Steel Plant on November 16, 2019.

Lecture on 'Importance and Functions of Engineering Shops in Integrated Steel Plant' delivered by Mr R N Mishra, Ex Assistant General Manager (Maintenance Shop & PPS) on December 17, 2019.

Coimbatore

Dr V Ramakrishnan Endowment Lecture on 'Nano Technology and Concrete Structures: Opportunities and Challenges' delivered by Dr P N Balaguru, Distinguished Professor, Department of Civil and Environment Engineering, Rutgers, The State University of New Jersey, USA on November 29, 2019.

Dhanbad

Lecture on 'Long Term Dump Planning of Three Pits of Bion Kirandul Complex' delivered by Dr Sanjay Kumar Roy, Senior Principal Scientist, CSIR-CIMFR, Dhanbad on November 13, 2019.

Durgapur

Workshop on 'Get Hands on with Cloud Study Jam' on November 24, 2019.

Ghaziabad

Lecture on 'Cyber Crime and Security' delivered by Mr Pradeep Kumar Gupta, Senior Technical Director & HOD, Ministry of Housing and Urban Affairs Division, National Informatics Centre, New Delhi, on November 16, 2019.

Kanpur

Celebrated 150th Birth Anniversary of Mahatma Gandhi on October 12, 2019.

Celebrated Birth Day of Dr A P J Abdul Kalam as World Students' Day on October 20, 2019.

Lecture on 'Techniques of Underground Construction' delivered by Mr Nitin Rajput, Assistant Professor, Department of Civil Engineering, HBTU, Kanpur on November 28, 2019.

Kanyakumari

Workshop on 'Disruptive Technologies in Machine Learning and Artificial Intelligence' on November 8, 2019.

Kota

Seminar on 'Water Conservation' during August 31 – September 1, 2019.

Mangalore

Celebrated 150th Birth Anniversary of Mahatma Gandhi on October 9, 2019.

Workshop on 'Means-Modes-Methods To Make Mangaluru- A Smart City For Sure' on October 18, 2019.

Nagpur

Organized Dr V M Dokras Memorial Oration on 'Leadership in Engineering and Disruptive Role of Technology' on October 23, 2019.

Ranipet

Lecture on 'Unified Field Theory for Ultimate Success – Pentagon Artificial Intelligence' delivered by Mr Gomathi Nayagam P, Honorary Secretary, Tamilnadu State Centre, IE on November 20, 2019.

Silchar

Lecture on 'Artificial Pancreas: The Need of Engineers' delivered by Rajeeb Day, Assistant Professor, NIT, Silchar on November 17, 2019.

South Gujarat

Lecture Meeting on 'Sustainable Water Management' on October 15, 2019.

Lecture Meeting on 'Industry Expectations from the Graduating Electrical Engineers' on October 15, 2019.

Tiruchirappalli

Lecture on 'Nutraceuticals Revolution' delivered by Dr M Vijayalakshmi, Assistant Professor, Department of Pharmaceutical Technology, Anna University, BIT Campus, Tiruchirappalli on November 5, 2019.

Lecture on 'Automation and Autonomy: Present and Future' delivered by Er R Rajkumar, Founder, Rignova (A cloud application Company) Trichy on November 12, 2019.

Lecture on 'Digital CMOS VLSI Design' delivered by Ms Kavitha, Assistant Professor, MAM College of Engineering and Technology, Trichy on November 19, 2019.

Lecture on 'All Possible effects of Cell Phone Radiation' delivered by Dr E Vinodha, Professor, Dean, Research and Development department, ECE Department, MAM College of Engineering and Technology, Trichy on November 26, 2019.

Udaipur

Lecture on '50th Anniversary of Human Landing on the Moon by Apollo 11 and Chandrayaan-2 Mission' delivered by Mr Avinash Shirode, former ISRO Engineer and Chairman, National Space Society (USA), Nashik Chapter on November 7, 2019.

Vadodara

Organised a Technical Lecture in association with National Academy of Indian Railways. Mr Pradeep Kumar, Director General and Mr Vineet Kumar, Deputy Director General of National Academy of Indian Railways were felicitated on this occasion.

Celebrated Annual Day on October 20, 2019.

