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April 2023

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A CENTURY OF SERVICE TO THE NATION

Volume 30

Number 1

Thirty-fifth National Convention of Computer Engineers and National Conference

Cyber Security and Privacy

Bareilly Local Centre, IEI organized the 35th National Convention of Computer Engineers during February 24-25, 2023 at Bareilly, in association with Mahatma Jyotiba Phule Rohilkhand University (MJPRU), Bareilly under the aegis of Computer Engineering Division Board [CPDB], IEI. A National Conference was also organized on the occasion on the theme **Cyber Security and Privacy**. Prof K P Singh, Vice-Chancellor, MJPRU graced the inaugural function as Chief Guest and Prof (Dr) Shekhar Verma, Dean, IIT Allahabad was present as the Guest of Honour. Dr



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Centenary Celebration of Tamilnadu State Centre, IEI

The Tamilnadu State Centre of The Institution of Engineers (India) observed its Centenary Celebration on December 15, 2022, at Hotel Le Royal Meridien in Chennai. Dr Hemant O Thakare, Immediate-Past President, IEI graced the function as Chief Guest. The Guests of Honour included Shri Ennarasu Karunesan, Founder & CEO of UMK Group in Chennai; Dr Rajoo Balaji, Director of the Indian Maritime University, Chennai Campus; and Padmabhushan Thirumalachari Ramasami, Former Secretary of the Department of Science and Technology, Government of India, and Former Director of the Central Leather Research Institute, Chennai. The celebration started with the invocation and lighting the lamp by the dignitaries. Er S Kannan, Chairman of the Tamilnadu State Centre of The Institution of Engineers (India), delivered the welcome address. Dr T M Gunaraja, Past President, IEI, in his address outlined



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From the President's Desk.....



Evolution of ITU's Focus: A Trend Analysis Based on World Telecommunication and Information Society Day Observances

World Telecommunication and Information Society Day (WTISD) has been celebrated annually since 1969, marking the founding of the International Telecommunication Union (ITU) on May 17th, 1865. Over the years, the themes of WTISD have reflected the changing landscape of the telecommunications and information industries, and the broader societal changes they have influenced.

From its inception in 1969 to the early 1990s, WTISD focused primarily on the technical aspects of telecommunications. For example, in 1975 the theme was "Telecommunications for national development," highlighting the role that telecommunications infrastructure could play in driving economic growth. In 1980, the theme was "Telecommunications and Health," which focused on the use of telecommunications technology to improve public health outcomes.

As the information age began to take hold in the 1990s, the themes of WTISD began to shift towards the emerging field of information and communication technologies (ICTs). In 1995, the theme was "Telecommunications and information: highways to the 21st century," which reflected the growing importance of the internet and other digital technologies. The following year, in 1996, the theme was "Telecommunications and the information market," which focused on the business opportunities created by the information age.

During the 2000s, the themes of WTISD began to reflect a growing recognition of the role that ICTs could play in achieving broader societal goals. In 2003, the theme was "ICT and improving road safety," highlighting the potential of ICTs to reduce traffic accidents. In 2005, the theme was "ICTs and disaster management," which focused on the use of ICTs to improve emergency response and disaster recovery.

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Cyber Security and Privacy

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Nirmal Das, Chairman, CPDB, IEI presided over the function. The programme was started with invocation and lighting of the lamp by the dignitaries on the dais. Mr Raj Goel, Chairman, Bareilly Local Centre, IEI delivered the welcome address. Prof K P Singh, in his address emphasized on exploring the existing knowledge base through further research and innovation. Prof Singh stated the Government initiative in national and state level regarding the data and information security. He discussed the importance of data and information



privacy in agriculture, healthcare, banking and finance and other public utility services. He focused on problem identification of different stake holders, identification of relevant technological platforms, formulation of suitable policies for data security and integrity and subsequent implementation of the same. Dr Nirmal Das, Chairman, Computer Engineering Division Board, IEI in his Presidential Address focused on the advancement and security of digital life. He discussed multi-factor authentication, data protection, initiatives and policies of Government of India's initiatives regarding digital privacy, among other topics. A Souvenir was released on the occasion in the august presence of the dignitaries on the dais.

Guest of Honour of the event, Prof (Dr) Sekhar Verma delivered the 'M S Ramanujam Memorial Lecture'. In his presentation, Prof Verma started his lecture with remembering the contribution of the personality in the field of mathematics. He further explained cryptography algorithms and discussed about the prime factorization theory and Ramanujam Graph established by Mr M S Ramanujam and its relevance to cryptography. In his lecture, Prof Verma explained several case studies, machine-to-machine communication, signal transfer through machine sensors, application of PLCs, application of light weight cryptography, development of trustworthy hardware, watermarking of computer programs. On the occasion, Prof (Dr) Divakar Singh Yadav, Pro Vice Chancellor, Head - Department of Computer Science & Engineering, Institute of Engineering & Technology, Lucknow; Prof (Dr) Baljit Singh Khehra, Principal, Babbar Akali Memorial Khalsa College, Garhshankar, Hoshiarpur and Mr Kaushlendra Singh Sisodia, Founder and CEO, UniConverge Technologies Pvt. Ltd, Noida were felicitated as eminent engineering personalities for their immense contribution in the field of computer engineering. For the year 2021-22, The IEI Young Engineers Award in the Computer Engineering Division was presented to Dr Rishemjit Kaur, Principal Scientist, CSIR-Central Scientific Instruments Organisation, Chandigarh; Dr G N Vivekananda, Assistant Professor, Department of Computer Science and Engineering, Madanapalle Institute of Technology & Science (Autonomous), Madanapalle, Andhra Pradesh and Dr Tanmoy Chakraborty, Assistant Professor, Department of Computer Science and Engineering, Indraprastha Institute of Information Technology Delhi. For the year 2022-23, The IEI Young Engineers Award in the Computer Engineering Division was presented to Dr P Dileep Kumar Reddy, Associate Professor, Computer Science and Engineering Department, Sri Venkateswara College of Engineering, Tirupati (in absentia); Dr Sanjaya Kumar Panda, Assistant Professor, Department of Computer Science and Engineering, NIT Warangal and Dr Abhijnan Chakraborty, Assistant Professor, Department of Computer Science and Engineering, Indian Institute of Technology Delhi. Er Kirti Chopra, Vice President, Bank of America, USA delivered the State of Art Lecture through virtual mode.

Earlier, Mr Sudhir Kumar Gupta, the Immediate Past Chairman and Convener of the event briefed the audience about the theme. During his presentation, Mr Gupta discussed the potential risks of cybercrime related to digital transactions, emphasized the importance of data protection measures such

as face and voice recognition technologies, and highlighted the dangers of AI-powered hacking and cloning techniques, which can be used to gain unauthorized access to sensitive information and manipulate digital identities. Organising Convener of the event, Prof (Dr) S S Bedi, in his address focused on standardization of data security systems. He explained active and passive cyber attacks, company policy formulation for data and information protection, design of data security tools, cryptography and data integrity, need of standardized data security mechanism etc. Mr V B Singh, Council Member, IEI and Mr Masarrat Noor Khan, Chairman, Uttar Pradesh State Centre, IEI were present on the occasion. Mr P K Madhwar, Honorary Secretary, Bareilly Local Centre, IEI proposed the vote of thanks.

A Panel Discussion was organized on the occasion on the topic 'Future of Computer Engineering'.

During the technical session, Prof (Dr) Divakar Singh Yadav delivered presentation on the topic 'Rigorous Design of Dependable Systems'. In his address, Prof Yadav discussed on different AI products and its applications. He explained the R&D trends in AI and Dependable Software Systems, distributed computation and modeling, application of dependable design system etc. Dr Baljit Singh Khehra delivered his presentation on the topic 'Classification of COVID 19, Normal and Pneumonia X Ray Images using CNN' and explained the ANN, CNN models, Deep Learning Models, proposed Architecture etc. Dr G N Vivekanand presented his paper on the topic 'A Multilayered Approach for Adversarial Machine Learning issues in Cyber Security Research'. Dr Sanjaya Kumar Panda delivered presentation on the topic 'Novel Service Broker and Load balancing Policies for CloudSim -based Visual Modeller'. Mr Kaushlendra Singh Sisodia presented paper on the topic 'Cyber Security and Privacy – A Practical Outlook with Emergence of Various Technologies (IoT and 5G)'. Dr Sovan Mohanty, Assistant Professor, SRMS, Bareilly delivered the invited lecture on the topic 'Dynamic Threats in Electromagnetic warfare'; Mr Prerak Kumar Swami and Ms Tulsi Singh, Rajshree Institute of management & Technology, Bareilly on 'False Information: Fake News, Misinformation and Correct Information'; Er Arun Kumar Kancheria, University of Petroleum and Energy Studies, Dehradun presented on the topic 'Human factor - A Paradox in Password Efficacy'; Prof Sandip Ramdasrao Mogle, SND College of Engineering and Research Centre, Yeola on 'Social Engineering & fake News'; Dr Umesh Dwivedi, Associate Professor, Babu Banarasi Das Northern Indian Institute of Technology, Lucknow on 'Earthquake - An Android Application'; Er Anuj Agrawal, Chairman, Centre for Research on Cyber Crime & law, New Delhi on 'Cyber Security & Crime - Impact on Business'; Er Ananda Prakash, CEO & Co Founder, Farm for Full Potential LLP, Co-founder, Deusent Energy Private Limited presented on the topic 'Security and Privacy in Cyber Space - The Fourth Basic Need of Human Being'.

An interactive session was organized on the occasion, when the professionals from industry and academia shared their expertise with the participants. Bareilly Police Cyber Crime Department presented the real life case studies and discussed the do's and Don'ts about the social media. The programme was well attended by the personnel from industry, academia, R&D and the students.

Recommendations emanated from the two-day deliberations are as follows.

To improve the security of personal accounts the 2-factor authentication security feature needs to be enabled. This provides an additional layer of protection to ensure that only authorized individuals can access the account. Before accessing any external storage devices, it is important to scan them for malware. Public networks should be used with caution, preferably with the use of a VPN. To prevent important data loss, it is advisable to back up information either in the cloud or on a local storage device for necessary restoration. It is recommended to use and protect separate passwords for multiple accounts to avoid single point hacking of multiple accounts. It is also suggested to raise awareness and motivate rural populations about Cyber Security and Privacy schemes so that they can benefit from recent technology advancements.

Design & Safety in Electric Vehicle Technology

Karnataka State Centre, IEI organized All India Workshop on the theme **Design & Safety in Electric Vehicle Technology** during 25-26 November 2022 in Association with Department of Electrical & Electronics Engineering, BNM Institute of Technology, Bengaluru under the aegis of Electrical Engineering Division Board [ELDB], IEI at Bangalore. Around the world, governments and automakers are promoting electric vehicles as a key technology to curb oil use and fight pollution and climate change. But as electric cars and trucks go mainstream, they have faced a persistent question that whether they are really as green as advertised. It matters how the electricity is generated and used for electric vehicles. The biggest challenges in EV technology include finding charging stations, charging times, higher initial costs, limited driving



range, and expensive battery packs for replacement. The most serious safety issue in EVs faced by customers are the instances of fire due to malfunctions in the battery system. The design of EV borne vehicle from the scratch and safety precautions and strategies from the initial stages of design is essential to advance the technology in the current scenario. The aim of the Workshop is to throw light on the concept of design, safety measures in EV technology to facilitate a path for researchers, practicing engineers and students to do better research in this field and, in turn, benefit the society and environment.

The inaugural function of the event began with the welcome address, delivered by Er M Lakshmana, Chairman, Karnataka State Centre and Council Member, IEI. Sri M G Balakrishna, Vice President, Federation of Karnataka Chambers of Commerce & Industry, Bengaluru graced the function as the Chief Guest. Dr Venkatesha K, Professor, Department of Electrical & Electronics Engineering (EEE), BNM Institute of Technology, Bengaluru highlighted the objectives of the All India Workshop and delivered lecture on the topic 'Evolution of Electric Vehicle Technology'. The resource person focused on automotive sector, basic components of car, drive trains/power trains, smart charging techniques, smart vehicles etc. He explained hybrid vehicles, vehicle to grid technology, Regenerative Braking in EVTs, importance of Smart Charging Technology in the current scenario, Load balancing for Smart Charging technology, Battery Swapping technology, static and dynamic inductive charging of moving vehicles and challenges in implementation of autonomous vehicle in Indian road systems. The speaker compared the efficiency of IC Engines with electric engines and the specific energy of different energy storage systems, which shows that specific energy of gasoline dominated the world so far. Plummeting battery price make EV the cheaper option, he opined, further. Dr Madhu S, Associate Professor, Department of EEE, BNM Institute of Technology, Bengaluru delivered presentation on the topic 'Smart Battery Management Systems'. Her entire session focused on design of battery management system from the scratch for the complete vehicular system safety. She explained the function of different open source software involved in the design of cell pack step by step, with safety precautions to reach up to the market launching level. She also discussed about the significance of active and passive balancing of cells by using electronic circuits, electrical and thermal protection of batteries. Active balancing saves the power by passing excess power to depleted cells of battery pack, while passive balancing loses the power by dissipation through resistors for balancing

technique, she explained further. She explained BMS design with the help of KiCad Software, which is applicable for electronic design automation (EDA).

Mr Jagadeesh, CEO, Nexgen Engineering Private Limited, spoke about different types of cells, cell testing devices, nickel strips, cell holders, packing insulation materials/tapes, thermistors, protective devices, heat shrinks and hot blowers used for battery packing. He explained the safety precautions and protective devices to be considered while packing the battery and discussed active and passive cell balancing used in battery management systems. Mr Narendra, Design Engineer, MVR Technologies demonstrated the working of 230 V, 4 kVA spot welding machine with two handheld electrodes and leg based throttle control. Participants learned the soldering techniques for different cells. Participants joined together to design and spot weld the cells with nickel strips for 36 V, 12 Ah battery pack suitable for E-cycle. They soldered the battery management system circuit wires to battery pack and placed the thermistor in the battery pack before closing and covered with heat shrinks. Mr Punith, Lakshmi Electronics Private Limited, Bengaluru, demonstrated the hub motors used for two wheelers, hall sensors connections, motor controllers and battery pack connection. He had dismantled the hub motor to show the position of hall sensors and wiring. He also showed the wiring connection of battery, motor controller, Brushless DC Electric Motor [BLDC] and auxiliary parts that include horn, lighting, brakes, throttles etc. Participants have learned all the concepts related to battery packing, battery management systems, motor drives, power electronic converters, wiring, safety precautions involved in design of electric vehicles. There were many queries raised by participants with respect to design and implementation of electric vehicles and the Industrial experts shared their views and expertise with the participants.

Dr Venkatesha K delivered lecture on the topic 'Design Considerations of Sizing Power Train' and highlighted various dimensions of a car for design, forces that act on vehicle while driving, usage of traction force to control the speed and sizing of power train. The parameters that affect rolling resistance force, aerodynamic drag force and gradient force were discussed with illustrations. The resource person provided the assignments to the participants to calculate the tractive power required to drive vehicle considering various constants, speed, acceleration, uphill, downhill modes and resistance forces. The power flow calculations in the entire vehicle was also shown to select motor and energy storage systems. The type of batteries used for hybrid and full electric vehicles, important parameters of battery pack selection for HEV were discussed too. The constructional parts and working principle of BLDC motor was explained with 3D models. Sri Pradeep Kranth, Lead Engineer - Design (R&D), Ford India Limited delivered presentation on the topic 'Mechanical Design Aspects of Automotive System' and discussed the details of dash board, side structure, fender, fender liner, front bumper, rear bumper, hood, carbon fibers, grass fiber, interior design of a car, body chassis design, safety, suspension, airbag, antilock brakes, electronic stability systems etc. The hands on training session was given by Sri Varun Rajamane & Mr Rajagopal, Founder and Head of Technology, Gremot Mobility Private Limited on the topic 'Demonstration of Electric Vehicle'. The resource persons demonstrated the disassembly and assembly of e-cycles & two wheelers and explained various parts and sensors available with EV for safety precautions and protection of drivers. During the last session, a motivational talk was delivered by Sri A H Sagar, International Educationalist on the topic 'Deep Learning and Research Mindset for Engineers in the 21st Century'. During the Valedictory session, Dr G Srinivas, Director, SGI Engineering Private Limited graced the function as Chief Guest. Dr Enti Ranga Reddy, Honorary Secretary and Council Member, IEI, Karnataka State Centre, IEI was present on the dais and addressed the gathering. Convener: Prof. T J Ramamurthy, IEI member: Dr. Naganagouda, resource persons and IEI members. Dr Srinivas, in his address explained on Earthing, Lightning Protection, Exothermic Welding, Surge Protection and Building Intelligence System.

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Design & Safety in Electric Vehicle Technology

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During the two-day sessions, the resource persons covered the emerging topics as follows.

- Concept of various types power trains or drive trains and their merits, demerits & applications;
- Design of Battery packs, smart battery management systems and safety measures.
- Various topologies of power electronic converters used in EV technology.
- Design considerations of sizing power trains.
- Disassembly and assembly of E-cycles, two wheelers etc.
- Design and safety of overall electric vehicle technologies by power flow analysis.

Moreover, the workshop reveals the present scenario of India in EV technology, which denotes that; Full Electric Vehicle [FEV] technology is more efficient than conventional gasoline engines; Huge vehicle design of FEV leads to more power savings than the smaller one; Resizing of the current Electric Vehicle [EV] to higher range or conversion from conventional vehicles to EV

of required size is not advisable and may results in fall of efficiency of the system. Dr Enti Ranga Reddy, Honorary Secretary, Karnataka State Centre and Council Member, IET proposed the vote of thanks.

Overall Recommendations from the All India Workshop are as follows.

Faster phase installation of EV fast charging / battery swapping stations in each and every petrol bunks to eliminate the fear of range coverage for customers that consequently results in higher sale of electric vehicles in the country; Subsidy for electric vehicle buyers from government which could increase the vehicle count in the country; Startups be encouraged to come out with high efficient indigenous designs of 2W, 3W and 4W that has increased efficiency with highest safety for better sales of EVs; Manufacturers be encouraged to design different EV parts in the country that focuses in export the quality parts globally for the speedy growth of the nation; etting up solar and wind mills with subsidy from government to install in own premises be encouraged in order to generate green power to charge own vehicles and convert the vehicle as green vehicle; Adoption of automotive such as EV trucks, aero planes, ships are big candidates to save more power than smaller vehicles. Strategic implementation of big EVs in all industrial and transportation fields to save more power is the need of the hour.

From the President's Desk.....

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In 2006/2007, the nomenclature of the day was changed from World Telecommunication Day (WTD) to World Telecommunication and Information Society Day (WTISD), reflecting the growing importance of the information society and the role that ICTs play in enabling it. Since then, the themes of WTISD have continued to reflect the evolution of the information society.

In recent years, themes such as "Connect 2030: ICTs for the Sustainable Development Goals (SDGs)" (2019) and "Accelerating digital transformation in challenging times" (2020) have reflected the growing recognition of the role that ICTs can play in achieving sustainable development and driving economic growth. As the world continues to grapple with the COVID-19 pandemic, the 2021 theme of "Accelerating digital transformation in challenging times" highlights the critical role that ICTs have played in enabling

remote work and learning, telemedicine, and other important services during the pandemic.

Overall, the themes of WTISD over the past five decades have reflected the changing landscape of the telecommunications and information industries, as well as the broader societal changes they have enabled. As ICTs continue to evolve and transform the world, WTISD will likely continue to play an important role in raising awareness of their potential and promoting their responsible use.

As we approach the World Telecommunication and Information Society Day in 2023, The Institution of Engineers (India) can play a crucial role in promoting the advancement of telecommunications and information technologies in the country. By harnessing its resources and expertise, The Institution of Engineers (India) can contribute to the vision of a digitally empowered and connected India.

One Day Seminar under the aegis of Electronics and Telecommunication Engineering Division Board

Wireless Communication Technologies and Mobile Networks



Bathinda Local Centre, IET organized One Day Seminar on the theme **Wireless Communication Technologies and Mobile Networks** on 01 October, 2022 at Bathinda. The programme started with welcome address delivered by Prof (Dr) Jagtar Singh, Chairman, Bathinda Local Centre, IET. Prof Singh also delivered lecture on the topic 'Wireless Communication Technologies and Mobile Networks'. Prof (Dr) T S Kamal, Former Vice President, IET graced

the function as Chief Guest and addressed the audience. Dr Savina Bansal delivered lecture on the topic 'Changing Paradigms of Communication: 5G'. The technical session was chaired by Dr Ram Krishan, Mata Sundri University Girls College, Mansa and Er Harsimran Singh, Head, Electrical Engineering Department, Baba Farid College of Engineering & Technology, Bathinda. Papers were presented on contemporary and relevant topics, which included, Study of Different Generations of Wireless Technology; Design of Hybrid Fractal Antenna for IoT Applications; Radiation Effects on Living Beings; Study on Different Fractal Geometries for Design of Antenna; ANN and IFS based Wearable Hybrid Fractal Antenna with DGS for S, C and X band Applications; Automated COVID-19 Detection Using Deep Learning; Performance Evaluation of MANET Routing Protocols based on Node Mobility; Performance Evaluation of Digital Pre-Distortion Technique of power amplifier using Low Complexity Analog to Digital Converter; Smart and Secure Architecture for Heterogeneous IOT Based Education System; Digital Pre-distortion Techniques for Mitigation Non-linear Effects in Power Amplifier: A Comprehensive Review etc. At the end of the session, Er Janta Singh, Honorary Secretary, Bathinda Local Centre, IET proposed the vote of thanks.

Earthquake Resistant Structures

Coimbatore Local Centre, IEI organized All India Seminar on the theme **Earthquake Resistant Structures** during 12-13 October 2022, in association with the Department of Civil Engineering, Dr NGP Institute of Technology (NGPiTech), Coimbatore at Dr NGP Institute of Technology, Coimbatore. The inaugural function was started with the welcome address delivered by Prof (Dr) S Shanmugam, Chairman, Coimbatore Local Centre, IEI. Dr L S Jayagopal, Managing Director, Mithran Structures, Coimbatore graced the function as the Chief Guest. In his address, Dr Jayagopal explained the significance of earthquake resistant structures. He also



delivered a lecture on the topic 'New Generation Steel Structures' detailing different facets of the behavior of steel structures when subjected to seismic loads. He explained several aspects of earthquake-resistant construction and discussed the methods to lessen the structural harm caused by seismic activities. Dr S U Prabha, Principal, NGPiTech, Dr P Muthupriya, Professor and Head, Department of Civil Engineering., NGPiTech, Dr M Veerapathran,

Assistant Professor, Department of Civil Engineering., NGPiTech and Mr V K Shankar, Assistant Professor, Department of Civil Engineering., NGPiTech also shared their views. Dr K Muthukkumaran, Professor, Department of Civil Engineering, National Institute of Technology Tiruchirappalli delivered lecture on the topic 'Mitigation of Earthquake Induced Liquefaction Risk by Induced Partial Saturation (IPS) - A Novel Ground Improvement Concept' and detailed about several facets of earthquake-resistant buildings, discussed on application of seismic loads to the structures and proposed strategies to reduce structural damage due to seismic activities. Dr K Chandrakaran, Professor, Department of Civil Engineering, National Institute of Technology Tiruchirappalli delivered lecture on the topic 'Ground Improvement for Foundation'. He spoke about the behaviors of foundation structures and explained earthquake resistant foundation design and construction, and also discussed how the substructure responds to seismic loads. Dr R Senthil, Professor, Department of Civil Engineering, Anna University, Chennai. delivered lecture on the topic 'Seismic Analysis and Design of Tall Buildings and Codal Provisions'. He explained the contents related to earthquake-resistant construction and also discussed the technologies to reduce structural damage caused by seismic activities. Dr A R Vijayanarayanan, Assistant Professor (Sr.Gr), Department of Civil Engineering, Amrita Vishwa Vidyapeetham, Coimbatore spoke on the topic 'The Past, the Present and the Future of Seismic Design of Buildings' and explained the earthquake-resistant constructions. Further, technical papers were presented on Earthquake Resistant Buildings & Structure; Structural Health Monitoring; Study on the Structural Health Monitoring of Bridge, based on the Internet of Things; Seismic Enhancement of RC Beam Column Joint Using Different Types of Composite Panels; The Behavior of Ambad Earth Dam under Change In Water Level and Earthquake; Lateral Load Analysis of Multi-Storey Frames with and without Shear Walls; Influence of Steel Fibers on Enhancing the Toughness Property on Concrete: A Simplified Approach etc.

Renewable Energy Integration with Energy Storage Systems

Tiruchirappalli Local Centre, IEI in association with the Department of Electrical and Electronics Engineering, University College of Engineering, BIT Campus, Anna University, Tiruchirappalli organized All India Workshop on the theme **Renewable Energy Integration with Energy Storage Systems** during 8-9 February 2023 under the aegis of Electrical Engineering Division Board [ELDB], IEI, at Tiruchirappalli. More than 125 participants including faculty members, students from various Engineering



Colleges and engineers from industries participated in this workshop. Er I Kamalakkanan, General Manager / SSTP & PPPU, Bharat Heavy Electricals Limited, Tiruchirappalli graced the function as Chief Guest. The Workshop was started with the welcome address delivered by Er Kevin Ark Kumar, Honorary Secretary, Tiruchirappalli Local Centre, IEI & Manager, BHEL,

Tiruchirappalli. Dr S Dharmalingam, Council Member and Member, Electrical Engineering Division Board, IEI briefed the esteemed audience about the theme of the Workshop and mentioned about the transformation of electric power sector around the world, which include the challenges of integrating high shares of renewable energy, particularly variable wind and solar energy. Dr T Senthilkumar, Dean, University College of Engineering, BIT Campus, Anna University, Tiruchirappalli appreciated the effort taken by Tiruchirappalli Local Centre, IEI in organizing the All India Workshop. Chief Guest, Er I Kamalakkanan, in his address, highlighted the details of solar power generation facilities available at BHEL, Trichy, supply of state-of-the-art Battery Energy Storage system for TERI by BHEL, advantages of energy storage facilities and related issues. Dr P Anbalagan, HOD/EEE, University College of Engineering, Anna University, BIT Campus and the Organizing Secretary of the event, proposed the vote of thanks.

During the technical sessions, resource persons from the relevant fields shared their expertise with the participants. Dr S Dharmalingam, explained the current status of Indian Power Sector, power system flexibility – current challenges and solutions and Energy Storage Systems. Mr K Kanagasabapathi, Head – Quality, High Energy Battery, BHEL, Tiruchirappalli explained the need for energy storage systems, types of batteries, design concept of batteries, fuel cells etc. Dr M Venkata Kirthiga, Professor, NIT Tiruchirappalli explained about Distributed Generation, Micro-grids and its Architecture, Distributed protection, islanding effects and consequences, power quality and protection issues in micro grid etc. Dr K Karthick,

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Latest Developments in Engineering Materials and Manufacturing Processes

Rajasthan State Centre, IEI, in association with Department of Metallurgical and Materials Engineering, Malaviya National Institute of Technology Jaipur organized All India Seminar on the theme **Latest Developments in Engineering Materials and Manufacturing Processes** during 17-18 September 2022 under the aegis of Metallurgical & Materials Engineering Division Board [MMDB], IEI at Jaipur. The aim of the Seminar was to bring academicians, scientists, industrialists, and students at a common platform. The purpose of this was to enable mutual exchange of knowledge in their respective fields, in accordance with the theme of the Seminar. The objective was to promote collaboration with industries, R&D labs and institutes, and to identify common goals/problems in technology which need immediate attention. The seminar included topics ranging from traditional materials and manufacturing processes like, steel and casting to advanced materials and manufacturing processes like, nanomaterials and



rapid prototyping. Besides, it included emerging topics such as, AI, ML, Six Sigma, Lean Manufacturing, the environmental and sustainability issues in the metallurgical industries etc. Er Gunjan Saxena, Chairman, Rajasthan State Centre, IEI delivered the welcome address and spoke on the theme. Er N M Mathur, Former CMD, Jaipur Vidyut Vitran Nigam Limited, (JVVNL) Jaipur graced the inaugural function as Chief Guest. Er Ranjan Swaroop, Director, M/s Agkasa Industries delivered the Keynote address on the topic 'To Build Low-cost Automation Culture in our Organizations which leads us into I 4.0 Strategic Intent' and explained about digital manufacturing and automation. Prof Ashok Sharma, Prof & Head (Formerly), Department of Metallurgical and Materials Engineering, MNIT Jaipur delivered lecture on the topic 'Industry 4.0 in a Pressure Die Casting Foundry'. Ms Nidhi Sindhu, Malaviya National Institute of Technology Jaipur delivered lecture on 'Development of Aluminium-based functionally graded Metal Matrix Composite'. Er Sunil Manani, Department of Metallurgical and Materials Engineering, MNIT Jaipur presented paper on the topic 'Combined and Individual Effect of Melt Thermal Treatment and Chemical Modification on Microstructure and Mechanical Properties of Al-14Si Alloy' and deliberated on the combined effect of melt thermal treatment and Sr modifier on microstructure and mechanical properties of hypereutectic Al-14Si alloy. Er Nikunj Patel, MNIT Jaipur delivered a presentation on the topic 'Effect of Cu Addition on Microstructure and Some Properties of 5754 Aluminium Alloy' and explained the effect of copper addition and solution heat treatment on microstructure, mechanical, corrosion, and thermal properties of 5754 aluminium alloy and subsequent study by optical microscope, Brinell hardness testing machine, UTM machine, mass loss test, and dilatometer, respectively. Dr Avnish Kumar, Research and Development Center, Star Wire (India) Ltd. Ballabgarh, Haryana delivered Invited lecture on the topic 'Effect of Heat Treatment on Microstructural Stability and Mechanical Properties of Cast 23-8N Nitronic Steel'. Er Sumit Shukla, Department of Mechanical Engineering, Poornima College of Engineering, Jaipur delivered lecture on 'Wire Electrical Discharge Drilling on Tool Steel'. Er Ritesh Gupta, Department of Metallurgical and Material Engineering, MNIT Jaipur delivered lecture on 'Experimental Investigation of Multiphase Hybrid Nanocomposites hybridized with Multi Walled Carbon Nanotube (MWCNT) to Improve Mechanical and

Interfacial Properties'. Er Mukesh Kumar, Department of Metallurgical and Materials Engineering, MNIT Jaipur delivered lecture on 'Enhancing Thermal and Dimensional Stability of High-performance Polymer Matrix Composites using Thermal Power Plant Leftover'. Ms Mansi Deshmukh, Department of Metallurgical and Material Engineering, MNIT Jaipur delivered presentation on 'Coating of CuNiFeCrMo High Entropy Alloy on Carbon Fibre Reinforced Polymer Composite to improve its Thermal and Electrical Conductivity'. Er S S Kasana, Executive VP and Head, (Quality and R&D), Star Wire India Limited, Ballabgarh, Faridabad delivered a lecture on the topic 'Chronology of Engineering Materials and their Processing Techniques'. Brij K Dhindaw, Retired Professor, IIT Kharagpur delivered a lecture on 'Twin Roll Casting of Aluminium Alloys and Scrap for Sustainable Production Strategies'.

Also papers were presented on emerging topics, which include 'Grain Refinement of Al-7Si Alloy'; 'Al6063 Reinforced with SiC and Marble Dust for Two Wheeler Brake Drum Application'; 'Effect of Annealing Heat Treatment Temperatures on Microstructure and Properties of Al-Cu-Mg Alloy'; 'Effect of Solution Heat Treatment Parameter (cooling rate, aging time) on Microstructure and Properties of Al-Cu-Mg Alloy'; 'Effect of Heat Treatment on Microstructural Stability and Mechanical Properties of Cast 23-8N Nitronic Steel'; 'Chronology of Engineering Materials and their Processing Techniques'; 'Twin Roll Casting of Aluminium Alloys and Scrap for Sustainable Production'; 'Agrivoltaics as Possible means to Support Dual-use: Renewable Energy Utilization and Food Production'; 'Study on High Performance Polymer Matrix Composites Reinforced with Agricultural Waste'; 'Study on Polymer/Rice Husk Ash Composites'; Synthesis and Characterization of the Electroplated Ni-ZrO₂ Composite Coatings; Characterization and Corrosion Behaviour study of Electrodeposited Ni-TiO₂ Composite Coating; Metallurgical Processing of Non-ferrous Metals: Mitigating Toxicity in Eco System through Vegetation; Role of Nanomaterials for Water Reclamation; Disinfection of Water by Eco-friendly Nanomaterials; Overview of Automatic Sewage and Drainage Cleaning System for Environmental Sustainability; Plasma Spray Deposition: A Review for Advanced Coating Formation and Research; Solidification Analysis of Mg-rich Corner of Mg-Zn-Nd Alloy Systems; Understanding the Role of TiC in Affecting Clad Geometry during Laser Cladding of Inconel 718 Alloy; Additive Manufacturing of the High Performance Polymer via Fused Deposition Modelling; Effect of Different Mean Feature Equivalent Sphere Diameter (ESD) on Compression Properties of FCC Material; Experimental Investigation of Tensile Strength of a Component Fabricated through Fused Deposition Modelling Process; Role of Kirkendall Porosity on Densification; Synthesis and Characterization of Solar Cell Materials for Photonics based Propulsion etc. During the Valedictory session, Er Sandeep Mathur, Managing Director, Rajasthan State Road Development & Construction Corporation Limited (RSRDC Limited), Jaipur graced the function as Chief Guest. Er Gunjan Saxena welcomed the dignitaries and participants present in the session. Er Sudesh Roop Rai, Honorary Secretary, Rajasthan State Centre, IEI proposed the vote of thanks.

IEI - Springer Journal

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Science for Sustainability and Development

Karnataka State Centre, IEI organized a One Day Seminar on the theme **Science for Sustainability and Development** on 28 February 2023 under the aegis of Interdisciplinary Coordination Committee [ICC], IEI at Bangalore. The Seminar aimed to discuss the role of science in achieving Sustainable Development Goals and promoting a better future for society. The Seminar was attended by a diverse audience, including the engineers, scientists, researchers, and students. The Seminar started with a welcome address



delivered by Dr Enti Ranga Reddy, Honorary Secretary, Karnataka State Centre & Council Member, IEI. In his address, Dr Reddy welcomed the distinguished guests, speakers, and participants to the Seminar and highlighted the importance of science in promoting sustainable development. Dr Wooday P Krishna, General Secretary, Seshadripuram Educational Institutions, and former Council Member, IEI graced the occasion as Chief Guest and inaugurated the Seminar. Prof Gopalan Jagadeesh, Professor, Department of Aerospace Engineering, Indian Institute of Science, Bangalore was the Guest of Honor for the Seminar. Dr Dinesh Rangappa, Professor, Department of Applied Science, Centre for Post-graduate Studies, Visvesvaraya Technological University, Bengaluru Region and Convener of the Seminar gave an overview of the Seminar theme and its objectives. He emphasized the need for sustainable development and how science could play a significant role in achieving it. The tremendous progress made in science over time has resulted in evolution of various technologies that have made modern lifestyle very comfortable; The revolutionary scientific discoveries in fields such as agriculture, health care, telecommunications, space exploration, transportation, computerization and so on have changed the dimension of technological development, he mentioned.

Dr Wooday P Krishna, in his address, emphasized the importance of sustainable development and how science could provide innovative solutions to address the challenges faced by the society. He further encouraged to work towards a sustainable future and make a positive impact on society. The Sustainable Development Goals are adopted as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. The role of science and technology in building sustainability is becoming a topic that is being discussed across the world; As resources steadily exhaust, the importance of science finding a solution has become even more critical now," Dr Krishna stated. Continuing, Dr Krishna said, today technology has progressed by leaps and bounds in all sectors. Countries around the world are creating models of sustainable

growth based on the assumption that technology can facilitate them to create new or alternate sources to the resources that are depleting; The demand for thorough research into the scope of science in building a sustainable future has become essential now, he opined further. There has been the emergence of several application programs towards the role of science in sustainability, related to the finding of alternative and renewable energy sources for reducing pollution. Moreover, it helps to avoid depleting of already scarce resources, he mentioned. Prof Gopalan Jagadeesh delivered an Invited Talk on the topic 'Shocking Waves - Healing Touch'. In his presentation, he explained that shock waves are accompanied in almost all the processes involving rapid energy transformations; the energy associated with such waves is harnessed and used for various applications across diverse disciplines including aerospace and aeronautical engineering, material science and biological and biomedical sciences; Shock waves are capable of inducing abrupt changes in the material properties and shock waves are one of the most efficient mechanisms of energy dissipation; There has been enormous development in the field of shock wave biology; Researchers across the globe have studied various interactions and effects of shock waves on biological systems. The speaker mentioned that biomedical applications developed by them include needle-less drug delivery, bacterial transformation using shock waves, microbial biofilm disruption, shock wave responsive drug release formulations and shockwave assisted wound healing. Dr Harish C Barshilia, Chief Scientist & Group Head, National Aerospace Laboratories, Bangalore delivered Invited Talk on 'Renewable Energy for Sustainable Development'. In his talk, he discussed the importance of renewable energy sources and their role in promoting sustainable development and also highlighted some of the innovative solutions that are being developed to address the challenges faced by society. Dr Gurumurthy Hegde, Director, Christ University, Bangalore spoke on 'Wonders of Light and Its Fascinating Applications' and discussed the importance of light in promoting sustainable development and how it could be used to address some of the challenges faced by society. He also highlighted some of the exciting applications of light in different sectors. Dr Dinesh Rangappa, Professor, Department of Applied Science, Centre for Post-graduate Studies, Visvesvaraya Technological University, Bengaluru delivered a lecture on 'Global Science for Global Wellbeing'. In his talk, he emphasized the importance of global science in addressing the complex challenges facing the world today and promoting the well-being of people, ecosystems, and the planet as a whole. Dr Rangappa also highlighted the importance of partnerships and networks in advancing global science for global well-being. He emphasized the need for collaborative and mutually beneficial partnerships between scientists, policymakers, and communities at the local, national, and global levels, and the need for sustained investment in scientific research and innovation. The talk provided a compelling argument for the critical role of global science in promoting global well-being. His insights and examples underscored the importance of collaboration, diversity, inclusivity, and equity in scientific research and innovation, and highlighted the need for sustained commitment and investment in global science to address the most pressing global challenges of our time. At the end of the session, Er Ravi K S, Member, Organising Committee proposed the vote of thanks.

Renewable Energy Integration with Energy Storage Systems

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Manager, Business Development Group (BDG), BHEL, Tiruchirappalli explained a case study for preliminary design of solar PV plant with battery energy storage system, compact substation, load levelling, frequency regulation, thermal energy storage systems and mechanical energy storage systems. Dr M P Selven, Professor, NIT Tiruchirappalli explained power system with synchronous generators, power system with restoring type loads, power system with wind energy conversion systems, electrical generators for wind turbine generation systems etc. Dr M Balasingh Moses,

Associate Professor, Department of Electrical & Electronics Engineering, University College of Engineering, Bharathidasan Institute of Technology Campus, Anna University, Tiruchirappalli (EEE, UCE-AU, BIT) discussed the technologies available in energy storage systems including Internet of Things, Artificial Intelligence, Machine Learning and Cyber Security. Dr P Anbalagan, Head of EEE, UCE-AU BIT, Tiruchirappalli explained Puducherry Smart Grid Pilot Project, different Cloud Computing tools, Cloud Service models, mobile computing in energy systems etc.

Basics of 5G Technology and its Advantages

Gwalior Local Centre, IEI organized One Day Seminar on the theme **Basics of 5G Technology and its Advantages** on 12 February 2023 under the aegis of Electronics and Telecommunication Engineering Division Board [ETDB], IEI at Gwalior. The programme was started with welcome address delivered by Er Radha Kishan Khetan, Chairman, Gwalior Local Centre, IEI. He further mentioned that 5G mobile technology can usher in new immersive



experiences such as VR and AR. It offers faster, more uniform data rates, lower latency, and lower cost-per-bit, which will enable the delivery of new and enhanced services, he opined. Dr Manisha Singh, Associate Professor, Department of Applied Physics, Amity University, Madhya Pradesh delivered the Keynote speech and explained about the basics of 5G. She explained that the fifth generation mobile network is a new global wireless standard, which is designed to connect virtually everyone and everything including man, machines, objects, and devices. She mentioned that 5G wireless technology is meant to deliver higher multi-Gbps peak data speeds, ultra low latency, more reliability, massive network capacity, increased availability, and a more uniform user experience for a large number of users. She added that higher performance and improved efficiency not only empower new user experiences but also connect new industries. Mr Mayank Gaur,

Amity University, Gwalior briefed about the difference between the previous generations mobile networks and 5G. He said that fourth generation- 4G LTE 2010s ushered in the era of mobile broadband; However, 1G, 2G, 3G, and 4G all led to 5G, which is designed to provide more connectivity than was ever available before. He mentioned 5G as a unified, more capable air interface, which has been designed with an extended capacity to enable next-generation user experiences, enable new deployment models and facilitate new services. With high speeds, superior reliability and negligible latency, 5G will expand the mobile ecosystem into new realms, he added. The speaker further stated that 5G will impact every industry, enabling safer transportation, facilitating remote healthcare, enabling precision agriculture, digitizing logistics and making more things a reality. Mr Rohit Jain, PhD Scholar discussed the roadmap regarding the growth of 5G and focused that 5G is the driver of global economic growth with a notable global economic output, creates new jobs over the next 15 years. He said that the landmark 5G Economy study revealed that its full economic effect will be realized across the globe in the near future, supporting a wide range of industries and potentially enabling a huge worth of goods and services. Although the full economic impact of 5G has yet to be fully realized, experts predict that it will be significantly greater than that of previous network generations. Moreover, the development requirements of the new 5G network are also expanding beyond the traditional mobile networking players to industries, he mentioned. Er Prabhat Kumar Bhargava, Past Chairman, Gwalior Local Centre explained about the 5G value chain including OEMs, operators, content creators, app developers, and consumers. Er Vinay Kumar Shukla emphasized the social impact of 5G, which is an increasingly important business measure. Dr (Ms) Sulochana Wadhvani, Honorary Secretary, Gwalior Local Centre, IEI proposed the vote of thanks.

IEI Technical Webinar under the aegis of Computer Engineering Division Board

Application of Machine Learning and Artificial Intelligence in Medicine

Kochi Local Centre of the Institution organised Technical Webinar on the theme **Application of Machine Learning and Artificial Intelligence in Medicine** on 27 August 2022 under the aegis of Computer Engineering Division Board, IEI. The webinar was started with the welcome address delivered by Mr Salahudheen P A, Chairman, Kochi Local Centre, IEI. Moderator of the session, Prof (Dr) Madhu G, Senior Professor and Head, Department of Chemical Engineering, School of Engineering, CUSAT, narrated the theme in details and introduced the speaker of the event, Dr Parvathi



Dr Parvathi S Pillai

S Pillai, Research Fellow, Mayo Clinic, Rochester, Minnesota, USA. In his address, Prof Madhu explained that the human brain advances over time to respond to survival instincts, harness intellectual curiosity, and manage demands of nature and when inclined towards the dynamic environment, began its quest to replicate nature. In addition, he expressed his opinion that the human brain can often surpass its physical limitations when advanced statistical models, algorithms, computational methods, and

other tools are employed to accelerate scientific progress. He explained the development of AI and ML algorithms for biological morphogenesis and elaborated the functional domain of AI starting from data models, ANN, etc based on the function and structure of human –biological interface. He discussed intelligent systems and the application of AI in healthcare, including diagnostics, treatment recommendations, engagement and adherence to the administrative control etc.

Intelligence in Medicine'. She began her presentation by introducing the terms 'Artificial Intelligence' and 'Machine Learning,' and then provided a general understanding of the challenges and future of AI in the field of medicine. She explained studies on Machine and Deep Learning in clinical



Prof (Dr) G Madhu

development, cited different applications of AI in medicine, and discussed the development of Probabilistic Neural Network model for information storage. She discussed Multilayered Perception and Deep Neural Networks in detail, and elaborated on the advancements in AI applications in healthcare. She also talked about the use of Machine Learning algorithms in predictive analytics for healthcare, as well as the use of Machine Learning and Deep Learning scores for process optimization features.

She explained application areas of AI in medicine, which include clinical decision support, image analysis, genetic analysis, pathology, therapeutics etc. She also discussed early diagnostics through predictive clinical analytics, application of AI and ML in clinical trials, application of Deep Learning models in Radiology, Augmented Intelligence etc.

Mr Amit Kumar Das, Chairman, Computer Engineering Division Board, IEI [Session 2021-22], addressed the audience and expressed his appreciation for the speaker's extensive knowledge and excellent presentation. An interactive session was held at the end of the event. Moderator of the event, Prof (Dr) G Madhu summed up the proceedings of deliberation. At the end, Mr Babu K S, Honorary Secretary, Kochi Local Centre, IEI proposed the vote of thanks.