Advertisement Tariff in IEI Publications

IEI News (Printed + online)

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Architectural Engineering Division	Chemical Engineering Division
Civil Engineering Division	Computer Engineering Division
Electrical Engineering Division	Electronics & Telecommunication Engineering Division
Environmental Engineering Division	Marine Engineering Division
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Inside Full Page	16.8 cm (width) x 22.6 cm (height)	Colour	20,000
Inside Full Page	16.8 cm (width) x 22.6 cm (height)	B/W	15,000
Inside Half Page	16.8 cm (width) x 11.3 cm (height)	B/W	8,000

For booking, Please write to:

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

Email: technical@ieindia.org

[Payment is to be made by 'at par' cheque drawn in favour of The Institution of Engineers (India)]

One Day Seminars/Workshops Conducted by Various Centres of IEI

STATE CENTRES

Jharkhand

Jharkhand State Centre of the Institution in association with Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE), Ranchi Chapter organized One Day Seminar on the theme 'Energy Sustainability Roadmap for Healthcare and Hospitality' under the aegis of Interdisciplinary Coordination Committee (ICC) on November 17, 2019 at Ranchi. The Chief



Guest on the occasion, Dr Nitin Madan Kulkarni, IAS, Secretary – Department of Health, Medical Education & Family Welfare, Government of Jharkhand mentioned healthcare as the biggest part of hospitality and stated that power intensive generation of green house

gases results a vicious cycle of damage to the environment. The Guest-of-Honor, Mr Amitabha Sur, Vice President (East), ISHRAE, while speaking on the theme, explained that Sustainability contains three principal objectives, namely meeting responsibilities towards society; retaining sustainable environment for all living beings on earth and maintaining an economically sustainable environment. Earlier, Mr Siyaranjan Kumar Singh, Chairman, Jharkhand State Centre and Council Member, IEI welcomed the august gathering. Mr Anand Trivedi and Mr Rajesh K Singh, President and Past President respectively, ISHRAE, Ranchi Chapter, also spoke on the occasion. Mr Jitendra Kumar, Honorary Secretary, Jharkhand State Centre proposed the vote of thanks.

Uttar Pradesh

Uttar Pradesh State Centre of the Institution in association with Institution of Valuers (IOV), Lucknow Branch organized One Day Seminar on the theme 'Real Estate Regulation on Development Act 2016 and its Implementation' under the aegis of Civil Engineering Division Board (CVDB) of IEI on November 17, 2019 at Lucknow. The Chief Guest of the function, Mr Bhanu Pratap Singh, IPS (Retd) Member, Uttar Pradesh Real Estate Regulatory Authority, in his address, explained



the norms of RERA Act for protecting homebuyers as well as to enhance investment in Real Estate Industry. Mr A K Shukla, Director, Quality and Design, UP Avas Evam Vikas Parishad Housing and Development Board graced the occasion as the Guest-of-Honour. The Keynote Speaker on the occasion, Mr Rajesh Mehtani, Additional Management Representative, UP Avas Evam Vikas Parishad dealt in detail different aspects of RERA. Mr V B Singh, Chairman, Civil Engineering Division Board (CVDB) and Council Member, IEI, in his speech advocated giving more power to RERA. Mr Khazan Chandra, Chairman, IOV Lucknow Branch also expressed his views. Earlier, Mr Rajesh Kumar Trivedi, Chairman, UP State Centre and Council Member, IEI welcomed the guests. Mr Prabhat Kiran Chaurasia, Honorary Secretary, UP State Centre proposed the vote of thanks.

LOCAL CENTRES

Coimbatore

Coimbatore Local Centre of the Institution organized One Day Seminar on the theme 'Communication Technologies and Security Challenges for Internet of Things' under the aegis of Electronics & Telecommunication Engineering Division Board (ETDB) of IEI on August 20, 2019 at Coimbatore. Dr T Kannadasan, Principal, Hindusthan College of Engineering & Technology, Coimbatore inaugurated the Seminar. Dr Kannadasan, in his address flagged the exponential increase in the number of nodes which poses problems in handling of the big data, IoT systems and also maintaining the security and reliability. He also explained the considerable progress that has been made in characterizing challenges in communication technology including



network management, interoperability and about the security challenges in various industrial applications. Earlier, Mr P R Natarajan, Chairman, Coimbatore Local Centre welcomed the august gathering. Other speakers include; Dr C Natarajan,

Principal, Hindusthan Institute of Technology (HIT), Coimbatore, Dr B Paulchamy, Head, Department of Electronics and Communication Engineering, (ECE) HIT, Coimbatore and Ms R Priyadharsini, Assistant Professor, Department of ECE, HIT, Coimbatore.