AI Intervention on Indian Knowledge System and its' Impact on Society

Bhilai Local Centre, IEI organized Technical Webinar on the theme **AI Intervention on Indian Knowledge System and its' Impact on Society** on 16 October 2022 under the aegis of Computer Engineering Division Board [CPDB], IEI. Panelists of the event were Dr G R Sinha, Adjunct Professor, International Institute of Information Technology (IIIT) Bangalore; Dr Kavita Thakur, Professor, School of Studies in Electronics and Photonics, Pt Ravi Sankar Shukla University, Raipur, Chhattisgarh and Mr Aryan Khare, Assistant Professor, Department of Civil Engineering, Birla Institute of Technology, Durg, CG. The webinar session was moderated by Prof (Dr) Nagendra Tripathi, Professor, Department of Electrical Engineering, Birla Institute of Technology, Durg, CG and Honorary Secretary, Bhilai Local Centre, IEI. The programme was started with the opening remarks by Prof (Dr) Nagendra Tripathi. Mr Pradeep Kumar Tiwari, Chairman, Bhilai Local Centre, IEI delivered the welcome address. Mr Aryan Khare delivered lecture on the theme of the day. He gave an overview of Artificial Intelligence (AI) and said that AI is the simulator of human intelligence in machines accompanied by studying the patterns of human brain and analyzing the cognitive process. He further explained different AI tools, which include Chatbots, Virtual Reality, Voice Assistant and Data Analytics. He also discussed the benefits for using Artificial Intelligence for the students, teachers and society at large. Dr Kavita Thakur, Head of the Department, School of Studies in Electronics and Photonics, Pt Ravishankar Shukla University, Raipur delivered lecture on the topic 'Role of Machine Learning for Energy Efficient 5G Communication Networks' and focused on 5G communication, overview of AI and ML, advantages of using AI in 5G communication networks, role of AI and ML in intelligent decision making and so on. She discussed the development of communication



Dr G R Sinha



Dr Kavita Thakur



Mr Aryan Khare

Dr G R Sinha delivered presentation on 'AI Intervention in Indian Knowledge System and its Impact on the Society'. Dr Sinha explained the significant aspects of smart and intelligent systems and mentioned that smart systems have the abilities of sensing, actuation, and control to interpret and analyze a situation, which is able to make decisions based on data captured, smartly and adaptively. He discussed Edge Computing, 5G communication network and its application in healthcare. He elaborated further smart emerging areas, which include Smart City Lab, Smart City Surveillance through Intelligent Sensor Data Analysis Monitoring under low-light condition, smart environment monitoring etc. Dr Sinha discussed further Cognitive Computing, AI Analytics, cloud services and opined that the next generation computing will drive the future of healthcare, startups and e-health research centres. He also discussed the application of Robust Environment Monitoring, Smart manufacturing, Internet of Medical Things and Tools etc.



Prof (Dr) Nagendra Tripathi

An interactive session was organized at the end of deliberation, when the panelists of the event shared their thoughts and expertise with the participants. Moderator of the webinar, Prof (Dr) Nagendra Tripathi summed up the proceedings of deliberation and extended the vote of thanks.

Centenary Celebration of Tamilnadu State Centre, IEI

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the history of Tamilnadu State Centre, IEI. Dr G Ranganath, Chairman, CATE, Council Member, IEI and Immediate Past Chairman, Tamilnadu State Centre, IEI delivered the felicitation address. Dr L Ramesh, Chairman, Tiruvallur Local Centre, IEI briefed about the Asia Book of Record certificate. During the celebration, Er S Kannan was presented with the Asia Book of Record certificate for organizing the 100 Hours IEI TNSC TECHNO CARNIVAL involving all the 16 Local Centres under Tamilnadu State Centre. The certificate was presented by Dr Suresh, Co-ordinator of the Asia Book of Record. The Centenary Elite Volume was released during the celebration by the Immediate Past President, IEI.

On the occasion, the Legendary Talks were delivered by Padma Bhushan. Dr A Sivathanu Pillai, Founder CEO & MD, BrahMos Aerospace, Former Honorary Distinguished Professor, ISRO, Former Chief Controller (R&D), DRDO, Honorary President, PMA-India; Padmabhushan Thirumalachari Ramasami, Former Secretary, Department of Science and Technology, Government of India, Former Director, Central Leather Research Institute, Chennai and Shri Elango Rangaswamy, Creator of Model Village, Former Scientist, Man of the Year Award winner 2013 and Shri Mahadevan Senthil Kumar, Chief Security Officer & Cyber Security Architect. The Lifetime Achievement Award

was presented to Dr T M Gunaraja, in recognition of his contribution to the Institution.

A panel discussion on the topic 'Role of Engineers for Sustainable & Self-reliant India - Academic Excellence' was organized, featuring Dr D Viswanathan, Former Vice Chancellor of Anna University; Dr M Murugan, Principal of SRM Valliammai Engineering College; Dr Suresh, Co-ordinator of the Asia Book of Record; Dr K Palani Kumar, Principal of Sairam Engineering College and Committee Member of the Tamilnadu State Centre of the Institution of Engineers (India); and Dr L Ramesh, Joint Registrar of the Dr M G R Educational Research Institute and Chairman of the Tiruvallur Local Centre of The Institution of Engineers (India). Dr J Balamurugan, Honorary Secretary, Tiruvallur Local Centre, IEI delivered lecture on the topic "Role of Engineers for Sustainable & Self-reliant India - Industry Excellence". Dr Arivazhagan Ondiappan, CEO, International Institute of Project Management - Consulting & Training on Project Management, Process Improvement, Risk Management, Business Analytics was the Special Guest and delivered the felicitation address. Er S Senthilkumar, Committee Member, Tamilnadu State Centre, IEI, Er Abhishek S VA, Senior Architect / Partner, AVS Architects and Partners, Chennai, Er K Mohan Reddy, Director, Planning & Projects, Neyveli Lignite Corporation India Limited, and Er S Yuvaraj Moorthy, AGM - Schneider Electric were present on the occasion. Vote of thanks was delivered by Er D Gokul, Honorary Joint Secretary, Tamilnadu State Centre, IEI.

Productivity Improvement in SMEs with Implementation of Lean Manufacturing Tools

Telangana State Centre, IEI organized Technical Webinar on the theme **Productivity Improvement in SMEs with Implementation of Lean Manufacturing Tools** on 27 August 2022 under the aegis of Production Engineering Division Board [PRDB], IEI. Dr Jaiteerth R Joshi, Programme Leader, KUSHA, DRDO, Hyderabad was the Chief Guest of the event. Panelists of the webinar were; Prof (Dr) Rakesh L Shrivastava, Member, Mechanical Engineering Division Board IEI [Session 2021-22], Former Professor of Mechanical Engineering, Consultant and Trainer, Nagpur; Mr Asim Inamdar, IVEX Lifestyle Vertical Expert in Indorama Ventures Limited and Mr Hanumantha Rao, Additional General Manager, Usha International Limited. Dr G Chandra Mohan Reddy, Former Honorary Secretary, Andhra Pradesh State Centre, IEI, Former Principal, MGIT and Professor, Department of Mechanical Engineering, CBIT, Hyderabad moderated the session. The programme started with welcome



Prof (Dr) Rakesh L Shrivastava,

address delivered by Er B Brahma Reddy, Chairman, Telangana State Centre, IEI. He explained the objective of the webinar to conceptualize lean manufacturing and lean implementation. Dr Seeram Satyanarayana, Chairman, PRDB, IEI addressed the audience and discussed the contribution of micro, small and medium scale industries in the national economy and in the manufacturing sector in particular. Dr G Ranganath, Chairman, Committee for Advancement of Technology and Engineering [CATE] shared his views and thoughts



Mr Asim Inamdar

with the audience. Er V B Singh, Vice President, IEI [Session 2021-22] in his address briefed about lean thinking and lean manufacturing and said that Lean principle enables quicker responses to changing customer demands, faster production, and increased quality with subsequent cost effectiveness. Small and medium-sized companies embrace lean methodologies to increase customer satisfaction and competitiveness in the global marketplace. Lean Manufacturing tools are intended to help drive out waste, simplify process control measures, results efficient material and process flow, improve quality control, which leads to the optimal utilization of resources, he added.

Dr Joshi in his address said that the SMEs are the life line of the country's economy and their survival and growth are critical to the national development; They are required to perform with modest resources at their disposal while facing stiff competition in the marketplace. He opined that SMEs are one of the major contributors to the national GDP, has the potential to create vast job opportunities and productivity improvement of SMEs can boost the gross productivity of the country. He explained the application of well known tools to enhance productivity, which include; Six Sigma, Lean Manufacturing, TQM, ISO certification and also enumerated the need of training and development in manufacturing, Quality Control, maintenance etc.



Mr Hanumantha Rao

He explained Lean concept as a customer focused strategy with value stream optimization and added that the objective of Lean manufacturing is to increase productivity, profitability, improved production lead time etc. He further focused on implementation of lean tools, namely JIT, KANBAN, TPM along with improvement in overall equipment effectiveness, process performance and suggested a roadmap for stepwise implementation of the same.



Dr G Chandra Mohan Reddy

Moderator of the session, Dr G Chandra Mohan Reddy introduced the panelists of the session and briefed about the theme.

Prof (Dr) Rakesh L Shrivastava delivered his presentation on the topic 'Lean Six Sigma for SMEs'. The speaker began his lecture by discussing the challenges faced by SMEs in terms of skilled manpower, technology upgradation, delivery lead time, quality of

products, cost effectiveness etc. He explained Lean Six Sigma commitment to the customers, employees, shareholders, investors and other stakeholders. He discussed the five interdependent Lean principles, which are value definition, value stream analysis, pull, flow and perfection. He discussed the application of Six Sigma tools, DMAIC/DMADV approach, FMEA, DOE/Taguchi Method, Process Optimization etc and strongly advocated for a customer driven approach for Lean Six Sigma application. The speaker also explained the significance of Sigma scale and Six Sigma accuracy.

Mr Asim Inamdar, IVEX Business Expert, Indorama Ventures Limited delivered presentation on the theme of the webinar. He explained Lean concept, Lean manufacturing toolset, Value Stream mapping (VSM), Single Minute Exchange Dies (SMED) with examples. In his presentation, he discussed the Lean principle,



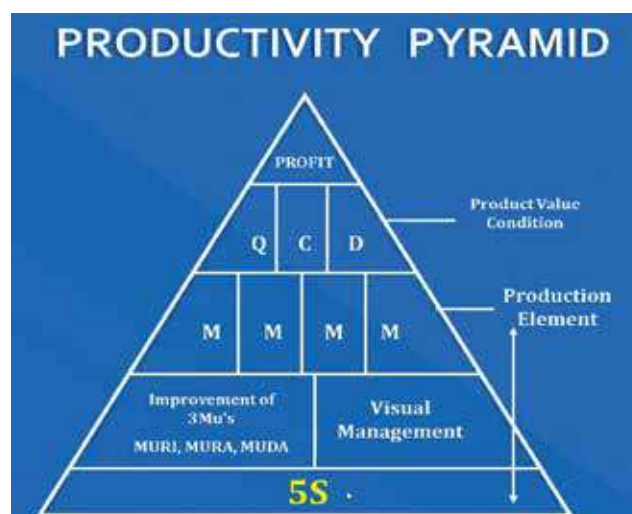
Dr Jaiteerth R Joshi

which involves reducing waste and cycle time through the use of Lean manufacturing tools such as VSM, 6S, SMED, and implicit infrastructure. He also highlighted that Lean supports six sigma process quality, and six sigma supports Lean speed. He explained nine waste to be reduced, known as DOWNTIME, i.e. Defect, Overproduction, Wait-under utilization of talent, Transportation, Inventory and Excessive Processing & safe sustainable process. Pace production rate with demand rate and cut up setting time; Standardize each

process and balance capacity bottlenecks; Inclusivity, employee engagement and training; Designing linear workflow and avoid changeovers; Just-in time raw materials, elimination of buffers; Ensuring logical organization of man and machine to reduce motion; Simplification of process to align customer specification with process capability and creation of culture to scan all actions from sustainability point of view. He explained the application of VSM, the materials and information icons and how it identify production bottlenecks, which leads to corrective actions to improve productivity.

Mr Hanumantha Rao in his lecture focused on waste elimination with MUDA principle, workplace management with 5S concept, Quality Circle with KAIZEN, Poka Yoke etc. The speaker explained profit depends on cost reduction and subsequent waste reduction. He explained different components of Productivity Pyramid, business and operational excellence, TQM, performance parameters of productivity etc. The speaker focused on the elimination of non-value added activities and explained constant elimination of waste with MUDA concept, Taiichi Ohnos seven waste principle and so on. He further explained 5S concepts and benefits with high impact low cost waste elimination, elimination of motion waste, visual control for easy identification, application of radar graph to monitor 5S implementation, 5S best practices and support structure, KAIZEN approach and implementation for quality improvement.

Moderator of the event, Dr G Chandra Mohan Reddy summed up the proceedings of deliberation. Prof Dr K Saraswathamma, Committee Member, Telangana State Centre, IEI proposed the vote of thanks.



Smart Antennas for 5G Applications

Madurai Local Centre, IEI organized One Day Seminar on the theme **Smart Antennas for 5G Applications** on 20 May 2022 under the aegis of Electronics and Telecommunication Engineering Division Board [ETDB] at Madurai. The event was started with the welcome address delivered by Dr N Sivasubramanian, Chairman, Madurai Local Centre, IEI. Mr S Mohamed Jaleel, Founder & Chairman, Sethu Institute of Technology inaugurated the Seminar and delivered a speech. Dr A Senthilkumar, Principal, Sethu Institute of Technology delivered the special address. Dr G Krishnaveni, Assistant Professor, Electronics and Communication Engineering Department, P T R College of Engineering & Technology, Madurai, delivered a presentation on the topic 'Health Care Antennas for 5G Systems' and explained the advantages and benefits of 5G communication, which include application of higher radio frequencies with less clutter. She mentioned that in the healthcare monitoring system, flexible/wearable electronics are expanding for the future health state application. The performance of the health monitoring system is greatly influenced by its radio frequency performance such as bandwidth, electromagnetic interference, and specific

absorption ratio, which in turn depends on Antenna design and integration. Dr S Kannadhasan, Associate Professor, Electronics and Communication Engineering Department, Cheran College of Engineering, Karur delivered a lecture on the topic 'Overview of 5G Technologies' and explained different concepts and applications of smart antennas. He discussed peak and average data rates of 5G network, its consistent and uninterrupted connectivity, enhanced broadband features etc. Dr T R Muthu, Assistant Professor (SG), Electronics and Communication Engineering, K L N College of Engineering, Pottapalayam delivered lecture on the topic 'Features and Future of Smart Antennas'. He said that smart antenna system combines multiple antenna elements with a signal-processing capability to optimize large increase in capacity, increased range, potential to introduce new services, more security and reduce multi path propagation which responds to the signal environment in its radiation pattern and reception pattern. The advent of powerful low-cost digital signal processors (DSPs), general-purpose processors and application specific integrated circuits (ASICs), as well as innovative software-based signal-processing algorithms has made intelligent antennas practical for cellular communication systems, the speaker added. Dr P G Akila, Assistant Professor, Electronics and Communication Engineering Department, PSNA College of Engineering & Technology, Dindigul, delivered a lecture on the topic 'MIMO Antenna' and explained the basic concepts of MIMO Antennas, Various spatial diversity and spatial Multiplexing, MIMO capacity on fading channels, benefits as well as drawbacks of MIMO. The speaker mentioned that MIMO is multiple antenna technology in which more than one antennas are used at transmitter and receiver stations and also explained Spatial Multiplexing. Prof (Dr) P Udhaya Kumar, Honorary Secretary, Madurai Local Centre, IEI proposed the vote of thanks.



Project Management Associates Weekend Programme



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Participation Fee for Level C: Rs. 47,090 per person plus GST @ 18%

Participation Fee for Level D: Rs. 24,650/- per person plus GST @ 18%

- Registration fee is non refundable. However, alternate persons can be nominated.
- Cheque / draft or NEFT is payable to **"Project Management Associates"** at Delhi.
- The registration fee does not include travel and hotel accommodation.

Next batch of on-line learning sessions on Project Management Competence Building (PMCB) based on ICB Version 4, knowledge base for IPMA Level C and Level D by our Learning partner PMA is from **5, 6, 12, 13 May 2023**. The relevant material is available in the link <https://www.pma-india.org/brochures>.

Exam Dates for Level C: 20, 26, 27 May 2023

Exam Dates for Level D: 20 May 2023

Exam Venue: Secure and Seamless Online Exam & Assessment

For more details, please contact:

Arvind Agarwal, Head, PMA Cert (Certification Body)

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IEI Celebrates World Engineering Day for Sustainable Development 2023

Theme
Engineering Innovation
for a more Resilient World

World Engineering Day for Sustainable Development was celebrated by the Centres of the Institution all over the country on March 04, 2023. Brief accounts of the celebration as received from various Centres are reported hereunder.

STATE CENTRES

Assam

Assam State Centre, IEI observed World Engineering Day for Sustainable Development 2023 at Guwahati on 04 March, 2023. The speaker of the event, Prof Sashindra Kumar Kakoty, Deputy Director and Professor, Department of Mechanical Engineering, IIT Guwahati and Former Council Member, IEI discussed about the importance of Sustainable Development Goals (UN-SDGs) and focused on the economic inequality. He explained further SDG-9, which covers Build resilient infrastructure promote sustainable industrialization and foster innovation. He spoke about the triple bottom line of sustainability encompassing environmentally sound, economically feasible and socially equitable infrastructure development. Earlier, Mr Nripendra Nath Patwari, Chairman, Assam State Centre, IEI welcomed all present in the session. Mr Pulak Sarmah, Honorary Secretary, Assam State Centre, IEI introduced the Speaker, who was also the Immediate Past Chairman, Assam State Centre, IEI. At the end, Mr Pulak Sarmah proposed the vote of thanks.



Gujarat

Gujarat State Centre, IEI in association with Staff Training College, Roads & Building Development, Government of Gujarat observed World Engineering Day 2023 on 04 March 2023 at Gandhinagar. In the beginning, Mr Dineshchandra Odhavibhai Nakrani, Honorary Secretary, Gujarat State Centre, IEI delivered the opening remarks and welcomed the dignitaries, Chief Guest, Guest of Honour, Keynote Speaker, delegates, participants. Mr Chaudhari Pravinkumar Mohanbhai, Chairman, Gujarat State Centre, IEI delivered the welcome address and discussed about the importance of the day. Chief Guest of the event, Mr S B Vasava, Council Member, IEI & Secretary, Roads & Building Department, Government of Gujarat addressed the gathering and briefed the objective and background of the day. Guest of Honour of the event, Dr G J Joshi, Professor & Head, Department of Civil Engineering, SVNIT Surat explained that development is a never ending process but at the same time, its impact on environment, global aspects of waste generation after development may also be considered. Mr H U Kalyani, Chairman, Water Management Forum of IEI and Chief Engineer & Additional Secretary, Water Resources Department, Government of Gujarat also addressed the audience. Keynote Speaker of event, Prof Dharamveer Singh, Indian Institute of Technology Mumbai delivered his presentation on the topic 'Technologies for Construction of



Sustainable and Resilient Pavement Infrastructure' and explained different types of pavement for road transportation with its durability, maintenance, economic points of views with different case studies. Dr Sunil S Basarkar, General Manager, AFCONS Infrastructure Limited, Mumbai delivered lecture on the topic 'Innovative and Sustainable Practices in Indian Infrastructure Projects'. Mr Ashwin Pathak, Ultra Tech Cement Limited delivered lecture on the topic 'Sustainable Solution for Smart Roads (White Topping)' and explained white topping as an important potential application area for sustainability concepts. Mr Harsh Patel, Cavtech delivered lecture on the topic 'Building Automation in Sustainable Development' Mr Dineshchandra Odhavibhai Nakrani proposed the vote of thanks at the end of the session.

Tripura

Tripura State Centre, IEI in association with Institute Innovation Council, Tripura Institute of Technology, Government of Tripura observed 'World Engineering Day for Sustainable Development' on 04 March 2023 at Tripura Institute of Technology, Narsingarh. Prof (Dr) Sekhar Datta, Principal, Tripura Institute of Technology graced the occasion as Guest of Honour and explained the difference between innovation and invention, discussed on National Education Policy (NEP) 2020, which focuses innovation in technological development. Special Guest of the event, Mr Jiten C Das, General Manager, Agartala Gas Based Power Station, North Eastern Electric Power Corporation Limited (NEEPCO), R K Nagar, Tripura, discussed how NEEPCO is integrating innovation in the power plant operation and enlightened about various engineering innovations in North-East Power Sector. Prof (Dr) B K Upadhyaya, Dean (Academics), Tripura Institute of Technology discussed how innovative online teaching methodologies helped teaching learning process during COVID pandemic. Special speaker of the event, Dr Suman Deb, Head, Department of Computer Science & Engineering & Chairman, Institute Innovation and Start up, NIT Agartala discussed about sense of innovation and motivated the students for innovation. Special speaker, Dr Subhrasmita Majumder, Lecturer, Tripura Institute of Technology explained sustainable development and resilient world. Er Meghajit Sarkar, entrepreneur & Ex-student, Tripura Institute of Technology presented a software app related to digital interactive advertisement as developed by him. Dr Subhadeep Bhattacharjee, Chairman, Tripura State Centre, IEI presided over the programme. Earlier, Dr Mrinal Kanti Deb Barma, Honorary Secretary, Tripura State Centre, IEI delivered the welcome address.



Uttarakhand

Uttarakhand State Centre, IEI observed World Engineering Day for Sustainable Development 2023 on 04 March 2023 at Dehradun. Chief Guest of the event was Er Narendra Singh, Past President, IEI. Guest of Honour of the event was Er Mukesh Mohan, Ex-Engineer-in-Chief, Irrigation Department, Uttarakhand. Keynote Speaker of the event was Er C P

Sharma, UPES Dehradun. Prof C P Sharma delivered the theme lecture on hydrogen for future energy sources to fulfill the energy requirement in automobile sector and power sector. On this occasion, Uttarakhand State Centre Executive Committee Members also attended the event. Mr Satish Chand Chauhan, Honorary Secretary, Uttarakhand State Centre, IEI proposed the vote of thanks at the end of the session.



LOCAL CENTRES

Agra

Agra Local Centre, IEI in association with R B S Engineering Technical Campus Bichpuri, Agra observed World Engineering Day 2023 at Agra on March 02 2023. The welcome address was given by Mr Anil Kumar Goyal, Chairman, Agra Local Centre, IEI. Chief Guest and speaker of the event was Mr Sanjay Verma, Project Director, National Highway Authority of India (NHAI), PIU, Agra. Keynote speaker was Mr Anuj Kumar, Joint Commissioner (Industries), Agra Division. Mr Sanjay Verma in his address highlighted three key points of sustainable development, namely Economic Development, Social Development and Environment Protection. Mr Anuj Kumar discussed the opportunities and scope provided by Ministry of Micro, Small and Medium Enterprises (MSME). Dr Brajesh Kumar Singh, Committee Member, Agra Local Centre, proposed the vote of thanks.



Aligarh

Aligarh Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 at Aligarh on 04 March 2023. Mr Jitendra Kumar Varshney, Honorary Secretary, Aligarh Local Centre, IEI welcomed all and introduced the Speaker of the event, Dr Mohd Ajmal Kafeel, In Charge and Associate Professor, Electronics Engineering Section, University Women's Polytechnic, Aligarh Muslim University, Aligarh. Dr Kafeel spoke at a length about the importance of sustainable development in different spheres, explained the role of engineering in sustainable development and emphasized that the engineers engaged with policy making must incorporate the aspects of economic growth, encourage individuals growth and other challenges to reduce carbon emissions and other global issues of climate change where sustainability plays a prime role. At the end, Dr (Mrs) Salma Shaheen, Chairman, Aligarh Local Centre, IEI proposed the vote of thanks.

Angul

Angul Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 on 04 March 2023 at NALCO, Angul. Mr Biju K, Honorary Secretary, Angul Local Centre, IEI welcomed the dignitaries. Mr S R Patnaik, Executive Director Incharge, NALCO graced the occasion as the Chief Guest. Chief Speaker of the event was Mr Surendra Kumar Dogra, Past Chairman, Angul Local Centre, IEI and Ex-General Manager (E&I), Smelter Plant, NALCO. He stressed the role of engineering in generating innovative ideas and the novelty of various engineering fields. Earlier, Mr Satyabadi Mishra, Chairman, Angul Local Centre, IEI discussed about the goal of the day. Mr Biju K proposed the vote of thanks at the end of the session. Members from NALCO and from other industries like Tata Steel, GMR, MBVL, JSPL, etc attended the programme.



Asansol

Asansol Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 at Asansol Engineering College on 13 March 2023. A Group Discussion was organized on the occasion. Dr Ashmi Chakraborty, a member of Asansol Local Centre, IEI and Assistant Professor in the Electronics and Communication Engineering Department at Asansol Engineering College, explained the purpose of observing World Engineering Day: to raise awareness about the use of the internet and other information and communication technologies to bridge the digital divide. Earlier, Mr Tarun Tapan Lahiri, Chairman, Asansol Local Centre, IEI welcomed all and motivates the audience for joining such types of program. Mr Sumanta Karmakar, Honorary Secretary, Asansol Local Centre, IEI proposed the vote of thanks at the end of the session.



Bareilly

Bareilly Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 at Bareilly on 04 March 2023. A Seminar was organized on the occasion. The welcome address was delivered by Mr K B Agrawal, Past Chairman, Bareilly Local Centre, IEI. In his address, Mr Agrawal focused on the problem-solving skills, expertise of the engineers and their positive role in bringing out collaborative output. Mr Subhash Mehra, Past Chairman and Administrator, Shri Ram Murti Smarak Institute of Trust, Bareilly highlighted engineering innovation as a significant framework to obtain engineering solutions and the emerging new technologies. Mr Z N Khan, Chief Engineer, Jan Sansthan, Uttarakhand also addressed the gathering on the occasion. At the end, Mr Pradeep Kumar Madhwar, Honorary Secretary, Bareilly Local Centre, IEI proposed the vote of thanks.



Bokaro Steel City

Bokaro Steel City Local Centre, IEI on 04 March, 2023 observed World Engineering Day for Sustainable Development 2023 at Bokaro. Chief Guest of the event, Mr Yogendra Nath Singh, Immediate Past Chairman, Bokaro Steel City Local Centre, IEI inaugurated the function by lighting the lamp and explained the importance of innovation in engineering to address the global challenges and to achieve sustainable goals. A technical paper was presented by Mr Parichay Bhattacharjee, Manager, CRM, SAIL, Bokaro Steel Plant on the topic 'Towards a Digitally Transformed Future with Artificial Intelligence and Sustainable Developments'. Earlier, Mr Navin Prakash Srivastava, Chairman, Bokaro Steel City Local Centre, IEI welcomed the dignitaries and participants. Mr Sunil Kumar, Honorary Secretary, Bokaro Steel City Local Centre, IEI proposed the vote of thanks at the end of the event.



Coimbatore

Coimbatore Local Centre, IEI in association with Rathinam Technical Campus, Coimbatore observed World Engineering Day for Sustainable Development



2023 at Coimbatore on 04 March, 2023. Guest Speaker of the event, Mr Baldev Krish, Managing Director, A2B2 IT Services Private Limited, Bengaluru explained about the standards maintained in the industries, importance of bringing innovation in the technical field and motivated to increase the service quality & development. Earlier, Dr H Ram Mohan, Immediate Past Honorary Secretary, Coimbatore Local Centre, IEI welcomed the gathering and discussed about the theme. Prof (Dr) Krishnamoorthi J, Honorary Secretary, Coimbatore Local Centre, IEI proposed the vote of thanks at the end of the event.

Durgapur

Durgapur Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 at Durgapur on 04 March 2023. Prof Indrajit Basak, Director (Officiating), NIT Durgapur graced the function as Chief Guest. Guest of Honour of the event was Mr Parasuram Shaw, Former Chief General Manager (HRD), Management Training Institute, SAIL, Ranchi. Keynote Speaker of the event was Mr A N Misra, Former Assistant General Manager (Safety), SAIL, Durgapur Steel Plant. Mr Manas Majumder, Honorary Secretary, Durgapur Local Centre, IEI delivered the opening remarks and mentioned that this day is an opportunity to promote engineering as a career and change the world for the better. Mr Safikul Islam, Chairman, Durgapur Local Centre welcomed the Chief Guest, Guest of Honours, dignitaries and the Members of Durgapur Local Centre, IEI. He mentioned that engineering has an essential role in development of human welfare and ensure that future generation of engineers and scientists will be able to design solutions for local and global challenges. He further added engineering as the vital profession in addressing basic human needs, alleviating poverty, promoting secure and sustainable development, in responding to emergency situations, in reconstructing infrastructure, in bridging the knowledge divide and in promoting intercultural cooperation. Mr Prasuram Shaw highlighted the principles of sustainability, which is made up of three pillars, namely economy, society and environment, which are also used as profit, people and planet. He explained about Biomimicry engineering as a practice to create designs inspired by nature's wisdom, structures and sequences from the natural world, including the plants, animals and biodiversities. Mr Manas Majumder proposed the vote of thanks at the end of the session.



Faridabad

Faridabad Local Centre, IEI, in association with NorthCap University Gurugram observed World Engineering Day for Sustainable Development 2023 in hybrid-mode on 04 March 2023 at Faridabad. Mr Sandeep Handa, Immediate Past Chairman, Faridabad Local Centre, IEI delivered the welcome speech and highlighted the importance of the day. Speaker of the event, Dr S K Agrawal, Head of Artificial Intelligence, Sony Research India Team discussed about Sustainable Life in AI- Metaverse and its impact on Environmental Sustainability. The event was chaired by Dr (Prof) Nupur Prakash, Vice Chancellor, NorthCap University, Gurugram. Mr Inderdeep Singh, Honorary Secretary, Faridabad Local Centre, IEI proposed the vote of thanks at the end of the session.



Ghaziabad

Ghaziabad Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 at Ghaziabad on 04 March 2023. Dr Satish Chandra Gupta, Former Honorary Secretary, Ghaziabad Local Centre, IEI presented the theme of the day. Guest of Honour and Keynote Speaker of the event,

Sanchar Ratna Dr M K Seth, ITS, Former CGM, ALTTT, BSNL, Ghaziabad focussed on the role of engineers in the present context and different fields of development. He invited the youth power to bring revolution for a better and viable solution for engineering innovation for a more resilient world. Earlier, Mr Raghunandan Prasad Sharma, Chairman Ghaziabad Local Centre and Council Member, IEI welcomed all the participants & dignitaries on the stage. Mr R R Tanwar, Council Member, IEI introduced the Guest of Honour & Keynote Speaker, apprised the members regarding the present activities & future plan of the Institution. Dr S C Gupta proposed the vote of thanks at the end of the session.



Gorakhpur

Gorakhpur Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 through online mode on 04 March 2023. In the beginning, Mr Pawan Kumar Mishra, Chairman, Gorakhpur Local Centre, IEI welcomed the Honourable Speaker & audience and briefed about the theme of the day. Mr Ramesh Chandra Pandey, Honorary Secretary, Gorakhpur Local Centre, IEI introduced the Speaker of the event, Prof (Dr) Deepti Pande Rana, Associate Professor, Amity School of Architecture and Planning, Amity University, Lucknow. Prof Rana focussed her lecture on sustainable habitat and application of engineering concepts for solving problems. Mr Ramesh Chandra Pandey proposed the vote of thanks at the end of the webinar.

Jammu

Jammu Local Centre, IEI in association with Model Institute of Engineering and Technology (MIET), Jammu observed World Engineering Day for Sustainable Development 2023 at Jammu on 04 March 2023. Mr Sandeep Seth, Chief Engineer, Jammu Power Distribution Corporation Limited (JPDCL), Jammu graced the occasion as Chief Guest. Major General (Retd) S K Sharma, AVSM, Director MIER Group of Institutions was the Guest of Honour and Mr Sunil Kumar Pachar, Director, Ecolive Ventures Private Limited, Gurugram was the Keynote Speaker. Prof (Dr) Bhawna Sharma, Chairman, Jammu Local Centre, IEI presented the welcome address and focussed on the need for re-imagining the cities with innovations in health, agriculture, energy, waste management, industrial and infrastructural development for a more resilient world. Major General (Retd) S K Sharma invited the engineers to identify the problem areas and solving the same with innovative methods to improve the system efficiency. Mr Sunil Kumar Pachar highlighted the need of ecologically viable engineering solutions for sustainable development of mankind. During the technical session, papers were presented on relevant topics. Mr Sachin Tickoo, Honorary Secretary, Jammu Local Centre, IEI focused on achieving the development goals of sustainable development and proposed the vote of thanks at the end of the session.



Jodhpur

Jodhpur Local Centre, IEI, on 04 March 2023 observed World Engineering Day for Sustainable Development 2023 at Jodhpur. A Seminar was organized on the topic 'Role of Society in Sustainable Development'. Chief Guest & Keynote Speaker of the



event was Mr Kapil Solanki, Head of the Department, Teacher Training Centre & Learning Resource Development Centre, Polytechnic College Campus, Jodhpur. Mr M M Agarwal, Chairman, Jodhpur Local Centre, IEI welcomed the guests and audience. Mr Reasham Ram Hooda, Honorary Secretary, Jodhpur Local Centre, IEI proposed the vote of thanks at the end of the event.

Kadapa

Kadapa Local Centre, IEI in association with KSRM College of Engineering, Kadapa observed World Engineering Day for Sustainable Development 2023 on 04 March 2023 at Kadapa. The Speaker of the event, Mr G Gopal, Joint Director (Retd), District Industries, Kadapa and Past Chairman, Kadapa Local Centre, IEI delivered lecture on the theme of the day. Er N Bramhananda Reddy, Chairman, Kadapa Local Centre delivered the welcome address. Dr V Adinarayana Reddy, Past Honorary Secretary, Kadapa Local Centre, IEI and Dr G Hemalatha, Professor and HoD, Department of Electronics and Communication Engineering, KSRM College of Engineering, Kadapa also spoke on the occasion.



Kalaburagi

Kalaburagi Local Centre, IEI observed World Engineering Day for Sustainable Development on 17 March 2023 at Kalaburagi. Speaker of the event, Dr Shashikant R Mise, Principal, PDA Engineering College, Kalaburagi & Past Chairman, Kalaburagi Local Centre, IEI presented his speech on the theme of the day. Mr Subhas Sugoor, Chairman, Kalaburagi Local Centre, IEI chaired the session. At the end, Mr Hanmayya Belure, Honorary Secretary, Kalaburagi Local Centre, IEI proposed the vote of thanks at the end of the session.



Kanpur

Kanpur Local Centre, IEI in association with Department of Civil Engineering, HBTI, Kanpur observed World Engineering Day for Sustainable Development on 04 March 2023 through online mode. The theme speaker of the event was Dr Santosh Kumar, Managing Director, Vam Consulting Engineers and Architects Private Limited, Kanpur. Prof Pradeep Kumar, Past Chairman, Kanpur Local Centre, IEI, was the Convener of the event. Dr Santosh Kumar focused on the urgent need for identifying the key research initiatives for survival of life on earth and discussed on sustainable consumption of precious natural resources by unlocking the mysteries of nature for the benefit of mankind, carbon neutral technologies, reduction and eventual elimination of green houses gases, harnessing renewable energies, innovations for minimising the impact of natural and manmade disasters have assumed urgency in the context of expanding world. Mr Rama Kant Yadav, Honorary Secretary, Kanpur Local Centre, IEI proposed the vote of thanks at the end of the program.

Madurai

Madurai Local Centre, IEI in association with Kumari Ariviyal Peravai observed World Engineering Day for Sustainable Development 2023 at Madurai on 11 March 2023. Chief Guest of the event, Mr M Vellaian, Former Engineer, IPRC, ISRO and Founder, Kumari Ariviyal



Peravai, Kanyakumari delivered lecture on the role of engineers towards sustainable development for a resilient world. Dr N Sivasubramanian, Chairman, Madurai Local Centre, IEI delivered the welcome address and Prof (Dr) P Udhaya Kumar, Honorary Secretary, Madurai Local Centre, IEI introduced the Chief Guest. Young Scientist, Ms PB Davina Sanyu delivered a presentation on 'Global Science for Global Wellbeing' and discussed the role of engineers in innovations and inventions, improved human livelihood with higher life expectancy and standard of living. Speakers of the session also highlighted accessibility of clean water for everybody towards sustainability; recycling and reuse of water, monitoring of smoke particle generated from industry, automobiles, harnessing clean energy for green economy considering the depletion of fossil fuel, environmental pollution and exercising alternative energy; green technology for environmental sustainability. Prof (Dr) P Udhaya Kumar proposed the vote of thanks at the end of the session.

Munirabad

Munirabad Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 at Munirabad on 04 March, 2023. Mr K Nanjappa, Honorary Secretary, Munirabad Local Centre, IEI welcomed all the dignitaries. Prof (Dr) Kuppagal Veeresh, Chairman, Munirabad Local Centre, IEI delivered a Keynote address about World Engineering Day. Speaker of the event, Dr Vinay H B, Associate Professor, Government Engineering College, Gangawathi delivered lecture on the theme of the day. Mr K Nanjappa, Honorary Secretary proposed the vote of thanks at the end of the session.



North Bengal

North Bengal Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 on 04 March 2023 at Jalpaiguri. A table discussion was organized on the occasion. The welcome address was delivered by Prof (Dr) Sudip Mukherjee, Chairman, North Bengal Local Centre, IEI. Speakers of the event were Er G K Panda, Professor, Department of Electrical Engineering, Jalpaiguri Government Engineering College and Er G Bairagi, Professor and Head, Department of Civil Engineering, Jalpaiguri Government Engineering College. Er Chinmoy Ghosh, Honorary Secretary, North Bengal Local Centre, IEI proposed the vote of thanks at the end of the session.



Palghat

Palghat Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 at Palakkad on 04 March 2023. Guest Speaker of the event, Dr C V Veena Venudharan, Assistant Professor, Civil Engineering Department, Indian Institute of Technology Palakkad delivered lecture on the theme of the day. In her address, she explained 6Rs of sustainability as rethink, refuse, reuse, reduce, repair and recycle. Also, during an interactive session, in reply to the query raised by Prof C Somasekharan, Former Principal, NSS College of Engineering regarding sustainability in road construction, she explained that to achieve sustainability, use of virgin aggregates to be reduced, use of recycled materials can be promoted, additives, granular and subgrade pavement materials should meet the desired standards as well as good planning and good supervision are needed to



build a long lasting road. Earlier, Mr Madhana Mohan K, Chairman, Palghat Local Centre, IEI delivered the welcome address and emphasized on designing more resilient and sustainable structures. Dr Pradip C, Honorary Secretary, Palghat Local Centre, IEI proposed the vote of thanks at the end of the session.

Ranipet

Ranipet Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 at Ranipet on 04 March 2023. A workshop was organized on the topic 'Engineering Innovation for a More Resilient World – Understanding Electric Vehicle Technology'. In the beginning, Mr M Salai Manalan, Chairman, Ranipet Local Centre, IEI welcomed the dignitaries. The Chief Guest of the event, Mr P Sivaprakasam, General Manager (Engineering) at BHEL, Ranipet, delivered the keynote address, covering various aspects,



including the proclamation of WED by UNESCO, the importance of Sustainable Goals, e-vehicles as a solution to climate change, the vital role of engineers in sustainability and environmental protection, and so on. Mr P Mohanavel, Assistant Professor, Electrical & Electronics Engineering, C Abdul Hakeem College of Engineering and Technology (CAHCET) delivered on the topic 'Introduction to Electric Vehicles (EV)'. M/s A R Green Mobility, Katpadi delivered lecture on the topic 'Demonstration of Electric Vehicle'. Dr D Kumar, HoD, Mechanical Engineering Department, CAHCET also spoke on the occasion.

Rourkela

Rourkela Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 on 04 March 2023 virtually. A webinar was organised on the topic 'Engineering Innovation and Self-sustainability: Indian Aerospace Industries'. At the beginning, Mr Ajay Kumar Goswami, Chairman, Rourkela Local Centre, IEI welcomed the dignitaries and participants. Dr Rama Chandra Pradhan, Honorary Secretary, Rourkela Local Centre, IEI discussed about the theme and introduced the Speaker of the event, Er Priyabrata Mallick, Senior Manager, Hindustan Aeronautics Limited, Koraput, Odisha. Speaking on the said topic, Er Mallick explained that the Indian aerospace industry is witnessing unprecedented growth and thus approaching towards self-reliance. On this occasion, it is important to highlight the holistic incorporation of advanced technologies, impetus on domestic manufacturing, enhancing public-private partnership and enhancing the overall indigenous development in the defence sector, he mentioned. The policies of the Government of India have created a robust roadmap laden with a multitude of opportunities for the flight testing community to engage proactively and contribute effectively to meet the national policy objectives; Moreover, the Indian aerospace industry is close to catapulting itself into a global arena with rapid rise in demand for aircraft and components; The country has many advantages such as low labour costs, high availability of engineering design and technical manpower and expertise, high growth markets, etc and active support from the Government's new policies; which presents a unique opportunity for global companies to tap into the Indian aerospace market across the entire value chain for aero structures, components, assemblies and even a complete equipment/aircraft and related services, the Speaker added further. Dr Rama Chandra Pradhan proposed the vote of thanks at the end of the event.

Saurashtra

Saurashtra Local Centre, IEI in association with Shri Labhubhai Trivedi Institute of Engineering and Technology, Rajkot observed World Engineering Day for Sustainable Development 2023 through virtual platform on 04 March 2023. Er Deepak V Suchde, on behalf of Saurashtra Local Centre,

IEI, delivered the welcome address during the event. Speaker of the event was Dr Bharat M Ramani, Professor & Principal, Shri Labhubhai Trivedi Institute of Engineering & Technology, Rajkot.



Tirunelveli

Tirunelveli Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 at Tirunelveli on 16 March 2023. Prof (Dr) R Velayutham, Chairman, Tirunelveli Local Centre, IEI delivered the welcome address. Speaker of the event, Dr G Sokkanathan,



Civil and Environmental Consultant, Green Enviro Consultancy, Tirunelveli delivered lecture on the theme of the day. Mr Jimmi Carten M, Honorary Secretary, Tirunelveli Local Centre, IEI proposed the vote of thanks at the end of the session.

Trichur

Trichur Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 virtually on 04 March 2023. A seminar was organized on the topic 'Engineering Innovation for a More Resilient World-Technology Adoption in Core Engineering Branches'. Speakers of the event, Dr Muruganantham Ponnusamy, Deputy Registrar, Indian Institute of Information Technology, Kalyani, West Bengal in his address mentioned that technology adoption in the core branches of engineering is inevitable for sustainable development. Prof Sunil Kumar C P, Chairman, Trichur Local Centre, IEI in his address outlined the necessity of technology adoption in the core engineering branches and further stressed on the rejuvenation of production and constructions fields with modern technologies like 3D printing. Dr Kurien E K, Honorary Secretary, Trichur Local Centre, IEI proposed the vote of thanks at the end of the webinar.

Udaipur

Udaipur Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 at Udaipur on 04 March 2023. The programme started with opening remarks by Er Purushottam Paliwal, Honorary Secretary, Udaipur Local Centre, IEI. Er Chandra Prakash Jain, Chairman, Udaipur Local Centre, IEI welcomed the Chief Guest of the event, Dr N S Rathore,



Director, Geetanjali Institute of Technical Studies, Udaipur, the Keynote Speaker of the event, Prof Hanuman Prasad, Course Director, MBA e-commerce, MBA FSM, Tourist & Hotel Management, MLSU,

Udaipur, the dignitaries and participants. Honorary Secretary, Udaipur Local Centre, IEI expressed his views about innovation. He explained it as the practical implementation of new ideas, which results in the introduction of new goods or services or an improvement in the way the goods and services are offered. Prof Hanuman Prasad in his address explained innovation as the implementation of new idea and approach, which is known as commercially successful return of innovations. Underlining the importance of sustainable development, he analyzed the role of engineers in preparing plans, detailed drawings, cost estimates, designing and executing projects to create workable solutions. At the end of the session, Er Purushottam Paliwal proposed the vote of thanks.

IEI Celebrates World Water Day



Theme - Accelerating Change

The World Water Day was celebrated by the Institution all over the country on March 22, 2023. Reports of celebration received from various Centres are highlighted here.

STATE CENTRES

Jharkhand

Jharkhand State Centre, IEI observed World Water Day 2023 at Ranchi on 22 March 2023. Er Mohammad Iquebal Alam, Chairman, Jharkhand State Centre, IEI welcomed the distinguished guests and dignitaries. Mr Phulan Prasad, Retired Engineer in Chief, Water Resources Department; Dr Gopal Pathak, Vice Chancellor, Sarala Birla University, Ranchi; Er A K Singh, Senior General Manager, MECON Ltd, Ranchi and engineers from different departments and fields attended the event to discuss about the theme of the event. Er Shivanand Roy, Council Member, IEI in his Keynote address stressed on coordination between different water sectors departments, educational institutions, etc to change the water scenario. Er A K Singh elaborated the theme of the day and focused on using water with care. Er Niranjana and Er Rajesh Kumar Choudhary, Chief Engineers, Water Resources Department, Government of Jharkhand highlighted the possibilities of augmenting water requirements at Ranchi. They discussed various measures that can be taken to ensure adequate water supply in the city. Dr Manoj Kumar, Honorary Secretary, Jharkhand State Centre, IEI proposed the vote of thanks at the end of the program.



Punjab & Chandigarh

Punjab & Chandigarh State Centre, IEI observed World Water Day 2023 through online mode on 22 March 2023. Dr Labh Singh Bhari, Chairman, Punjab & Chandigarh State Centre, IEI welcomed the dignitaries and participants. Chief Guest of the event, Mr Shivinder Pal Singh Saini, Former Chief Engineer, Water Resources Department, Punjab & Chandigarh highlighted the water issues of Punjab and challenges likely to be faced in future due to water shortages. Key Speaker of the event, Mr Parminder Singh Bhogal, Former Chief Engineer, Water Resources Department, Punjab & Chandigarh and Member, State Expert Appraisal Committee, Punjab and former Council Member, IEI highlighted global water crisis and challenges related to sanitation and emphasized the urgent need for every individual, institution to take responsibility for bringing about meaningful change in use of water and also by changing water consumption pattern and management practices. At the end, Mr Swinder Singh, Honorary Secretary, Punjab & Chandigarh State Centre, IEI proposed the vote of thanks.