Durgapur

Durgapur Local Centre of the Institution organized One Day Seminar on the theme 'Production Engineering for Life Breakthrough Technologies and Capacity Development' under the aegis of Production Engineering Division Board (PRDB) of IEI on November 16, 2019 at Durgapur. The Chief Guest, Dr C T Bhunia, Director General, Rahul Foundation and Principal, Durgapur Institute of Advanced Technology and Management (DIATM), Durgapur, in his address mentioned different aspects of 3D Printing, AI, solar power applications and advancement in manufacturing. The Guest-of-Honour, Dr Chittatosh Bhattacharya, Deputy Director, National Power Training Institute, Eastern Region, Durgapur explained Data Analytics to reduce machine breakdown time with case studies. He further emphasized upon System Reliability, QMS, safety at work place etc. The Guest-of-Honour, Prof (Dr) Nirmal Baran Hui, Department of Mechanical Engineering, NIT Durgapur spoke on Robotics & its' challenges. The Guest-of-Honour, Prof (Dr) P K Sinha, Principal, DIATM, Durgapur emphasized upon the theme which is most current and for capacity development different aspects may be



investigated, including the speed of the running machines, the number of workers running each machine, the operating shifts, the machines utilization and the working environment. Mr P Bhattacharya, General Manager, Rahul Foundation was also the Guest-of-Honour during the occasion and addressed the audience. Mr M Varghese, Senior Manager, Central Engineering Shop, SAIL, DSP, the Invited Speaker during the occasion

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IEI Celebrates World Standards Day

Theme

Video Standards Create a Global Stage

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

Telangana

Dr P Sreenivasa Rao, Chief Executive Officer, Apollo Medskills Limited, Hyderabad graced the occasion as Chief Guest. The Chief Guest, in his



speech explained the importance of video standards for telemedicine applications and mentioned that development of video standards made the telemedicine more economical and efficient. He further mentioned that the data required for remote

diagnostics is huge and the channel bandwidth utilization is very critical for such medical applications. The Keynote Speaker, Dr K V N S V P L Narasimham, Group Leader, Electronics Support Group, NCCCM/ BARC, Hyderabad explained that with the introduction of microprocessors and

microcontrollers, there is a need for display unit to view the information that is flowing into the microcomputer system and while obtaining processed data out of the microcomputer system. 'Initially these display units of computers are designed using CRTs and termed as Video Display Units (VDUs)', he added. He further mentioned that the need for displaying high resolution and high quality images triggered a marvelous technological development in the 'Video Standards'. Dr Narasimham concluded with the latest developments in video standards and its numerous applications including telemedicine, e-governance, educational, and scientific applications. Earlier, Mr T Anjaiah, Honorary Secretary, Telangana State Centre welcomed the gathering. Dr G Rameshwar Rao, Chairman of the Centre presided over the function. Dr G Radhakrishna, Jt. Hon. Secretary proposed the vote of thanks.

Agra

Dr B D K Patro, Chairman of the Centre, in his address narrated about advancement in video technology that have changed the world, revolutionizing entertainment, connecting friends and family across the globe, enriching our communication experiences and enabling major improvement in medical care and education. Mr D S Chaudhary, Immediate Past Chairman of the Centre, while speaking on the theme mentioned that in each branch of Engineering, different standards are followed which is approved by some standards organization. Dr Ashok Yadav, Honorary Secretary, Agra Local Centre proposed the vote of thanks.



One Day Seminars/Workshops Conducted by Various Centres of IEI

Contd. from page 13

explained about the advancement in welding. Prof (Dr) P K Sinha, Principal, DIATM, Durgapur emphasized upon the theme which is most current and for capacity development different aspects may be investigated, including the speed of the running machines, the number of workers running each machine, the operating shifts, the machines utilization and the working environment. Prof H B Goswami, Council Member, IEI, in his welcome address highlighted organizational analysis to determine the main factors affecting its production capacity, and study their influence to improve the production capacity to reach the optimum. Mr M K Biswal, Honorary Secretary, Durgapur Local Centre proposed the vote of thanks.