Telangana

Telangana State Centre, IEI observed World Water Day 2023 on 22 March 2023 through online mode on the topic 'Accelerating Change to Solve the Water and Sanitation Crisis'. Er Badduru Brahma Reddy, Chairman, Telangana State Centre and Council Member, IEI delivered the welcome address and introduced the Chief Guest & Speaker of the event, Dr I Satyanarayana Raju, Council Member, IEI. He also presided over the function. During his address, Dr. Raju shared valuable insights on the importance of accelerating change to solve the water and sanitation crisis, citing specific examples of successful strategies and initiatives. Dr G Venkata Subbaiah, Honorary Secretary, Telangana State Centre, IEI proposed the vote of thanks at the end of the session.

Tripura

Tripura State Centre, IEI in association with Public Works Department (Drinking Water & Sanitation), Government of Tripura observed World Water Day 2023 on 22 March, 2023 at Agartala. A Seminar was organized on this occasion. Guest of Honour of the event, Mr Tapan Lodh, Former Chief Engineer, Public Works Department (Water Resource), Government of Tripura explained the theme of the day in perspective of Sustainable Development Goal for 'Clean Water and Sanitation' and portrayed the development pace of clean water & sanitation achievements. Special



Speakers of the event, Mr Bikash Ranjan Podder, Team Leader, SPMU & Former Chief Engineer (Public Health Engineering), West Bengal narrated the contamination of fresh water and different technological solutions for water conservation. Dr Animesh Debnath, Assistant Professor, Department of Civil Engineering, NIT Agartala discussed about potential of Zero Liquid Discharge (ZLD) plant concept and highlighted different environmental hazards due to chemical waste disposals, which contaminate drinking water sources. Dr Subhadeep Bhattacharjee, Chairman, Tripura State Centre, IEI presided over the program. Dr Mrinal Kanti Deb Barma, Honorary Secretary, Tripura State Centre, IEI delivered the welcome address. In this connection, the students of National Institute of Technology Agartala and Tripura Institute of Technology conducted a technical visit to the Ground Water Treatment Plant and Surface Water Treatment Plant in Agartala Municipal Corporation.

Uttar Pradesh

Uttar Pradesh State Centre, IEI observed World Water Day 2023 at Lucknow on 22 March 2023. The objective of the event was to discuss the status of wetlands in terms of their geographical distribution and extent of their spread, the ecological services provided, to identify the various stresses about the subject matter and to identify the measures for their conservation and management. Chief Guest of the event, Dr R C Srivastava, Former Vice-Chancellor, Dr Rajendra Prasad Central Agricultural University, Bihar discussed briefly the international treaty on wetlands. He said that wetlands are among the most productive ecosystem on earth and provide many important services to human society, exhibit great biological diversity according to their origin, geographic location, water regime, geochemistry, soil and sediment characteristics. He mentioned that wetlands have been degraded and are disappearing due to pressure from urbanization, population growth & increased economic activity. Earlier, Er Masarrat Noor Khan, Chairman, Uttar Pradesh State Centre, IEI welcomed the guests. Er V B Singh, Council Member, IEI was present at the event. At the end, Dr Jaswant Singh, Honorary Secretary, Uttar Pradesh State Centre, IEI proposed the vote of thanks.



LOCAL CENTRES

Alwar

Alwar Local Centre, IEI observed World Water Day 2023 at Alwar on 22 March 2023. Mr Ashok Kumar Gupta, Chairman, Alwar Local Centre, IEI welcomed the guests and presented his views on World Water Day. Chief Guest of the event, Mr J L Meena, Superintendent Engineer, Jaipur Vidyut Vitran Nigam Limited (JVNL), Alwar explained value of water, conservation, water harvesting, water recycling etc. Special Guest of the event, Mr Niranjana Mathur, Senior Hydrologist, Central Ground Water Board (CGWB), Government of India focused on present condition of ground water and explained about Government policies for efficient use of water with systematic distribution. Mr R C Sharma, Honorary Secretary, Alwar Local Centre, IEI proposed the vote of thanks at the end of the program.



Angul

Angul Local Centre, IEI observed World Water Day 2023 on 22 March 2023 at Angul. Mr Satyabadi Mishra, Chairman, Angul Local Centre, IEI welcomed all the dignitaries. Chief Guest of the event was Mr Sudhir Ranjan Patnaik, GGM (CPP), NALCO. Mr Biju K, Honorary Secretary, Angul Local Centre, IEI introduced the Chief Speaker of the event, Mr Amit Kumar Sarangi, Head, Water Management, Tata Steel, Meramundali. Mr Manoranjan Acharya, GGM (O&M), CPP, NALCO; Mr D Chatterjee, GGM (CRG), S & P Complex, NALCO and other dignitaries attended the program. Mr Siba Ram Panda, Immediate Past Honorary Secretary, Angul Local Centre, IEI proposed the vote of thanks at the end of the session.



Bareilly

Bareilly Local Centre, IEI observed World Water Day 2023 at Bareilly on 22 March 2023. On the occasion, a Seminar was organized on the theme 'Accelerating Change'. Mr Sudhir Kumar Gupta, Immediate Past Chairman, Bareilly Local Centre, IEI delivered the welcome address and Mr Subhash Mehra, Past Chairman, Bareilly Local Centre, IEI introduced the theme. Mr Sudhir Kumar Gupta highlighted that flood, drought and other associated threats to water resources are the most significant of all potential risks posed by the climate crisis. He mentioned that water related climate impacts all aspects of society and the environment including agriculture, health care, energy, economic sectors and ecosystems. Mr Z N Khan, Former Chief Engineer, Jal Sansthan, Uttarakhand opined that dysfunction throughout the water cycle undermines progress on all major global issues from health to hunger, gender equality to jobs, education to industry and disaster to peace. Mr Pradeep Kumar Madhwar, Honorary Secretary, Bareilly Local Centre, IEI proposed the vote of thanks at the end of the Seminar.



Bathinda

Bathinda Local Centre, IEI observed World Water Day 2023 on 22 March 2023 through online mode. The session started with a welcome address

delivered by Prof (Dr) Jagtar Singh, Chairman, Bathinda Local Centre, IEI. The speaker of the event was Dr Gulshan Kumar Jawa, Associate Professor, Chemical Engineering Department, Sant Longowal Institute of Engineering and Technology, Punjab. Prof (Dr) Tara Singh Kamal, Former Vice President, IEI and Former Chairman, ETDB, IEI graced the occasion as Chief Guest. The event was moderated by Er Gagandeep Kaur, Assistant Professor, Electronics and Communication Engineering Department, Yadavindra College of Engineering, Talwandi Sabo. Mr Janta Singh, Honorary Secretary, Bathinda Local Centre, IEI proposed the vote of thanks at the end of the webinar.

Bokaro Steel City

Bokaro Steel City Local Centre, IEI observed World Water Day 2023 at Bokaro on 22 March 2023. Chief Guest of the event, Mr P K Baishayakia, Chief General Manager (Utilities), SAIL, Bokaro Steel Plant inaugurated the event and highlighted the importance of potable water and the effort to increase its availability. Mr Yogendra Nath Singh, Immediate Past Chairman, Bokaro Steel City Local Centre, IEI welcomed the dignitaries. Mr Nitesh Ranjan, AGM (Environment), SAIL, Bokaro Steel Plant presented lecture on the topic 'Water Conservation through 3R's (Reduce, Recycle and Reuse). Mr Prabhat Ranjan, Director, Healthy Water-Tech Private Limited & representative of WFR Industries Private Limited delivered presentation on the topic 'Water Filtered through HRCM'. Mr Sunil Kumar, Honorary Secretary, Bokaro Steel City Local Centre, IEI proposed the vote of thanks at the end of the program.



Durgapur

Durgapur Local Centre, IEI observed World Water Day 2023 at Durgapur on 22 March 2023. Chief Guest and Keynote Speaker of the event, Dr Biswajit Ruj, Chief Scientist, CSIR-CMERI, Durgapur deliberated on the topic 'Water Quality and Health Issues'. Guest of Honour of the event Dr Sandip Kumar Lahiri, Associate Professor, Chemical Engineering Department, NIT Durgapur delivered presentation on the topic 'Water Crisis and Solution' and provided the statistics about water to conserving water by adopting drip irrigation, use drought-tolerant crops, implement crop rotation, adopt conservation tillage, rainwater harvesting, implementation of water audits, reuse of wastewater and so on. Earlier, Mr Manas Majumder, Honorary Secretary, Durgapur Local Centre, IEI delivered the opening remarks. Mr Safikul Islam, Chairman, Durgapur Local Centre, IEI welcomed the Chief Guest, Guest of Honour and the distinguished audience present in the function. Mr Manas Majumder proposed the vote of thanks at the end of the session.



Faridabad

Faridabad Local Centre, IEI observed World Water Day 2023 in hybrid-mode on 25 March 2023 at Faridabad. Mr Kuldip Raj Gupta, Chairman, Faridabad Local Centre, IEI delivered the welcome address and highlighted the importance of the day. Speaker of the event, Mr I S Chauhan, CEO, I S Chauhan Associates, Gurugram discussed on the topic 'Water Revolution - Crisis of Water in India' and highlighted the findings of World Water Survey about acute shortage of water. He mentioned that 'Accelerating Change' emphasizes the urgent need for individuals, communities and institutions to take the responsibilities for bringing out meaningful change. He explained different measures of water management, which include; water harvesting, purifying wastewater



and alleviating flood, connecting rivers to the flood plains and aquifers, conserving and protecting water resources, restoration of forest landscapes etc. In conclusion, Mr Inderdeep Singh, Honorary Secretary, Faridabad Local Centre, IEI proposed the vote of thanks.

Indore

Indore Local Centre, IEI observed World Water Day 2023 on 22 March 2023 at Indore. Speakers of the event were Padma Shri Dr Anil Prakash Joshi, Environmentalist; Mr Anand Asolkar, Director, Bhoojal Foundation and Dr R K Paliwal, IRS (Retired) and Gandhian Thinker, Gram Seva Samiti, Bhopal. Mr Rajendra Prasad Gautam, Chairman, Indore Local Centre, IEI delivered the welcome address. He mentioned the responsibility for every person to save, conserve, promote water. Padma Shri Dr Anil Prakash



Joshi through his virtual presence described that water is precious, people should be careful to save every drop of it and is presumed to be a cause for future conflicts over water. Mr Anand Asolkar spoke about the cleanliness of the rivers, which had become severely polluted before. Dr R K Paliwal stressed on taking resolution for not polluting the rivers by throwing garbage, dirt, etc. Prof (Dr) Ms Shilpa Tripathi, Council Member and Chairman, Chemical Engineering Division Board, IEI was the Convener of the programme.

Jammu

Jammu Local Centre, IEI observed World Water Day 2023 on 22 March 2023 at Jammu. A Seminar was organized on the theme 'Accelerating the Change to Solve the Water and Sanitation Crisis', with the objective to emphasize the necessity to initiate action to address the global water crisis and to create awareness towards depleting water resources. Mr Mohinder Angurala, Senior Hydrogeologist, Central Ground Water Board, Jammu & Kashmir was the Chief Guest of the event. Prof (Dr) Ms Bhawna Sharma, Chairman, Jammu Local Centre, IEI presided over the function. Prof Sharma in her address discussed the objective of the Seminar to raise awareness about water and sanitation crisis and inspire actions to tackle water and sanitation crisis, thereby achieving Sustainable Development Goal of Water and Sanitation for all by 2030. During the technical session, a number of papers were presented on the theme of the day. Mr Sachin Tickoo, Honorary Secretary, Jammu Local Centre, IEI while speaking on the occasion stressed on the dysfunction throughout the water cycle undermines progress on major global issues like health to hunger, gender equality to jobs, education to industry and disasters to peace. Hence, it is imperative to accelerate the change towards the solutions of water and sanitation crisis. This is necessary for achieving the development goals of sustainable development, he opined. At the end of the session, he also proposed the vote of thanks.



Jodhpur

Jodhpur Local Centre, IEI observed World Water Day 2023 at Jodhpur on 22 March 2023. Keynote Speakers of the event were Er Dinesh Periwal, Former Additional Chief Engineer, PHED, Jodhpur and Er Acharya Daria Singh Yadav, Former Director, Directorate of Technical Education, Rajasthan. Dr Ghanshyam Prasad Vaishnav, Coordinator of the Programme briefed about the theme of the



event and introduced the Keynote speakers. Mr M M Agarwal, Chairman, Jodhpur Local Centre, IEI welcomed the guests and spoke about water harvesting system since ancient times. Er Acharya Daria Singh Yadav in his address stated that it is the duty of everybody to play the important role in fulfilling the mission to save environment and water. Er Dinesh Periwal emphasized on saving water by preventing wastage. Mr Resham Ram Hooda, Honorary Secretary, Jodhpur Local Centre, IEI proposed the vote of thanks at the end of the session.

Kadapa

Kadapa Local Centre, IEI, on 25 March 2023, in association with Anamacharya Institute of Technology and Sciences (AITS), Rajampet observed World Water Day 2023 at



Kadapa. Speaker of the event, Dr T Naresh Kumar, Associate Professor and Head, Civil Engineering Department, AITS, delivered lecture on the theme of the day. Er N Bramhananda Reddy, Chairman, Kadapa Local Centre welcomed the dignitaries and participants. Er R Narendra Rao, Honorary Secretary, Kadapa Local Centre, IEI proposed the vote of thanks.

Kollam

Kollam Local Centre, IEI in association with TKM Institute of Technology, Kollam observed World Water Day 2023 at Kollam on 22 March 2023. Mr K Rajan, Chairman, Kollam Local Centre, IEI inaugurated the session and discussed the significance of water. Ms Sreedevi, Faculty Advisor, Civil Engineering Division, TKM Institute of Technology, Kollam introduced the Guest Speaker of the event, Dr Jose Prakash, Principal, TKM Institute of Technology, Kollam. During the technical session, Mr Sunil Raj D, Superintending Engineer, Irrigation Department, Kerala delivered a lecture on the topic 'Urgency of Water Conservation and Steps Taken by the Department for the Same in Kerala'. Mr Madhavanunni, Operations Manager, Va Tech Wabag, Chennai, delivered his presentation on the topic 'Water Scarcity, Basics of Desalination and Sea Water Desalination Plants and Procedures of Vast Experiences in India and Abroad'. Dr Madhusoodanan Pillai, Joint Secretary, Kollam Local Centre, IEI, Dr Sudhi Mary Kurian, IQAC Coordinator, TKMIT and Executive Committee Member, Kollam Local Centre, IEI, Executive Committee Members, Corporate Members of Kollam Local Centre, IEI also attended the programme.



Madurai

Madurai Local Centre, IEI observed World Water Day 2023 at Madurai on 22 March 2023. Ln Er J Venkataraman, Chartered Engineer, Registered Valuer and Environmental Consultant, Harini Constructions, Madurai, was the Chief Guest of the event. Dr N Sivasubramanian, Chairman, Madurai Local Centre, IEI delivered the welcome address. Prof (Dr) P Udhaya Kumar, Honorary Secretary, Madurai Local Centre, IEI, introduced the Chief Guest. Ln Mr J Venkataraman outlined the water consumption strategies for domestic consumption and discussed best practices for sustainable use of water. He also highlighted the components and benefits of roof-top rainwater harvesting in his speech. The speaker, in his concluding remarks, stressed the importance of ensuring sustainable water use for our survival. Prof (Dr) P Udayakumar, Honorary Secretary, Madurai Local Centre proposed the vote of thanks.



Mangalore

Mangalore Local Centre, IEI observed World Water Day 2023 at Mangalore on 21 March 2023. The speaker of the event was Dr Subhash C Yaragal, Professor, Department of Civil Engineering, NITK Surathkal. Dr Sunil B Malegole, Chairman, Mangalore Local Centre, IEI chaired the session and Dr Manu B, Honorary Secretary, Mangalore Local Centre, IEI, proposed the vote of thanks at the end of the session.



Muzaffarpur

Muzaffarpur Local Centre, IEI observed World Water Day 2023 on 22 March 2023 at Muzaffarpur. Mr Anjani Kumar Srivastava, Chairman, Muzaffarpur Local Centre, IEI delivered the welcome address and explained the objective to observe this day to increase awareness about the importance of water. Chief Guest of the event, Dr B B Choudhury, HoD, Civil Engineering Department, Government Polytechnic, Muzaffarpur stressed on the need of individuals, communities, institutions to take responsibility for bringing out the meaningful changes. Guest of Honour of the event, Dr Taran Roy, Former Head, Physics Department, Babasaheb Bhimrao Ambedkar Bihar University (BRABU), Muzaffarpur emphasized the need to change our water consumption pattern and water management practices. Dr B K Roy, Principal, Government Women's Polytechnic reminded the need for collective action about the global water and sanitation crisis. Number of papers were presented during the technical session. A Souvenir was also released on the occasion. At the end, Mr Sanjay Kumar Choudhary, Honorary Secretary, Muzaffarpur Local Centre, IEI, presented the vote of thanks.



North Bengal

On 22 March 2023, North Bengal Local Centre, IEI observed World Water Day 2023 at Jalpaiguri. Mr Chinmoy Ghosh, Honorary Secretary, North Bengal Local Centre, IEI delivered the welcome address. Prof (Dr) Sudip Mukherjee, Chairman, North Bengal Local Centre, IEI stressed on solving the water and sanitation crisis and consuming and managing water in our lives. Mr P K Saha, Professor, Department of Electrical Engineering, Jalpaiguri Government Engineering College, Jalpaiguri emphasized the role of individuals in water management, communities and institutions to take initiatives to bring meaningful change. Mr Chinmoy Ghosh, proposed the vote of thanks at the end of the session.



Roorkee

Roorkee Local Centre, IEI in association with Indian Water Resources Society (IWRS) observed World Water Day 2023 at Roorkee on 22 March 2023. Dr Ashish Pandey, Chairman, Roorkee Local Centre, IEI welcomed the gathering and informed the importance of World Water Day. Dr Basant Yadav, Secretary, IWRS, also spoke on the occasion. Speaker of the event, Mr S P Shukla, Former Director (Technical), THDC India Limited delivered lecture on the topic 'Suggestions to Achieve Sustainable Water Management and Sanitation in India by 2030' and explained the importance of water, challenges of water management in India and UN SDGs. After the



deliberation of the Speaker, a question and answer session was organized. Mr Vineet Kumar Saini, Honorary Secretary, Roorkee Local Centre, IEI proposed the vote of thanks at the end of the session.

Rourkela

Rourkela Local Centre, IEI observed World Water Day 2023 through hybrid-mode on 22 March, 2023. Mr Ajay Kumar Goswami, Chairman, Rourkela Local Centre, IEI welcomed the members and Dr Rama Chandra Pradhan, Honorary Secretary, Rourkela Local Centre, IEI spoke about the theme and introduced the Speaker of the event, Dr Harmohan Jena, Assistant Professor, Department of Chemical Engineering, NIT Rourkela. Dr Jena delivered an address on the topic 'Mastering Water Conservation and Management' and mentioned that World Water Day 2023 is the critical reminder of global water & sanitation crisis, and emphasized on the needs for collective action. He discussed on the sixth Sustainable Development Goals for clean water and sanitation for all. He further added that discharge of inadequately treated or untreated industrial wastewater into water bodies severely affected the water quality, squeezes the availability of freshwater and creates environmental hazards; efficient eradication of recalcitrant pollutants from industrial wastewater is a prevailing challenge in the wastewater treatment technology domain. Dr Rama Chandra Pradhan proposed the vote of thanks at the end of the program.

Saurashtra

Saurashtra Local Centre, IEI in association with Marwadi University, Rajkot observed World Water Day 2023 at Rajkot. A Seminar was organized on the theme 'Accelerating Change'. Prof (Dr) Sarang Sadashiv Rao Pande, Chairman, Saurashtra Local Centre, IEI delivered the welcome speech and introduced the Theme Speaker of the event, Mr Hemish Kapadia, Managing Partner of Neo-Nir Engineering and Vasu Chemicals, Surat. Mr Kapadia in his address explained the UN recommendations for celebrating World Water Day, importance of change water consumption pattern and management practice around the world, water treatment in cost effective manner etc. Dr Swati Dube, Assistant Professor in Chemical and Environmental Engineering Department, Marwadi University, Rajkot also addressed the audience.

Trichur

Trichur Local Centre, IEI observed World Water Day 2023 on 22 March 2023 at Trichur. Speaker of the event, Dr N Sajikumar, Principal Consultant & Proprietor, WRPM Consultants explained about



the misconception of availability of water resources, which is the principle reason for all problems related to water scarcity. He also explained about groundwater storage and ways to reduce water usage. Prof Sunil Kumar C P, Chairman, Trichur Local Centre, IEI in his welcome address, highlighted about fresh water resources with population growth; the impact on ecosystem and agriculture due to water scarcity and stressed the need to build water democracy as ground water recharge potential is very in many States. Dr Kurien E K, Honorary Secretary, Trichur Local Centre, IEI said that without judicious and planned water usage, increasing water scarcity can lead to struggles and crises for people, as seen in several rain-fed rivers in Kerala. He further proposed the vote of thanks at the end of the programme.

Visakhapatnam

Visakhapatnam Local Centre, IEI observed World Water Day 2023 through online mode on 22 March 2023. Guest Speaker of the event was Er V Ravi Kumar, Chief Engineer, Rural Water Supply & Sanitation, Vijayawada, Government of Andhra Pradesh. Earlier, Er R Nageswara Rao, Honorary Secretary, Visakhapatnam Local Centre, IEI welcomed the guests. Er Venkata Satya G Pakki, Chairman, Visakhapatnam Local Centre presided over the function.

News-in-Brief

The following are the brief account of Technical Activities organised by various Centres

STATE CENTRES

Assam

Organized 65th Foundation Day and 17th HP Baruah Memorial Lecture during 26-28 November 2022 at Guwahati. The H P Baruah Memorial Lecture was constituted in memory of the Founder Chairman of the Assam State Centre, IEI. It was delivered by Prof Narendra S Choudhari, Vice Chancellor of the Assam Science and Technology University on the topic 'Computing Technologies: Some Trends' on 26 November 2022. Prof Choudhari explained the significance of Computing Technology and discussed about the significance of Computing Technology, and its application in various fields such as robotics, healthcare, autonomous transport, Internet of Things, 3D printing, genomics, etc.

Bihar

Observed World Telecommunication and Information Society Day on 17 May 2022 at Patna on the theme 'Digital Technology for Older Persons and Healthy Ageing'. The Chief Guest of the event, Prof (Dr) Rash Bihari Prasad Singh, Former Vice Chancellor of Patna University, called upon citizens to participate, contribute and accelerate digital technologies for the older persons to stay healthy. The Guest of Honour and Keynote speaker of the event, Shri Mahendra Singh Dhaker, ITS, Principal General Manager, Bihar Telcom Circle, Patna focussed on the application of Information and Communication Technologies (ICTs) to facilitate healthy ageing, the application of digital health and telemedicine platforms etc.

Observed World Environment Day on 05 June 2022 at Patna on the theme of the day 'Only One Earth' with focus on 'Living Sustainability in Harmony with Nature'. Dr Ashok Kumar Ghosh, Chairman, Bihar State Pollution Control Board graced the function as Chief Guest and Dr Atul Aditya Pandey, Chairman, State Environment Impact Assessment Authority, Bihar was the Guest of Honour & Keynote Speaker. Dr Ashok Kumar Ghosh discussed about ambient air pollution and toxic chemical pollution due to increased industrialisation, uncontrolled urbanisation, population growth, fossil fuel combustion, etc. He mentioned that the triad of pollution, climatic change and biodiversity loss are the key global environmental issues. Dr Atul Aditya Pandey, Professor of Geology, Chairman, State Environment Impact Assessment Authority, Director, HRDC, Patna University stressed the importance of individual action to conserve the environment.

Delhi

Organized 9th R K Vir Memorial Lecture in association with SQG-IEI, IEEE, IREE and IET-DLN on the theme 'Hyperloop Technology-Indian Research and Innovations' on 04 January 2023 at Delhi. Chief Guests of the event were Mr Vinod Kumar Yadav, Former Chairman & CEO, Railway Board and Ex-officio Principal Secretary, Government of India and Mr V K Tripathi, Immediate Ex-Chairman & CEO, Railway Board, and Ex-officio Principal Secretary, Government of India. Guest of Honour of the event was Mr Naveen Gulati, Member Traction & Rolling Stock, Railway Board and Ex-Officio Secretary, Government of India and Patron, IREE. Keynote Speakers of the event were Mr Rajesh Jain, Senior ED Dev. Railway Board; Dr R K Shrivastava, Professor, IIT BHU and Prof S R Chakravarthy, Aerospace Engineering Department, IIT Madras. Convener of the event was Mr V K Dutt, Former AML, Railway Board and Executive Member, IEEE. Mrs Tarini Baswal, Divisional Head/Rail Infra RITES, Executive Member, IEEE, Secretary, IEEE TEMS and Member, BoG-SQF; Mr A Q Ansari, Vice Chair, IEEE-Delhi Section; Mr Ram Prakash, AM (RE), Railway Board; Mr Vasudev Panda, AM (Traction), Railway Board and President, IREE; Mr Swades De, Chairman,

VTS-IEEE; Mr R S Grover, Chairman, IET-DLN; Mr Pramod Kumar, General Secretary, IREE and Principal Chief Electrical Engineer, Northern Railway also delivered lectures on the programme.

Gujarat

Organized Technical Talk on the topic 'Carbon Credit' on 24 August 2022 through hybrid-mode at Ahmedabad. Mr Dinesh Chandra Odhavjibhai Nakrani, Honorary Secretary, Gujarat State Centre, IEI gave brief introduction of the seminar and carbon credit (often called a carbon offset) for greenhouse emissions. Chief Guest of the event was Mr Sandip B Vasava, Secretary, Roads and Building Department, Government of Gujarat and Council Member, IEI (in absentia). Guest of Honour of the event, Mr Ashok Mulani, Retired Executive Engineer, UGVCL, Gandhinagar and Certified Energy Manager, Ahmedabad said that to effectively limit the emissions of greenhouse gases (GHGs), the cost of using carbon as an energy source needs to be sufficiently high to encourage the required changes in economic behavior towards limiting greenhouse gas emissions. Keynote Speaker of the event, Mr Ketan Bhatt, Senior Consultant Renewable, Mahalaxmi Electrical, Ahmedabad delivered a lecture on the topic 'Carbon Credit'.

Karnataka

Organized Lecture on 'Drone Technology – Digital Transformation through AI & ML in Mining and Tunnelling' on 29 July 2022 through hybrid-mode. Keynote Speaker of the event, Mr Cyriac Joseph, MD & CEO, SQUADRON Infra & Mining Private Limited Bengaluru explained how Unmanned Aerial Vehicles (UAVs) / drones are turning the mining sector into an emerging frontier for new technology. He opined that in recent years, these miniature helicopters have helped the industry find cheaper and safer ways to map deposit sites and explore for minerals via remote control. He mentioned that UAV-based technology has enormous potential in the mining industry. It can be used for data collection, aerial mapping of mineral prospect zones, mine planning and design, mine safety and security surveillance, disaster management and monitoring, machinery tracking, infrastructure monitoring, pipeline, conveyor belt inspection, electrical safety. He opined majority of mineral exploration, mining, railways, power transmission, and other infrastructure projects, especially green field projects, are located in tough terrain and are difficult to access., whereas drone technology and 3D Modelling, combined with AI and ML and computer vision technologies enables deep visualization of projects, precise monitoring and fast-tracking project execution, resulting in significant cost and time savings. He pointed out that the application of Drones in Underground Mines through the Hover map operation can obtain the Mapping of all UG tunnels, drives, raise, orepass, roadways, crosscuts, 3D reality model of the entire mine, underground tunnel mapping and highlighted the usage of Drone mounted Magnetometer for Geophysical survey that is 10x faster than the traditional method for mineral exploration, groundwater exploration, coal exploration etc.

Organized technical talk on 'Being Entrepreneurial & the Role of Organizations' on 26 August 2022 through hybrid-mode. Speaker of the event, Er Uma Reddy, Managing Director, M/s Hitech Magnetics and Electronics Private Limited and Past Committee Member, Karnataka State Centre, IEI elaborated about the entrepreneurial skills including leadership skills, persistency, positive attitude, etc. She explained about the scope and function of various trade bodies and associations, namely FICCI, CII, ASSOCHAM, state chambers of commerce and industry etc.

Organized Lecture on 'Pile Design and Construction Practice for Metro Projects' on 28 December 2022 through hybrid-mode. Speaker of the event,

Dr Naveen B P, Assistant Professor and HoD, Civil Engineering Department, Amity University, Haryana explained the application and challenges of drilled cast insitu pile foundation in residual soils. He explained the design aspects that are used to estimate the theoretical safe loading capacity of large diameter bored piles. These piles are socketed into granitic gneiss bedrocks.

Puducherry

Organized Fourth National Conference in association with Department of Electronics and Communication Engineering, NIT Puducherry on the topic 'Communication Systems' (NCOCS-2022) on 23 December 2022 at Puducherry. Prof K Sankaranarayanan, Director, NIT Puducherry inaugurated the Conference and emphasized about the critical role of wireless communication in today's world. Chief Guest of the event, Prof M V Kartikeyan, Director, IITDM Kancheepuram discussed about the present trends and future scope of wireless communication. Guest of Honours of the event, Dr R Nakkeeran, Electronics Engineering Department, Pondicherry University and Dr Y R M Rao, National EC Member, PS, ISTE addressed the esteemed audience. Out of 86 articles received, 48 papers were presented by the authors from CFTIs, State Universities, renowned private universities and industry personnel across India. A Souvenir and Book of Abstracts were released on the occasion.

Tripura

Organized Workshop on 'Process and Steps to be Observed in Controlling the Quality for all types of Constructions' on 27 October 2022 in association with PWD (R&B), TTAADC, (Tripura Tribal Areas Autonomous District Council) Khumulwng at the Training Hall, PO(Agri), TTAADC, Khumulwng. Chief Guest of the event was Mr C R Debbarma, Honourable Executive Member (PWD & Edn), TTAADC and Special Guest of the event was Mr C K Jamatia, IAS, CEO, TTAADC. Speaker of the session was Mr R K Majumder, IAS (Retd) Former Director, Urban Development Department, Tripura.

Organized Seminar in association with Public Works Department (R&B), Government of Tripura; Public Works Department, Drinking Water & Sanitation (DWS), Government of Tripura and Rural Development Department, Government of Tripura on 'Drinking Water & Sanitation' and 'Roads, Bridges & Buildings' on 29 October 2022 at Agartala. The seminar was inaugurated by the Chief Guest of the event, Mr Sushanta Chowdhury, Hon'able Minister, PWD (DWS) Department, Government of Tripura. Special Guest of the event was Mr Shyamlal Bhowmik, Chief Engineer, Public Works Department (DWS), Government of Tripura. Special Speakers of the event, Mr Rajib Majumder, Director, Water & Sanitation Support Organization (WSSO), PWD (DWS), Government of Tripura and Dr John Devdas Dahey, Groundwater Expert, SPMU, JJM, DWS, Agartala presented their speech on the topic 'Drinking Water'; Mr Kripan Ayudh Roy, Former Assistant Advisor, Central Public Health and Environmental Engineering Organisation (CPHEEO), Former ODS (NGRBA), NMCG, Former Scientist-E, CPCB delivered his speech on the topic 'Sustainable Water Supply System in Tripura' through online mode. During Valedictory session, seminar was organised on 'Roads, Bridges and Buildings'. Mr Gitte Kiran Kumar Dinkarrao, IAS, Secretary, Public Works Department, Government of Tripura graced the occasion as Chief Guest. Special Guest of the event was Mr Swapan Kumar Das, Chief Engineer, Rural Development Department, Government of Tripura. Dr Abhay Gupta, Director, Skeleton Consultants Private Limited, New Delhi, presented his speech on the topic 'Rapid Building Construction in/c Salient Feature of Light House Project at Agartala as Special Speaker through virtual mode. Mr Nanigopal Pal, Executive Engineer, Rural Development Department, Government of Tripura delivered his speech on the topic 'Common Defects in Building Works' and Mr Sudip Chakraborty, Assistant Engineer, Public Works Department, Government of Tripura delivered a speech on the topic 'New Technology in Rural Roads Construction'. Mr R K Majumder, IAS (Retd), Former Director, Urban Development Department, Tripura presented the recommendation of the Seminar.

Organized a three-day Training Programme for the Engineers working with Public Works Department, Government of Tripura on 17-19 October, 2022 at Agartala. Another training program on 'Contract Management and Arbitration' was also organised for Engineers of the Public Works Department, Government of Tripura on 20 October 2022 at Agartala. The program was funded by Public Works Department, Government of Tripura with support from Revenue Department, Government of Tripura. Chief Guest of the event was Mr Shyamlal Bhaumik, Chief Engineer, Public Works Department, Government of Tripura. Special Guest of the event was Mr Rajib Paul, Deputy Secretary, PWD (R&B), Government of Tripura. Mr R K Majumder, IAS (Retd), Former Director, Urban Development Department, Tripura delivered his introductory speech.

Organized Training Programmes through online mode jointly with Department of Chemical and Polymer Engineering, Tripura University and Academy of Water Science, Baroda Gujarat on the topic 'Domestic RO Training' on 18-23 November 2022 and 'Industrial RO cum Softeners Training' on 24-28 November, 2022 at Tripura for Skill Development purpose of the Stakeholders. Guest of Honour of the event was Prof Sabyasachi Dasgupta, Dean (Students Welfare), Tripura University. Mr M C Kushwaha, Academy of water Science, Gujarat, Er Harjeet Nath, Head (I/c) and Co-ordinator of the Value-added Course, Department of Chemical and Polymer Engineering, Tripura University and Dr Sachin Bhaladhare, Assistant Professor, Department of Chemical and Polymer Engineering, Tripura University also graced the occasion and shared their views.

Organized Seminar in association with Gomati District Polytechnic on 'Recent Trends in Concurrent and Emerging Technologies' on 22 November 2022 at Gomati District Polytechnic, Udaipur. Guest of Honour and Special Speaker of the event, Dr Sudhan Debnath, Principal, Netaji Subhas Mahavidyalaya, Udaipur, Gomati Tripura delivered lecture on 'Natural Compounds in Cancer Therapy'. Special Guest of the event was Mr Suraj Deb Barma, Principal-in-Charge, Gomati District Polytechnic. In the first technical session, three papers were presented; Mr Dinesh Kumar Jamatia, Lecturer, Civil Engineering Department, Gomati District Polytechnic, Udaipur delivered lecture on the topic 'A Survey on Usability of Micropile as an Advanced Foundation Technology'; Mr Ruman Sarkar, Lecturer, Computer Science and Technology Department, Tripura Institute of Technology, Narsingarh on 'A Smart and Portable Braille System for Visually Impaired People' and Smt Khumbar Debbarma, Lecturer, CST, TTAADC Polytechnic Institute, Khumulwng on the topic 'Efficient POS Tagger for Sentiment Analysis of Kok-Borok Language'. Mr R K Majumdar, Retd IAS and Former Director of Urban Development Department, Government of Tripura chaired the session. In the second technical session, Mr Ramananda Paul, Lecturer, Electrical Engineering Department, Gomati District Polytechnic, Udaipur delivered on 'Expected Role of Non-Conventional Energy Resources for Economic Development in India: A Survey'; Mr Dibakar Chakraborty, Lecturer, CST, Gomati District Polytechnic, Udaipur on the topic 'A Survey of IoT Integrated Edge Computing Framework: Recent Advances and Open Challenges' and Mr Deepjyoti Debbarma, Lecturer, Electrical Engineering Department, TTAADC Polytechnic Institute, Khumulwng on the topic 'Photovoltaic Panels Characteristic Monitoring and Performance Analysis of a Hybrid System'. The session was chaired by Mr Subhendu Chaudhuri, Retired Superintendent Engineer, Power Department, Government of Tripura. At the end, Mr Dinesh Kumar Jamatia, HOD (In-charge), Civil Engineering Department, Gomati District Polytechnic put the concluding remarks.

Uttarakhand

Organized Seminar in association with Disaster Awareness & Management Forum, IEI on 'Stress Relieving Management in Day-to-Day Life' on 24 November 2022 at Dehradun. On this occasion, International Vedic Speaker Acharya Sri Anand Purusarthiji from Hosangabad, MP shared his thoughts on stress management. Mr Kishan Nath, Former Additional Secretary, Government of Uttarakhand also delivered lecture on stress relieving in day-to-day life.

West Bengal

Organized Seminar on the topic 'Weathering Steel Design and Reconstruction of Scarborough Railway Bridge in York, United Kingdom' on 04 August 2022 at Kolkata. The guest speaker, Mr Arnab Chakraborty from the UK, explained the innovative approaches adopted to overcome the engineering challenges during the reconstruction of the 140-year-old flood-prone railway bridge in York City, UK. The speaker has a long track record of working with numerous international designs both in UK and overseas like Balfour Beatty, Morgan Sindall, Carillion bouygues and Mitsubishi. He promoted and adopted design innovations and the use of materials, including orthotropic weathering steel for deck railway bridges and fiber-reinforced polymer in footbridges. He opined that sustainability and whole life cost form a significant part of the feasibility and option selection process besides robust methodology for a safe and environment friendly construction.

Organized the Prof A K Seal Memorial Lecture on the topic 'Yesterday, Today and Tomorrow – Journey of Indian Steel' on 01 September 2022 at Kolkata. Mr Bhola Nath Sen, the former Chief of Technology, Long Products and Global Wires, Tata Steel Limited, Jamshedpur delivered a lecture on the topic and enumerated the global steel production scenario. He explained various steel making processes, including the function of the Bessemer process and LD converter.

Organized World Habitat Day on the topic 'Mind the Gap. Leave No One and Place Behind' on 22 October 2022 at Kolkata. Speaker of the event, Mr Debashish Kar, Former Director General, Kolkata Municipal Corporation delivered a lecture on the theme and briefed about the present and future scenario of human habitat and significance of the word 'shelter' in national and global context.

LOCAL CENTRES

Agra

Organized One Day Conference on 'Energy and Environment (Urjavarán-2022)' in association with Indian Society of Heating Refrigerating and Air Conditioning Engineers on 23 December 2022 at Agra. Chief Guest of event was Mr Rakesh Garg, Vice President, Laghu Udyog Bharati and nominated Minister in the Uttar Pradesh Government and Guest of Honour of the event was Mr Ashwani Shiromani, President, Agra Association of Architects. Er Mohd Arif, Associate Dean, Student Welfare, Anand Engineering College, Agra, briefly discussed the Urjavarán theme 'Disha 2.0' and mentioned that it is an initiative of ISHRAE towards energy efficient building services like Smart Homes, HVAC&R, Electricals, Fire & Safety, Building Automation. The Keynote Speaker of the event, Mr Dinkar Saxena, Environment Consultant and Convener of the event, mentioned the recovery of energy from waste. Mr Rajat Agarwal, Consultant Architect, Agra, Uttar Pradesh presented case study on 'Reducing Carbon Footprints using Architecture Planning and Materials'.

Belagavi

Organized Invited Talk on 'Water Quality Assessment and Management of Panchaganga River' on 15 July 2022 at Belagavi. The Chief Guest of the event, Mrs Shilpa P Hiremath, Research Scholar and Keynote Speaker discussed about the methods of assessing the water quality of river Panchaganga in the Maharashtra State and to control the water quality. She also mentioned that industry and domestic affluent are the main reasons for water pollution. The speaker stressed on pre-treatment of water before releasing it into the water channel for minimizing the water pollution.

Organized Invited Talk on 'Importance of VLSI for the Future' on 13 August 2022 at Belagavi. The Invited speaker of the programme, Prof Raviraj Chougala, HOD, ECE, Angadi Institute of Technology & Management, Belagavi, explained how VLSI technology reduces the size of electronic circuit and how it makes electronic circuits faster and reliable.

Organized an invited talk on 'Implementation of NEP 2020 in Engineering' on 05 November 2022 at Belagavi. The Speaker of the event, Prof (Dr) Sadashiv Halbhavi, Professor, Visvesvaraya Technological University, Belagavi explained the prerequisites and strategies used during the implementation of NEP.

Bokaro Steel City

Organized technical paper presentation on 'Cloud Computing' on 31 July 2022 at Bokaro. The Speaker of the session, Er Aditya Dubey, briefed about cloud computing and its importance in this modern age, categories of clouds, India's cloud (public, private, and hybrid clouds) service potential and highlighted the advantages of cloud computing.

Coimbatore

Organized webinar on the theme 'Registration of Intellectual Property Rights (IPR) without Legal Assistance' on 29 October 2022 in association with Department of Mechatronics Engineering, Hindusthan College of Engineering and Technology, Coimbatore (HICET). Guest Speaker of the event, Mr T Jayachandran, Advisor for IPR Services, Trodo 3D Product Development, Tiruppur explained the significance of Intellectual Property Rights (IPR) and their vital role in enhancing the socio-economic prosperity of the country. He mentioned that relativity and innovation are new drivers of the world economy. He emphasized the growth of the nation and need to create large public awareness about the pivotal role of IPR in globalized knowledge economy. He suggested that the engineering community incentivize and protect innovation to solve the world's most challenging problems, generate jobs and economic growth and promote, innovation in product development, along with filing for legal assistance.

Organized technical lecture in association with Department of Civil Engineering, Coimbatore Institute of Technology (CIT), Coimbatore on 'Awareness on Climate Changes' on 23 November 2022 at Coimbatore. The Guest Speaker of the event was Dr S R Ramanan, Former Director, Area Cyclone Warning Centre, Regional Meteorological Centre, Chennai.

Dhanbad

Organized technical lecture on 'Stress Management for Engineers' on 18 January 2023 at Department of Environmental Science and Engineering, IIT-ISM Dhanbad. The Speaker of the event was Mr Binay Dayall, Former Director, Coal India Limited.

Durgapur

Organized a lecture meeting on 'Ten Tenets of Smart Engineering' on 22 July 2022 through hybrid-mode. The Speaker of the event, Dr Alok Nath De, Executive Consulting Director and Chief Technology Officer, Samsung India and Council Member, IEI, highlighted that smart engineering uses insights to conceive, model and scale appropriate solutions to objectives or problems. He illustrated with examples about feature improvisation, cost optimization and performance boosting.

Erode

A webinar was held on 25 July 2022 on 'Sustainable Developments of the Nation – The Role of Engineers in Smart Grid Initiatives for Sustainable Development; Sustainable, Renewable and Environmental-Friendly Insulation Systems for High Voltage Applications; Enabling India with Solar Power'. The Speaker of the event, Dr S Albert Alexander, Associate Professor, Department of Electrical and Electronics Engineering, Kongu Engineering College, Perundurai, said that electrical power sector globally is experiencing an advanced evolution of the conventional electrical grid, and this transformation is in response to advanced technologies and the latest environmental policies. He spoke about the shortcomings of conventional grid, and advocated for smart grid to address the shortcomings of the conventional power grid with increased reliability, efficacy, security and sustainability. Dr M Srinivasan, Assistant Professor, Department of Electrical & Electronics Engineering, Kongu Engineering College, Erode, said that with

the inception of high voltage (HV), requisites on the insulating permanence of HV equipment becoming increasingly crucial. Mineral/synthetic oil liquid insulation, together with solid insulation materials, is the fundamental insulation constituent in HV apparatus in use, he added. Dr T Jayakumar, Associate Professor, Department of Electrical & Electronics Engineering, Nandha Engineering College, Erode, discussed the National Solar Mission.

Organized webinar on 'Green Technology for Environment Sustainability' on 20 August 2022. Dr K Senthilkumar, Associate Professor, Chemical Engineering Department, Kongu Engineering College, Erode was the speaker of the event.

Organized a webinar on 'Importance of Sustainable Energy in Current Scenarios'; 'Role of Electric Vehicles in Achieving Sustainable Development'; 'Sustainable Developments in IoT'; 'Role of Engineers in Sustainable Development' on 27 August 2022. Speaker of the event Dr Srinivasan Mallan, Associate Professor, Department of Electrical & Electronics Engineering, Bannari Amman Institute of Technology, Sathy & BEE Certified Energy Auditor highlighted the importance of renewable energy to promote economic growth, enhanced energy security, increased access to energy and slow down climate change. Mr Krishnagandhi P, Assistant Professor (Senior Grade), Department of Electrical & Electronics Engineering, Nandha Engineering College, Erode spoke about the digitalization of power, smart grid, and the provision of value added services to consumers and other stakeholders involved in the energy market. He also discussed the possible disruption of existing electricity services in smart cities. He further discussed the application and benefits derived from electric vehicles and the role of electric vehicles to promote the development of smart grid by deploying Vehicle-to-Grid and Grid-to-Vehicle communication. Dr S J Suji Prasad, Associate Professor, Department of Electronics and Instrumentation Engineering, Kongu Engineering College, stated that IoT, with its ever expanding eco-system of digital sensors, is currently trending towards appliances and wearable smart devices. Dr P Navaneetha Krishnan, Chief Coordinator, Planning & Professor of Mechanical Engineering, Kongu Engineering College, said that engineers have played and continue to play a key role in the future of sustainable development. To boost the nation's Sustainable Development Goals (SDGs), engineers remain the key contributors in the vast chain of modern production and consumption of natural resources to deliver goods, services and solutions for the larger society. Dr R Kumaravelan, Professor, Mechanical Engineering Department, Velalar College of Engineering and Technology, Erode, said that engineers are increasingly required to play a leadership role in sustainable development, overcoming global challenges, such as depletion of resources, environmental pollution, rapid population growth and damage to ecosystems.