Kanchepuram

Kanchepuram Local Centre of the Institution in association with the Department of Information Technology, St. Joseph's Institute of Technology (SJIT), Kanchepuram organized One Day Workshop on the topic 'Hands on Training on Machine Learning' under the aegis of Computer Engineering Division Board (CPDB) of IEI on August 23, 2019 at Kanchepuram. Mr E Arun Kumar, Vice President, Retech Solutions Pvt. Ltd graced the occasion as



Chief Guest and addressed the august gathering about different aspects of Machine Learning including its four broad categories, namely Supervised Learning, Unsupervised Learning,

Semisupervised Learning and Reinforcement Learning. Dr P Ravichandran, Principal, SJIT, was present in the occasion and while addressing the

audience, emphasized on explorations of amazing and recent applications of Deep Learning. Experts on the related fields deliberated over emerging topics including software libraries, different Algorithms, Classification Segmentation and so on. Dr D Elango, Honorary Secretary, Kanchepuram Local Centre, proposed the vote of thanks.

Tiruchirappalli

Tiruchirappalli Local Centre of the Institution in association with the Department of Information Technology, Saranathan College of Engineering (SCE), Tiruchirappalli organized One Day Workshop on the theme 'Machine Learning Techniques Using PyTorch' under the aegis of Computer Engineering Division Board (CPDB) of IEI on October 10, 2019 at Tiruchirappalli. Dr D Valavan, Principal, Saranathan College of Engineering (SCE), Tiruchirappalli, graced the occasion as Chief Guest. The Resource Person on the occasion, Mr Salai Deva Thirumani, Techno Commercial Engineer, AIDELTECZ, Pudukottai discussed at a length key tools of digital transformation including Artificial Intelligence (AI), Machine Learning and Deep Learning using PyTorch-Keras Platform. He further presented an overview of packages, installation, dataset creation, loss error, learning rate, gradient descent, stochastic and execution of MNIST in PyTorch. Earlier, Dr N. Kumaresan, Chairman, Tiruchirappalli Local Centre welcomed the august gathering. Other speakers include; Dr R Sumathi, Professor and Head, Department of Information Technology, SCE and Mr R Rengaraj, Assistant Professor, Department of Information Technology, SCE.



IEI DIARY



Aerospace Engineering Division

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

Coimbatore, February 05-06, 2020

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

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

Jaipur, February 08-09, 2020

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

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

Kanpur, November 09-10, 2020

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

Agricultural Engineering Division

National Conference on "Agriculture and Smart Villages for Sustainable Development"

Bengaluru, February 07-08, 2020

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

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

Bangalore, July 03 - 04, 2020

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

Architectural Engineering Division

All India Seminar on "Heritage Structure"

Jodhpur, February 29-March 01, 2020

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

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

Jaipur, May 08-10, 2020

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

Chemical Engineering Division

One Day Seminar on "Nanowaste Sources Classification and Management"

Surat, January 17, 2020

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

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

Salem, January 07, 2020

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

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

Salem, February 17-18, 2020

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

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

Madurai, July 03-04, 2020

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

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

Durgapur, September 11-12, 2020

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

Civil Engineering Division

One Day Workshop on "NDT Applications in RCC Structures"

Ahmednagar, January 22, 2020

The Honorary Secretary, IEI, Ahmednagar Local Centre, Irrigation Compound, Aurangabad Road, Ahmednagar 414001 [☎: (0241) 2323359; e-mail: ahmednagarlc@ieindia.org]

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

Salem, January 24, 2020

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

One Day Workshop on "QGIS for Hydrological Applications"

Surat, January 30, 2020

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

One Day Seminar on "Drone Technology in Construction Engineering"

Salem, January 31, 2020

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

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

Salem, March 05-06, 2020

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

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

Bhubaneswar, March 7-8, 2020

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

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

Nagpur, March 20-21, 2020

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

International Conference on "Building the Disaster Resilient Society in BIMSTEC Countries"

Agartala, July 10-12, 2020

The Honorary Secretary, IEI, Tripura State Centre, Pandit Nehru Complex, Near Tripura Housing Board, PO: KUnjaban, PB No. 139, West Tripura, Agartala 799006 [☎: (0381) 2304700; email: tripurasc@ieindia.org; web: www.ieitripura.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.ieisc.org]

Computer Engineering Division

One Day Seminar on **"Recent Trends in Robotics"**
Siddhpur, January 04, 2020

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

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

Chandigarh, January 23-24, 2020

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

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

Jaipur, February 15-16, 2020

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

National Conference on **"Future Trends in Virtual Reality and Augmented Reality for Education"**

Salem, February 20-21, 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]

Electrical Engineering Division

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

Hyderabad, January 11-12, 2020

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

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

Chandigarh, January 15-16, 2020

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

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

Salem, January 25, 2020

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

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

Hyderabad, February 01-02, 2020

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

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

Ghaziabad, February 07-08, 2020

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

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

Bokaro, February 23, 2020

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

All India Seminar on **"Smart Grids in Integration with Distributed Generation Challenges and Solutions"**

Salem, March 27-28, 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]

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

Tiruchirappalli, June 12-13, 2020

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

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 & Telecom. Engineering Division

One Day Seminar on **"Artificial Intelligence for Embedded System"**

Kancheपुरam, January 09, 2020

The Honorary Secretary, IEI, Kancheपुरam Local Centre, Agni College of Technology - ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [e-mail: kancheपुरamlc@ieindia.org]

All India Workshop on **"Nanosensors for Medical Applications"**

Tiruchirappalli, January 9-10, 2020

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

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

Chandigarh, January 27-31, 2020

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

Environmental Engineering Division

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

Lucknow, February 07-08, 2020

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

All India Seminar on **"Sustainable Energy Technologies"**

Kanpur, February 08-09, 2020

The Honorary Secretary, IEI, Kanpur Local Centre, Engineers Bhawan, HBTI East Campus, Nawabganj, Kanpur 208002 [Telefax: (0512) 2560034; e-mail: kanpurc@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. Kaloore, Kochi 682017 [☎: (0484) 2403838 / 3993 e-mail: kochilc@ieindia.org; website: www.ieikochi.org]

Mechanical Engineering Division

One Day Seminar on **"Surface Engineering and Micro Machining"**

Salem, January 06, 2020

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

All India Seminar on **"Advances in Materials, Design Manufacturing and Thermal Engineering"**

Bhubaneswar, January 18-19, 2020

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

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

Kolhapur, January 17-18, 2020

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

All India Seminar on **"Revolutions in Ecofriendly Vehicles"**

Madurai, February 05-06, 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]

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

Ranchi, February 08-09, 2020

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

All India Seminar on "MATLAB for Mechanical Engineers"

Bangalore, February 13-14, 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; website: www.ieiksc.org]

All India Workshop on "Finite Element Method Applications for Mechanical Engineering and Science using Mathematica"

Kadapa, February 24-25, 2020

The Honorary Secretary, IEI, Kadapa Local Centre, APHB Colony, Prakash Nagar, Kadapa 516004 [☎: 085562 245808; e-mail: kadapalc@ieindia.org; website: www.ieikadapa.org]

All India Seminar on "Advances in Welding and Joining Processes"

Bangalore, March 02-03, 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; website: www.ieiksc.org]

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

Coimbatore, March 19-20, 2020

The Honorary Secretary, IEI, Coimbatore Local Centre, PSG College of Technology Campus, Peelamedu, Coimbatore 641004 [☎: (0422) 2580733; e-mail: coimbatorelc@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 Workshop on "Materials Informatics and Soft Computing Application using Machine Learning and FEA Analysis"

Salem, February 06-07, 2020

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

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

Durgapur, January 17-18, 2020

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

One Day Seminar on "Friction Stir Processing"

Ahmedabad, February 15, 2020

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

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

Bokaro, September 06-07, 2020

The Honorary Secretary, IEI Bokaro Steel Local Centre, Abhiyanta Bhawan, Sector 5-A, Bokaro Steel City 827006 [☎: (06542) 267227; e-mail: bokarolc@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.: BCCCL Township, Koyla Nagar, Dhanbad 826005 [Mob: 9934896322 / 8789853083]

Production Engineering Division

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

Durgapur, May 23-24, 2020

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

Textile Engineering Division

One Day Seminar on "An Eco Friendly Approach for Textile Wet Processing"

Surat, January 16, 2020

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

One Day Seminar on "New Trends in Industrial Textiles"

Salem, January 22, 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: salemclc@ieindia.org]

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

Kolkata, February 09-10, 2020

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

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

Ahmedabad, February 20-21, 2020

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

All India Seminar on "Industrial Textiles and Characterisation"

Coimbatore, March 27-28, 2020

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

Interdisciplinary

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

Tiruchirapalli, January 03-04, 2020

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

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

Gwalior, January 12, 2020

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

One Day Workshop on "Rigging and Hoisting Crane and Pressure Vessel Accidents Prevention"

Faridabad, January 18, 2020

The Honorary Secretary, IEI, Faridabad Local Centre, Qtr No. 45, YMCA University of Science & Technology, 1st Floor, Sector 6, Faridabad 121 006 [☎: (0129) 4100798; e-mail: faridabadlc@ieindia.org; Web: ieifbdlc.in]

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IEI Celebrates World Habitat Day

Theme

Frontier Technologies as an Innovative Tool to transform Waste to Wealth

The World Habitat Day was celebrated by the Institution on October 7, 2019. Brief accounts of celebration as received from various Centres are reported hereunder.