Faridabad

Organized webinar on 'Quality Improvement in Auto Industries' on 16 July 2022. Speaker of the event, Mr Kuldeep Raj Gupta, Vice President, Ottoman Industries Private Limited, Faridabad and Chairman, Faridabad Local Centre, IEI in his address stated that to increase product accuracy, manufacturers need to apply the quality control tools; Several industries have implemented quality control practices in the manufacturing sector to achieve superior quality, decrease product complaints and increase sales, he added. He explained the application of 7 QC Tools, which are systematic and scientific methods for problem solving and are used for products and process improvement.

Gwalior

Organized seminar in association with Amity University, Gwalior on the topic 'Advances in 5G Technology and Its Impact on India' on 28 December 2022 at Gwalior. Keynote Speaker of the event, Maj Gen (Dr) S C Jain, VSM (Retd), Director, Amity School of Engineering and Technology, Gwalior explained about 5G Technology, and mentioned that 5G is a unified platform which can deliver up to 20 Gigabits per second (Gbps) peak data rates

and 100+ Megabits per second (Mbps) average data rates. Dr Rinkoo Bhatia, Assistant Professor, Department of Electronics and Communication Engineering, Amity University, Madhya Pradesh, Gwalior, elaborated on major connection services of 5G, namely enhanced mobile broadband, mission-critical communication and the massive IoT. She also added that 5G mobile technology can be used in smart phones with faster and uniform data rates with low cost per bit. Ms Anushka Saxena, Madhav Institute of Technology and Sciences (MITS), Gwalior, explained the application of 5G in Robotics and 5G technology requires to be deployed in small cell towers closer to users with more antennas to expand its data-intensive coverage.

Kadapa

Organized Technical Seminar in association with Global College of Engineering & Technology, Kadapa on the topic 'The Joy with Python' on 26 August 2022 at Kadapa. Speaker of the event, Dr B Muni Lavanya, Assistant Professor, Computer Science and Engineering Department, JNTUA College of Engineering described Python as the world's fastest growing popular programming language. She defined Python as an interpreter, interactive, object oriented programming language, that is able to incorporate modules, exceptions, dynamic typing, very high level dynamic data types and classes and it supports multiple programming paradigms beyond object oriented programming, such as procedural and functional programming. She mentioned that people from different disciplines use Python for variety of tasks such as data analysis, visualization, artificial intelligence, machine learning, automation.

Organized Technical Seminar on 'Recent Trends in VLSI Chip Design' on 15 October 2022 at Kadapa. Speaker of the event was Ms N Shehanaz, Assistant Professor, Department of Electronics and Communication Engineering, JNTUA College of Engineering, Pulivendula presented her speech on the occasion.

Kalaburagi

Organized Seminar on 'Internet of Things: Technology and Its Applications' on 30 August 2022 at Kalaburagi. Speaker of the event was Dr Prakash Pattan, System Manager, Computer Science and Engineering Department, PDA College of Engineering, Kalaburagi.

Organized lecture meeting on 'Web 4.0 & The Block Chain Technology' on 28 November 2022 at Kalaburagi. Speaker of the event, Mr Siddaram Hebbal, Chief Technology Officer and Co-Founder, Keoch IT Solution & Mahiti Info Solution, deliver lecture on the topic.

Kanpur

Organized lecture meeting on 'Technical Textiles for Defence Applications' on 22 July 2022 at Kanpur. Guest Speaker of the event, Dr Krishna Kumar Gupta, Former Scientist F, Joint Director, DMRDE, Kanpur spoke about technical textile, its applications in Medical textiles (implants), Geo textiles (reinforcement of embankments), Agro textiles (textiles for crop protection), Protective clothing (heat and radiation protection for fighter clothing), stab protection and bullet proof vests and space suits. He highlighted the development of textile based defence products as PVC and PU coated fabric with specific features on protective clothing; tent/shelters, camouflage systems, NBC protective gears and mountaineering equipments. He also highlighted camouflage and stealth products, where PVC-coated fabrics are used for the protection of the T-90 tank.

Organized lecture programme in association with All India Valuers Association, Kanpur on the topic 'Why Compliance with IVS is Difficult' on 13 August 2022 through online mode. Chief Guest of the event was Mr Rajat Kumar Nanda, Regional Head, Union Bank of India, Hisar, Haryana. Guest Speaker of the event, Er Akhaya Ketan Das, Registered Valuer, Bhopal in his lecture emphasized on proper value assessment system of land and discussed at a length the significant aspects of International valuation standards.

Organized lecture programme in association All India Valuers Association, Kanpur on the topic 'Building Bye Laws and its Impact on Valuation' on 10 December 2022 through online mode. Guest Speaker of the event, Mr Gagan Singh, Registered Valuer, in his informative speech explained the key factors to assess the value of property, which include approval of building plan, nature of construction, market condition, occupancy availability of civic amenities etc. He stressed that authenticity of the approved building plan is also required to be verified further and the valuers should have thorough knowledge about building byelaws, percentage of ground coverage, FAR setbacks, road widening factors etc.

Organized lecture in association with All India Valuers Association, Kanpur on 'Value the Valuation' on 14 January 2023 through online mode. Chief Guest of the event was Mr Ashok Patnaik, General Manager – Resources & Government Relation, Indian Bank, Corporate Office, Chennai and Guest Speaker of the event was Mr S S Dash, Proprietor, S S Dash & Associates, Kanpur. Mr Dash requested all the valuers to assess the value of the valuation by submitting qualitative valuation report instead of quantitative valuation. He also requested the bank authority to empanel the valuers zone wise to avoid improper reports. He discussed the parameters, considered during the process of valuation, which affect the value of property.

Kanyakumari

Organized webinar on 'Industrial IoT Solutions' on 22 July 2022. The Resource person of the session, Er Robin Thomas, Chief Executive Officer, Olive IoT Innovations Private Limited, Chennai explained the benefits and applications of Industrial IoT.

Organized webinar on 'Industrial Automation Using Pneumatics' on 05 August 2022. Er S Natarajan, Honorary Secretary, Kanyakumari Local Centre, IEI highlighted the concept of Industrial Automation using Pneumatics and the components of pneumatic system. Resource person of the event, Dr M Kannan, Professor & Head, Department of Mechatronics Engineering, Kamaraj College of Engineering Technology, Virudunagar district in his lecture explained fixed, programmable and flexible automation. He discussed basics of pneumatic system, actuators, symbols, valves etc.

Kattankulathur

Organized technical webinar in association with Indian Geotechnical Society, Chennai Chapter and Department of Civil Engineering, SRM Institute of Science and Technology on the topic 'Climate-Resilient Design of Civil Infrastructure' on 26 July 2022 in Kattankulathur. The Speaker of the event, Dr Krishna R Reddy, Professor of Civil and Environmental Engineering, University of Illinois, Chicago (UIC) in his address explained environmental remediation of soils, sediments, groundwater and storm water. He also discussed on waste management, landfill engineering and waste disposals. He explained life cycle assessment and sustainable/resilient engineering, stressed on consequences of climate change and various codes on Intergovernmental Panel on Climate Change (IPCC). He explained climate-resilient design framework and how to use them in flood/surge protection by implementing nature based solutions.

Kharagpur

Organized webinar on 'Modern Perspectives in Radar Data Processing' on 29 July 2022 at Kharagpur. Dr Arijit De, Associate Professor, Electronics & Communication Engineering Department, Indian Institute of Technology Kharagpur was the speaker of the session.

Organized Seminar on the topic 'Aerodynamics of Flapping Airfoils' on 02 November 2022 at Kharagpur. Keynote Speaker of the event was Dr Sunil Manohar Dash, Associate Professor, Department of Aerospace Engineering, Indian Institute of Technology Kharagpur. He explained nonstationary airfoil aerodynamics including dynamic stall, vortex shedding and thrust generation. He further elaborated flapping wing flight in terms of Reynolds number, Strouhal number and reduced frequency. Earlier, Dr Damodar Maity, Chairman, Kharagpur Local Centre, IEI highlighted the aerodynamic aspects of flapping airfoil.

Kollam

Organized beginner-level Python Programming "The Code" in association with IEI EEE Student Chapter, TKM College of Engineering, Kollam on 30 November 2022 at Kollam. Dr (Prof) Ms Sheeba R, Honorary Secretary, Kollam Local Centre, IEI presented lecture on 'Python Programming Workshop Series'. The event was successfully completed by the active and enthusiastic participation from the students.

Madurai

Celebrated 42nd anniversary of Madurai Local Centre, IEI on 19 July 2022 at Madurai and a seminar was organised on the topic 'Sustainable Development in Digital Era' in Madurai. Chief Guest of the event, Mr J K Muthu, Chairman, TEDCO, MD, Kamalam Group, Madurai explained that the transformational capabilities of the digital age might even be a necessity to achieve the Sustainable Development Goals (UN-SDGs) by 2030 as declared by the United Nations; Yet, global sustainability is not an inevitable outcome of the digital revolution. He presumed that digitalization is expected to increase the sustainability of our energy systems, spread electricity in remote areas and improve the way we use it. He opined that digitization also opened the avenue for novel challenges for our energy systems.

Nashik

Organized Seminar in association with Akshay Study Abroad Consultants on the topic 'Study Abroad – Myths and Facts' on 23 July 2022 at Nashik. Guest Speakers of the event, Mr Amit Gore, Founder & Director, Akshay Study Abroad Consultants presented the relevant statistics about the students who go abroad for higher education and explained the options available in different countries and different curriculum. He further presented a comparative analysis of different countries and spoke about top international universities well known for higher education. He mentioned various entrance tests like GRE, GMAT, SAT, TOEFL and IELTS for studying abroad and elaborated various funding and scholarship options available to students for education abroad. Mrs Anupa Gore, Joint Director, Akshay Study Abroad Consultants also delivered lecture on the topic.

Navi Mumbai

Organized Technical Lecture on 'Construction Safety' on 23 December 2022 at Belapur. Speaker of the event, Mr K K Mheta, Former Additional Chief Engineer, Construction, Nuclear Power Corporation of India Ltd (NPCIL) explained the hazards in construction industries and preventive measures.

Pune

Celebrated 64th Foundation Day on 29 November 2022 at Pune. Chief Guest of the event, Mr Shekhar Singh, IAS, Municipal Commissioner, Pimpri Chinchwad Municipal Corporation shared his thoughts and views with the august audience.

Ranipet

Organized lecture programme on 'Digital Signal Processing' on 24 July 2022 at Ranipet. Speaker of the event was Dr S Deepa, Associate Professor, Department of Electrical and Electronics Engineering, Kingston Engineering College, Vellore. Key points discussed in the session include: importance of condition monitoring in electrical machines, probable machine faults like coil movement, dielectric failure, eccentricity, transient voltage fluctuations, humidity, load fluctuations, overloads etc. Speaker also discussed signal processing techniques including root mean square (RMS), power spectral density (PSD), short-term Fourier transform (STFT), discrete wavelet transform (DWT), adaptive peak filters (APF) etc. She highlighted about detection of power quality using time frequency filter method like single phase matrix converter (SPMC) and adaptive peak filters (APF). She also elaborated about Simulation study of switching fault in SPMC and its effects. The Speaker briefed about smart monitoring of machines used for health diagnosis, Digital Signal Processing (DSP) techniques used to ascertain the machine condition through product life cycle etc.

Organized Industrial Visit to Tata International Limited (Bachi Shoes Division) on 30 July 2022 at SIPCOT Phase-I, Ranipet.

Organized webinar on 'Sustainability – Need in the Indian Context' on 31 August 2022. Speaker of the event was Mr John Syushil Packiaraj, Professor, School of Civil Engineering, Vellore Institute of Technology. Key points discussed in the session are different aspects of sustainability and avenues for individual contributions towards sustainable use of water and energy.

Rourkela

Organized Technical Paper Meeting on 18 August 2022 in hybrid-mode on the topic 'Industrial Micro-planning'. Speaker of the session, Mr Chitrasen Tajan, Senior Manager, Hot Strip Mill-I, SAIL, Rourkela Steel Plant in his lecture stressed on intelligence-based framework for automated micro-planning.

Organized International Day against Nuclear Test on 29 August 2022 in hybrid-mode. Speaker of the session, Dr Pawan Kumar Kulriya, Associate Professor, School of Physical Sciences, Jawaharlal Nehru University, New Delhi spoke on the topic 'Materials Challenges for Advanced Nuclear Energy Systems'. The speaker explained that nuclear energy is widely considered as a green source of energy amongst its counterparts owing to the huge amount of electricity it produces at commercially competitive cost with modest environmental impact. He further mentioned that the future of nuclear energy lies beyond the current generation of power and critically depends upon development of advanced materials for nuclear fuels, shielding and immobilization of radioactive waste as well as structural materials.

Thanjavur

Organized technical lecture meeting on the topic 'Driving of Technological Innovation and Entrepreneurship' on 02 December 2022 at Thanjavur. Speaker of the event was Dr Sivakumar Muthusamy, Chief Technology Officer & Co-founder, Ariviya Deep Tech Private Limited, Periya TBI, PMIST Campus, Vellam, Thanjavur. The objective of the event was to motivate the students and members about new innovative ideas that support community problems in rural and bring solutions for the respective issues in particular, based on the demand of customers.

Tirunelveli

Organized lecture meeting on 'Principles of VLSI Design' on 01 December 2022 at Tirunelveli. Chief Guest and Resource person of the event, Mr G Muralidhar, Director, MAXVY Technologies, Bangalore delivered the Keynote address and explained the concepts & techniques of modern integrated circuit design and testing.

Trichur

Organized webinar on the topic 'Why Institutional Rankings Matter in Higher Education' on 07 July 2022. Speaker of the event, Dr B Anil, Former Principal, Government Engineering College (GEC), Barton Hill, Thiruvananthapuram explained various performance indicators considered for ranking of higher education Institutions like teaching, learning & resources, research and professional practice, graduation outcomes, outreach & inclusivity and peer perception. Prof Sunil Kumar C P, Chairman, Trichur Local Centre, IET discussed the strategy and process of ranking of institutions of higher education as an annual exercise as stipulated by the Ministry of Education, Government of India.

Udaipur

Organized India-Namibia Knowledge Forum 2022 on the theme 'Research and Educational Opportunities between India and Namibia' in association with Knowledge Chamber of Commerce and Industry; Computer Society of India, Udaipur Chapter on 12 August 2022 at Udaipur. Chief Guest of the event was Dr Erol Naomab, Vice-Chancellor, Namibia University of Science and Technology, Namibia. Dr Colin Stanley, Acting DVC, Research-Namibia

University of Science and Technology, Namibia was the Guest of Honour. Special Guest of the event was Prof S S Sarandevot, Vice-Chancellor, Janardan Rai Nagar Rajasthan Vidyapeeth, Udaipur. Prof Dharm Singh Jat, Professor and UNESCO Chairholder on Secure High-performance Computing for Higher Education and Research, Namibia University of Science & Technology-Namibia highlighted the importance for organizing this event for research and study between India and Namibia by providing information about various activities of IET. Dr Erol Naomab spoke about the mutual cooperation between India and Namibia for increasing the like minimum water irrigation and soil agriculture, diamond mining production, green hydrogen production at low cost, etc. Prof S S Sarandevot, Prof Fungai Bhunu Shawa, Acting Dean of Namibia Science & Technology University, Namibia, Acting Associate Dean (Research and Innovation); Dr Suma Menyela, Professor and UNESCO Chairholder; Dr Dharam Singh Jat and Dr Amit Joshi of Knowledge Chamber of Commerce and Industry addressed the audience. Dr Manju Mandot, President of Computer Society of India highlighted the activities of this society.

Organized Seminar in association with Rajasthan Renewable Energy Corporation Limited on 'Energy Conservation Building Code (ECBC)' and 'Eco Niwas Samhita' on 08 October 2022 at Udaipur. Chief Guest of the event, Mr G S Taunk, Honourable Mayor, Udaipur emphasized the use of energy saving devices and explained Energy Conservation Building Code. The Energy Conservation Master Trainer, Architect Abu Talha Farooqui, Assistant Professor and Assistant Dean, Jindal School of Art and Architecture, OP Jindal Global University, New Delhi highlighted the benefits of energy saving. Er Aditya Singh, Project Architect, Er Kunal Jagdale, Project Engineer and Er Roshan Kumar, Project Engineer, Rajasthan Renewable Energy Corporation Limited also expressed their views.

Organized Er Y S Sardalia Memorial Lecture on the theme 'Sustainable Development' on 27 November 2022 at Udaipur. Chief Guest and Keynote speaker of the event, Prof (Dr) Padmakali Banerjee, President (Vice Chancellor), Sir Padampat Singhania University, Udaipur shared her views on carbon emissions, UN-SDGs and emphasized on taking appropriate steps to reduce poverty. She called upon engineering fraternity for the development of humanity by enhancing their skills and being ready to make life easier for people. Speaker of the event, Mr Ashok Jain, Former GM, and Head of Corporate Safety and Sustainability, Hindustan Zinc Limited delivered lecture on the topic 'Sustainability for Sustainable Development' and explained the objective of sustainability to strike a balance between the needs of present demands without ignoring the needs of future generations. He expressed his views on business sustainability, environmental sustainability, community sustainability and on the characteristics of a sustainable community.

Vallabh Vidyanagar

Organized Workshop in association with B & B Institute of Technology, V V Nagar on the topic 'Model Rocket' during 14-15 October 2022 at Vallabh Vidyanagar. Resource person of the event was Dr Atul Makwana, Director, Air Wing Services Private Limited.

Vadodara

Celebrated Power Day in association with Society of Power Engineers (India), Vadodara Chapter at Vadodara on 10 November 2022. A Seminar was organised on the topic 'Role of PGCIL in the Development of Power Section in India'. Speaker of the event, Mr TR Krishna Kumar, Executive Director, (Western Region II) Power Grid, Vadodara delivered presentation on the topic 'Development of Power Sector in India'. He discussed about latest technologies being used in Power Grid Corporation of India Limited (PGCIL) such as use of Robot in Substation Maintenance, Smart Grid, Centre of Excellence in Cyber Security, etc and State of Art Maintenance etc. He also informed about the maintenance and monitoring practices adopted in PGCIL, namely Application Based Line Patrolling; Application Based Condition Monitoring of Substation and Line; Aerial Patrolling; Remote Operation of Substation, etc.



Engineering Staff College of India

Autonomous Organ of The Institution of Engineers (India)
(IMS [ISO 9001:2015, ISO 14001:2015, ISO 50001:2018, ISO 45001:2018],
ISO/IEC 17025:2017 Certified, AICTE & CEA Recognized Institution)

Continuing Professional Development Programmes (CPDPs) for the Month of May 2023

Sl. No.	Name of the Course	Scheduled Dates
1.	Climate Change Impact on Water Resources, its Imitation and Adaptation	01 - 04 May 23
2.	Pumps Operation, Maintenance and Performance Monitoring for Power Plant Applications	02 - 04 May 23
3.	Construction and Demolition Waste Management and its relevance with Climate Change	03 - 05 May 23
4.	Concepts on Design, construction & Maintenance of Bridges	08 - 12 May 23
5.	Big Data Analytics for Business Decisions (Hands-on practical on MS Excel & Tableau)	08 - 11 May 23
6.	Design & Optimization of Blasting in Opencast Mines	08 - 12 May 23
7.	Smart meter Integration - PMU Asset Management in T&D Utilities	09 - 12 May 23
8.	Conducting EIA Study and Preparation of EIA reports - Case study & Group Discussion.	10 - 12 May 23
9.	Conflict Management, Decision Making and Problem-Solving Skills	10 - 12 May 23
10.	Surface Engineering - Concepts, Applications and Emerging Technologies	15 - 17 May 23
11.	Nature based solutions for sustainable development	16 - 18 May 23
12.	Best Practices in O&M of Coal Mills & Feeders	17 - 19 May 23
13.	Planning Design and Construction of Advanced Underground Subway	22 - 26 May 23
14.	Reverse Engineering Techniques (collaboration with Industry)	22 - 24 May 23
15.	Network & Security Administration	22 - 26 May 23
16.	Interpersonal Effectiveness and Transcendental Intelligence for Innovative Leadership	22 - 24 May 23
17.	Sustainable Practices in Mining: Environmental Laws & Policies, Land Acquisition, Social Impact Assessment, Rehabilitation & Resettlement, District Mineral Foundation, Application of Geographic Information System and Remote Sensing	22 - 26 May 23
18.	Renewable Energy Systems - Wind & Solar - Grid Integration (Online)	22 - 26 May 23
19.	Leadership Excellence: An Innovative approach	22 - 24 May 23
20.	Convergence for Synergy: One day workshop on SDG Goal 13 - Climate Action	23rd May 23
21.	Assessment of Irrigation Demand and Irrigation Scheduling using Latest Software Applications	23 - 25 May 23
22.	Sustainable Urban Drainage System	24 - 26 May 23

For detail information please contact:

Engineering Staff College of India

Old Bombay Road, Gachibowli, Hyderabad – 500 032

Landline : 040-66304100 & Mobile: +91 7337319038 / Email : mis@escihyd.org / URL : <https://escihyd.org>

Empanelment as Advocate/ Attorneys & Chartered Accountant for Engineers

The Institution of Engineers (India) invites practicing Advocates/Attorneys and Chartered Accountants who are also Engineers to apply for empanelment to enhance their visibility in the public domain. Empanelment entails a nominal application fee of Rs. 5900/- (inclusive of GST) payable by Demand Draft/Multi-city Cheque made in favor of "The Institution of Engineers (India)" and payable at Kolkata.

Applicants are requested to send a hard copy of their application to the **Director (Membership)**, The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700020. For further details, please visit our website at <https://www.ieindia.org/webui/iei-home.aspx>.