STATE CENTRE

Telangana

Mr V Anil Kumar, Chief Executive Officer, Sree Engineering Works, Hyderabad graced the function as the Chief Guest. Speaking on the occasion, he urged that environment protection is every one's responsibility to provide clean and healthy environment to our posterity. He further explained functional aspects of manufacturing from waste products. 'Such technologies provide not only employment for the youth, but also economical for the society', he added.

Earlier, Mr T Anjaiah, Honorary Secretary, Telangana State Centre welcomed the august gathering. Dr G Rameshwar Rao, Chairman, Telangana State Centre and Council Member, IEI presided over the function. Mr P Shankar Prasad, proposed the vote of thanks on behalf of Telangana State Centre.

LOCAL CENTRES

Kanpur

The Keynote Speaker of the function, Mr Ankit Sharma, Assistant Professor, Department of Civil Engineering, Harcourt Butler Technical University, Kanpur, in his speech mentioned that frontier technologies sustains hopes for humanity and these technologies can help eradicate hunger and epidemics, increase life expectancy, reduce carbon emission, automate manual and repetitive tasks and simple decision-making process. Mr Sharma cited examples that among 40 key emerging frontier technologies identified

by Organisation for Economic Cooperation and Development: Internet of Things, Sustainable Polymers, Artificial Intelligence, Renewable Energy Technologies and Nanotechnologies, which have shown great potential to control ever increasing waste problem in world. 'These innovative technologies provide unique ways to reduce, collect, transport, treat waste and making waste management an economically viable process. Dr Rajat Kumar Khare, Honorary Secretary, Kanpur Local Centre proposed the vote of thanks.

Mangalore

The Theme Speaker on the occasion, Dr Rajesh Gratian D'Souza, Principal, Yenepoya Institute of Technology, Moodabidri stated that innovating waste management through Rethinking, Refusing, Reducing, Reusing, Recycling can resolve not only the challenge but also create employment, promote economic growth, improve eco systems which in turn contribute to happier, greener and healthier cities. 'By using frontier technologies like circular economy opportunities for cities and human settlement, regenerative design, retaining values as much as possible over a product's lifetime can turn waste into wealth. Cities can become pioneer in conserving precious resources, saving energy and reducing greenhouse gas emissions', he added. Earlier, Dr Katta Venkataramana, Chairman, Mangalore Local Centre delivered the welcome address. Dr K S Babu Narayan, Honorary Secretary, Mangalore Local Centre proposed the vote of thanks.



IEI DIARY

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

Coimbatore, January 24, 2020

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

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

Chennai, February 14-15, 2020

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

Other Events

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

Kolkata, January 04-07, 2020

Organised by Global Water Alliance jointly with Rural Development Forum, IEI. For further queries write to gwaconference2020@gmail.com

International Conference on "Energy and Sustainable Development 2020"

Kolkata, February 14-15, 2020

Jointly by IEI and Department of Mechanical Engineering, Jadavpur University under support from Rashtriya Uchchatar Shiksha Abhiyan. For further queries write to icesd20@gmail.com



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

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

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

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

Details of IEI Centenary Fund are as follows.

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

IEI Join Hands with Various Certification Bodies to Nurture Engineers

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

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

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

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

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

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

ANNOUNCEMENT



GLOBAL WATER
ALLIANCE



Thirteenth GWA Conference

Theme

Achieving Water, Sanitation, and Hygiene (WASH) Sustainability Goals for Developing Countries

January 6-7, 2020, Novotel Hotel, Kolkata

Organized jointly by

Global Water Alliance, USA

and

The Institution of Engineers (India)

RURAL DEVELOPMENT FORUM

In partnership with

Indian Institute of Science and Technology, Shibpur

and

The Institution of Engineers (India)

Water Management Forum



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