IEI DIARY



Aerospace Engineering Division

All India Seminar on **"Small Satellites for Rural Application"**

Madurai, May 09-10, 2023

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 **"Emerging Trends in Aero Engine Technologies"**

Gwalior, May 13-14 2023

The Honorary Secretary, IEI, Gwalior Local Centre, Green Park, Engineer Road, Behind New Collectorate, City Centre, Gwalior 474011 [☎: 0751-2454168, E-mail: gwaliorlc@ieindia.org]

Thirty-sixth National Convention of Aerospace Engineers on **"SPACE - Boundless Opportunities - Transforming Lives"**

Bangalore, September 01-02, 2023

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]

Agricultural Engineering Division

Thirty-fifth National Convention of Agricultural Engineers **"Emerging Technologies for Advances in Agriculture and Horticulture"**

Jabalpur, September 12-13, 2023

The Honorary Secretary, IEI, Jabalpur Local Centre, Vishvesvaraya Marg, South Civil Lines, In front of Old RTO Office, Jabalpur 482001, Ph: 0761-2678929, E-mail: jabalpurlc@ieindia.org

Architectural Engineering Division

All India Seminar on **"Technological Advancement in Architectural Engineering"**

Hyderabad, June 09-10, 2023

The Honorary Secretary, IEI Telangana State Centre, 6-2-910, "Visvesvaraya Bhavan", Khairatabad, Hyderabad 500004, Telangana [☎: 040-23314969/23373087/23370779, E-mail: telanganasc@ieindia.org, Website: www.ieitsc.org.in]

Chemical Engineering Division

Thirty-eighth National Convention of Chemical Engineers on **"Digitization of Chemical Process Industry"**

Tiruchirappalli, September 07-08, 2023

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: tiruchirappallilc@ieindia.org]

Civil Engineering Division

All India Seminar on **"Advanced Civil Engineering Approach towards Geo-Environmental Disaster"**

Jalpaiguri, May 19-20, 2023

The Honorary Secretary, IEI, North Bengal Local Centre, Engineers' House, Jalpaiguri Government Engineering College Campus, PO Jalpaiguri Government Engineering College, Dist. Jalpaiguri, Pin 735102 [☎: 03561-255468, E-mail : nblc@ieindia.org, Web: www.ienblc.org]

All India Seminar on **"Recent Advancements in Ground Improvement Techniques for Problematic Soil"**

Kanchepuram, May 23-24, 2023

The Honorary Secretary, IEI, Kanchepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kanchepuramlc@ieindia.org]

All India Seminar on **"Advancement in Irrigation, Drinking Water Supply, Factory use and Sanitation Projects using Pressurized System"**

Jabalpur, May 27-28, 2023

The Honorary Secretary, IEI, Jabalpur Local Centre, Vishvesvaraya Marg, South Civil Lines, In front of Old RTO Office, Jabalpur 482001 [☎: 0761-2678929, E-mail: jabalpurlc@ieindia.org]

All India Seminar on **"Landslide and Land subsidence in Hilly area: Causes, Prevention, Mitigation and Restoration"**

Shimla, June 01-02, 2023

The Honorary Secretary, IEI, Himachal Pradesh State Centre, Engineers Bhawan, Nigam Vihar, Shimla 171002, Ph: 0177-2623736, E-mail : hpssc@ieindia.org, Website: hpiei.org

All India Seminar on **"Impact of Waste Water on Environment & Its Efficient Management"**

Lucknow, June 18-19, 2023

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.in]

Thirty-eighth National Convention of Civil Engineers on **"Water Management for Sustainability using Emerging Technologies"**

Belagavi, October 07-08, 2023

The Honorary Secretary, IEI, Belagavi Local Centre, Er S G Balekundry Marg, Shivabasava Nagar, Belagavi 590010 [☎: 0831-2470258, Mobile: 9141384358, E-mail : belagavilc@ieindia.org, Website: www.ieilcbelagavi.org]

Computer Engineering Division

All India Workshop on **"Natural Language Processing, Information Retrieval and AI"**

Salem, May 02-03, 2023

The Honorary Secretary, IEI, Salem Local Centre, 104/7, Manivannan Road, 3rd Floor, SPC Bhawan, Opp to Salem New Bus Stand, Salem 636004 [☎: 0427-2332544, E-mail: salemclc@ieindia.org; Website: www.ieisl.com]

One-day Workshop on **"Machine Learning Concepts and Applications"**

Puducherry, May 05, 2023

The Honorary Secretary, IEI, Puducherry State Centre, No. 63, Nethaji Subash Chandra Bose Salai, Ground Floor, PWD Campus, Puducherry 605001 [Mobile: 9489766701/9443748471, Email: puducherryisc@ieindia.org, Website: www.ieipsc.org]

One-day Workshop on **"Data Science"**

Kadapa, May 12, 2023

The Honorary Secretary, IEI, Kadapa Local Centre, A.P.H.B Colony, Kadapa 516004 [☎: 08562-245808, E-mail: kadapalc@ieindia.org]

One-day Seminar on **"Building Artificial Intelligence Models for Predicting the Structural Durability of Concrete Structures"**

Coimbatore, May 13, 2023

The Honorary Secretary, IEI, Coimbatore Local Centre, PSG Tech Campus, Peelamedu, Coimbatore, Tamilnadu 641004 [☎: 0422-2580733, E-mail: coimbatorelc@ieindia.org, Website: www.ieicoimbatore.org]

All India Seminar on **"Intelligent Systems & Security Challenges in Industry 5.0"**

Kolkata, May 26-27, 2023

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

All India Workshop on **"Driving Digital Transformation Through Data, AI and Machine Learning"**

Kanchepuram, July 05-06, 2023

The Honorary Secretary, IEI, Kanchepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kanchepuramlc@ieindia.org]

All India Workshop on **"Microsoft Power Bi Desktop for Data Analysis and Data Visualization"**

Kanchepuram, July 26-27, 2023

The Honorary Secretary, IEI, Kanchepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kanchepuramlc@ieindia.org]

All India Seminar on **"Front end Application Development using HTML CSS, Javascript and Reactjs"**

Kattankulathur, July 27-28, 2023

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

One Day Workshop on **"Embedded System Design in Automotive Electronics"**

Kattankulathur, August 07, 2023

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

All India Seminar on **"Hands on Practice on IoT"**

Chandigarh, August 25-26, 2023

The Honorary Secretary, IEI, Punjab & Chandigarh State Centre, Plot No.1-A, Engineers Bhawan, Madhya Marg, Sector 19-A, Chandigarh 160019, Ph: 0172-2775418, E-mail:pcsc@ieindia.org, Website:www.ieichd.org

All India Seminar on **"Protection of Data and Privacy Within Distributed System"**

Ranchi, September 23-24, 2023

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, PO: Doranda, Ranchi 834002 [☎: 0651-3510412, E-mail: jharkhandsc@ieindia.org; Website: ieijscjarkhand.org]

All India Workshop on **"Building ChatGPT Messenger using Nextjs"**

Kattankulathur, September 28-29, 2023

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

All India Seminar on **"Integration of Cloud Computing and Internet of Things (IoT)"**

Kancheperum, October 18-19, 2023

The Honorary Secretary, IEI, Kancheperum Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheperumlc@ieindia.org]

International Conference on **"Sustainable Governance and Economic Development through IT Enabled Industry 5.0"**

Kolkata, November 23-24, 2023

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

All India Three Days Workshop on **"Competitive Programming and System Design"**

Kattankulathur, February 7-9, 2024

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

Electrical Engineering Division

One Day Seminar on **"Advances, Design Challenges and Innovations in Power Electronics Technology for Green Energy Systems"**

Kancheperum, May 04, 2023

The Honorary Secretary, IEI, Kancheperum Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheperumlc@ieindia.org]

All India Workshop on **"Hybrid Electric Vehicle"**

Kancheperum, June 07-08, 2023

The Honorary Secretary, IEI, Kancheperum Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheperumlc@ieindia.org]

All India Seminar on **"Wireless Charging Technologies for Electric Vehicle Applications"**

Kattankulathur, June 22-23, 2023

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

All India Seminar on **"Electric Vehicles Fault Diagnosis Service and Maintenance"**

Kattankulathur, July 12-13, 2023

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

All India Workshop on **"An Awareness Workshop on Energy Management and Audit"**

Kancheperum, July 17-18, 2023

The Honorary Secretary, IEI, Kancheperum Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheperumlc@ieindia.org]

All India Seminar on **"Mobilizing Renewable Energy for Battery Swapping, G2V And V2G Charging Stations in India"**

Kattankulathur, July 21-22, 2023

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

All India Seminar on **"Artificial Intelligence and Machine Learning Applications in Electrical Engineering"**

Tiruchirappalli, September 20-21, 2023

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-eighth National Convention of Electrical Engineers on **"Systemic Electric vehicle Adoption in India including EV Charging - Implementation Roadmap, Regulatory Framework, Infrastructure Development, Technical Challenges & Case Studies"**

Shimla, November 24-25, 2023

The Honorary Secretary, IEI, Himachal Pradesh State Centre, Engineers Bhawan, Nigam Vihar, Shimla 171002 [☎: 0177-2623736, E-mail: hpsec@ieindia.org, Website: hpiei.org]

Thirty-ninth National Convention of Electrical Engineers on **"Green Hydrogen, Electric Vehicle and Energy Storage System"**

Chennai, May 24-25, 2024

The Honorary Secretary, IEI, Tamil Nadu State Centre, No. 19, Swami Sivananda Salai, Chepauk, Chennai 600005 [☎: 044-25360614 /9962950333, E-mail : tnsc@ieindia.org, Website : www.ieitnsc.org]

Electronics and Telecom. Engg. Division

All India Seminar on **"Research Avenues of IoT and Cloud for Intelligent Applications"**

Kancheperum, June 14-15, 2023

The Honorary Secretary, IEI, Kancheperum Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheperumlc@ieindia.org]

All India Seminar on **"VLSI Design"**

Gwalior, July 15-16, 2023

The Honorary Secretary, IEI, Gwalior Local Centre, Green Park, Engineer Road, Behind New Collectorate, City Centre, Gwalior 474011 [☎: 0751-2454168, E-mail: gwaliorlc@ieindia.org]

All India Workshop on **"Real Time Applications of Image Processing : AI, MI and Computer Vision"**

Tiruchirappalli, August 25-26, 2023

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 **"Sensors and IoT for Smart Health Care"**

Kattankulathur, August 30-31, 2023

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

Thirty-eighth National Convention of Electronics & Telecommunication Engineers on **"Hyper Connectivity Applications of Next Generation Communications"**

Kochi, October 27-28, 2023

The Honorary Secretary, IEI, Kochi Local Centre, IEI Bhavan, Government Homeo Hospital Road, Pullepady, PO: Kaloore, Kochi 682017 [☎: 0484-2403838 /2403993, E-mail : kochilc@ieindia.org; Website : www.ieikochi.org]

Environmental Engineering Division

All India Seminar on **"Forest Clearance and Environmental Clearance: Issues relating to Ease of Doing Business"**

Jharkhand, August 12-13, 2023

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, PO: Doranda, Ranchi 834002 [☎: 0651-3510412, E-mail: jharkhandsc@ieindia.org; Website: ieijscjharkhand.org]

All India Seminar on **"Cost-Effective and Emerging Effluent Treatment Technologies"**

Durgapur, August 19-20, 2023

The Honorary Secretary, IEI, Durgapur Local Centre, Nehru Avenue, B-Zone, Durgapur 713205, [☎: 0343-2564770, E-mail: durgapurlc@ieindia.org; Website: www.ieidurgapurlc.org]

All India Seminar on **"Sustainable & Green technologies for Industries"**

Bokaro, August 26-27, 2023

The Honorary Secretary, IEI, Bokaro Steel City Local Centre, Abhiyanta Bhawan, Sector V-A, Bokaro Steel City, 827006, Ph: 06542-363262, E-mail: bokarolc@ieindia.org, Web: www.ieibsccl.org

Thirty-seventh National Convention of Environmental Engineers on **"Non Conventional Waste Water Management Issues Challenges and Way Forward"**

Patna, August 25-26, 2023

The Honorary Secretary, IEI, Bihar State Centre, Kranti Marg (Hardinge Road), R-Block, Chauraha(near Petrol Pump), Patna 800001, Mobile: 8986273123 [☎: 0612-2222639 / 2330544, Email: biharsc@ieindia.org]

Marine Engineering Division

All India Seminar on **"AI and ML in Marine Engineering"**

Hyderabad, May 12-13, 2023

The Honorary Secretary, IEI, Telangana State Centre, 6-2-910, "Visvesvaraya Bhavan", Khairatabad, Hyderabad 500004, Telangana [☎: 040-23314969/23373087/23370779, E-mail: telanganasc@ieindia.org, Website: www.ieitsc.org.in]

All India Seminar on **"Sailing towards a Circular Economy: Imperatives and Opportunities in the Maritime Sector"**

Shimla, June 06-07, 2023

The Honorary Secretary, IEI, Himachal Pradesh State Centre, Engineers Bhawan, Nigam Vihar, Shimla 171002, Ph: 0177-2623736, E-mail : hpssc@ieindia.org, Website: hpiei.org

One-day Seminar on **"Future Technologies, Human Resources Development and Entrepreneurship in Marine Industry"**,

Chennai, June 09, 2023

The Honorary Secretary, IEI, Tamilnadu State Centre, No. 19, Swami Sivananda Salai, Chepauk, Chennai 600005 [☎: 044-25360614 /9962950333, E-mail : tnscc@ieindia.org, Website : www.ieitnsc.org]

Thirty-fifth National Convention of Marine Engineers on **"Recent Advances in Marine Engineering and Marine Systems"**

Kanchepuram, August 25-26, 2023

The Honorary Secretary, IEI, Kanchepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kanchepuramlc@ieindia.org]

Mechanical Engineering Division

National Conference on **"Recent Trends in Design and Application in Energy Development Programme"**

Thiruvananthapuram, May 10-11, 2023

The Honorary Secretary, IEI, Kerala State Centre, Visvesvaraya Bhavan, Opposite Kanakakunnu Palace, Thiruvananthapuram 605033 [☎: 0471-2322991 / 2322992, E-mail: keralasc@ieindia.org; Website: www.ieitvm.org]

One Day Seminar on **"Mechanical Engineering - The Life of Industry"**

Udaipur, May 27, 2023

The Honorary Secretary, IEI, Udaipur Local Centre, 128, Hiran Magri, Sector 11, Opposite Central Excise, Udaipur 313002 [☎: 0294-2583702, E-mail: udaipurlc@ieindia.org, Website: www.ieiudaipur.org]

All India Seminar on **"Sustainable Development of Industries through Industry 5.0 Applications"**

Gwalior, June 10-11, 2023

The Honorary Secretary, IEI, Gwalior Local Centre, Green Park, Engineer Road, Behind New Collectorate, City Centre, Gwalior 474011 [☎: 0751-2454168, E-mail: gwaliorlc@ieindia.org]

All India Seminar on **"Advances in Nanotechnology for Sustainable Development"**

Puducherry, July 21-22, 2023

The Honorary Secretary, IEI, Puducherry State Centre, No. 63, Nethaji Subash Chandra Bose Salai, Ground Floor, PWD Campus, Puducherry 605001 [Mobile: 9489766701/9443748471, Email: puducherryisc@ieindia.org, Website: www.ieipsc.org]

All India Seminar on **"Role of Mechanical Engineers for Mitigating Climate Change"**

Guwahati, August 19-20, 2023

The Honorary Secretary, IEI, Assam State Centre, East Lane, Panbazar Overbridge, Panbazar, Guwahati 781001 [☎: 0361-2548742, E-mail: assamsc@ieindia.org, Website: www.ieiasc.org]

Thirty-eighth National Convention of Mechanical Engineers on **"Emerging Trends and Developments in Smart Manufacturing , Renewable Energy and Mechanical Systems Diagnostics/Design"**

Nagpur, September 08-09, 2023

The Honorary Secretary, IEI, Nagpur Local Centre, North Ambazari Road, Nagpur 440010, [☎: 0712-2525617, E-mail : nagpurlc@ieindia.org]

All India Seminar on **"Solar Energy and Thermal Storage for Sustainable Environment"**,

Kattankulathur, September 21-22, 2023

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

Metallurgical & Materials Engineering Division

One-day Seminar on "Metal casting Technology: the Backbone of Futuristic Manufacturing"

West Bengal, August 05, 2023

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

International Conference on **"Digitization and Advancements in Materials and Metallurgical Industries"**

Jaipur, August 19-20, 2023

The Honorary Secretary, IEI, Rajasthan State Centre, Gandhi Nagar, Tonk Road, Jaipur 302015, Ph: 0141-2706327, E-mail: rajasthansc@ieindia.org

Thirty-sixth National Convention of Metallurgical & Materials Engineers on **"Green Composites, the New-generation Sustainable Composite Materials: Specific Features and Applications"**,

Kolkata, January 19-20, 2024

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

Mining Engineering Division

Thirty-third National Convention of Mining Engineers on **"Amended Mines Regulations and its Impact on Mining Industry"**

Bangalore, August 11-12, 2023

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

Production Engineering Division

All India Seminar on **"Recent Trends and Challenges in 3D Printing"**

Kanchepuram, May 25-26, 2023

The Honorary Secretary, IEI, Kanchepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kanchepuramlc@ieindia.org]

Thirty-seventh National Convention of Production Engineers on **"Recent Trends and Future Direction in Production Engineering and Management: Vision 2030"**

Kolkata, August 18-19, 2023

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

All India Workshop on **'CNC Programming & Practice through MASTERCAM/SeeNC Software on 5 Axis CNC Machine'**

Kattankulathur, July 27-28, 2023

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

All India Workshop on **"Hands-on Robot Simulation, Programming and Execution using Real Time Robot"**

Kanchepuram, August 17-18, 2023

The Honorary Secretary, IEI, Kanchepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kanchepuramlc@ieindia.org]

One Day Workshop on "Laser-based Processing: Advancements and Applications in Modern Manufacturing"

Ranchi, 08 October 2023

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, PO: Doranda, Ranchi 834002 [☎: 0651-3510412, E-mail: jharkhandsc@ieindia.org; Website: ieijscjharkhand.org]

Thirty-eighth National Convention of Production Engineers on **"Green and Bio-inspired Manufacturing – The Way Forward"**

Bareilly, June 28-29, 2024

The Honorary Secretary, IEI, Bareilly Local Centre, 44, Camphor Estate Colony, Near Champhor Hospital, Rampur Road, C B Ganj, Bareilly 243502, Uttar Pradesh [Mobile: 9634953691, Email: bareillylc@ieindia.org]

Textile Engineering Division

One Day Seminar on **"Emerging Trends in Technical Textiles"**

Coimbatore, April 08, 2023

The Honorary Secretary, IEI, Coimbatore Local Centre, PSG Tech Campus, Peelamedu, Coimbatore, Tamilnadu 641004, Ph: 0422-2580733, E-mail: coimbatorelc@ieindia.org, Website: www.ieicoimbatore.org

Thirty-sixth National Convention of Textile Engineers on **"Smart Textile"**

Chennai, February 16-17, 2024

The Honorary Secretary, IEI, Tamil Nadu State Centre, No. 19, Swami Sivananda Salai, Chepauk, Chennai 600005 [☎: 044-25360614 /9962950333, E-mail : tnscc@ieindia.org, Website : www.ieitnsc.org]

Interdisciplinary Coordination Committee

All India Seminar on **"Women in Engineering"**

Udaipur, June 17-18, 2023

The Honorary Secretary, IEI, Udaipur Local Centre, 128, Hiran Magri, Sector 11, Opposite Central Excise, Udaipur 313002 [☎: 0294-2583702, E-mail: udaipurclc@ieindia.org, Website: www.ieiudaipur.org]

All India Seminar on **"Artificial Intelligence and IoT in Agriculture and Food Industry 4.0"**

Rourkela, July 08-09, 2023

The Honorary Secretary, IEI, Rourkela Local Centre, National Institute of Technology Campus, Rourkela 769008, Odisha [☎: 0661-2472709, E-mail: rourkelalc@ieindia.org]

One Day Seminar on **"Innovation Conclave"**

Durgapur, August 6, 2023

The Honorary Secretary, IEI, Durgapur Local Centre, Nehru Avenue, B-Zone, Durgapur 713205, [☎: 0343-2564770, E-mail: durgapurclc@ieindia.org; Website: www.ieidurgapurclc.org]

World Environment Day

5 June 2023

Theme: Solutions to Plastic Pollution

The theme for World Environment Day on 5 June 2023 will focus on Solutions to Plastic Pollution under the campaign #BeatPlasticPollution.

The world is being inundated by plastic. More than 400 million tonnes of plastic is produced every year, half of which is designed to be used only once. Of that, less than 10 per cent is recycled. An estimated 19-23 million tonnes end up in lakes, rivers and seas. Today, plastic clogs our landfills, leaches into the ocean and is combusted into toxic smoke, making it one of the gravest threats to the planet.

Not only that, what is less known is that microplastics find their way into the food we eat, the water we drink and even the air we breathe. Many plastic products contain hazardous additives, which may pose a threat to our health.

The good news is that we have science and solutions to tackle the problem –and a lot is already happening. What is needed most now is a surge of public pressure to scale up and speed actions from governments, companies and other stakeholders to solve this crisis. This underscores the importance of this World Environment Day mobilizing action from every corner of the world.

World Environment Day 2023 will showcase how countries, businesses and individuals are learning to use the material more sustainably, offering hope that one day, plastic pollution will be history.



The Institution of Engineers (India)

IEI YOUNG ENGINEERS AWARD 2023-2024

Notification

The Institution of Engineers (India) is a multi-disciplinary professional body of engineers with 15 engineering disciplines and over 9,00,000 members in India and abroad. The Institution was established in 1920 and was incorporated by Royal Charter in 1935. It has been in the forefront of engineering profession addressing the socio engineering problems for progress of the country. IEI functions among professional engineers, academicians, research workers to update their professional knowledge through continuous professional development. With its large international linkages and a network of 125 Centres in India and Six Overseas Chapters, the Institution has built up wide reach and large infrastructure to meet its objectives of promoting engineering in all aspects.

With a view to promote the pursuit of excellence in the field of engineering, IEI has instituted 'IEI Young Engineers Award'. The Award consists of a Plaque and a Certificate. The purpose of the Award is to recognize outstanding achievements/contributions made by young engineers in engineering research, excellence in engineering technology development, technology transfer, etc. Any engineer citizen of India not older than 35 years of age as on March 31, 2023 is eligible for the Award. The IEI Young Engineers Award is presented to awardees for all the 15 Engineering Divisions of the IEI during the respective National Conventions. The awardees attending the National Convention will be provided with free accommodation & their traveling expenses (AC-3 Tier train fare by shortest route) will be reimbursed on production of original documents.

The last date of receipt of applications for IEI Young Engineers Award 2023-24 has been extended till 30 May 2023.

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

Director (Technical)

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

The envelope containing the application should be superscribed at the top as 'IEI Young Engineers Award 2023-2024' and name of the engineering division under which the applicant desires to be considered for the Award.

Know-Your- Member (KYM)

The Institution of Engineers (India) is updating the database of all its Corporate Members along with their achievements for which a Know-Your-Member (KYM) form has been introduced.

Every Corporate Member is requested to kindly fill up the form and forward it along with the self-attested copy of photo ID proof to the address given below:-

The Director (Membership)

The Institution of Engineers (India)
8 Gokhale Road, Kolkata 700020
Email: datamemb@ieindia.org

The form is available in IEI Website:

https://www.ieindia.org/WebUI/ajax/Downloads/WebUI_PDF/HIGHLIGHTS_DOCUMENT-3332.pdf

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