

# IEI NEWS

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A CENTURY OF SERVICE TO THE NATION

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## Thirty-fifth National Convention of Textile Engineers and National Seminar

### Resource Efficient Technologies in Textile Manufacturing

West Bengal State Centre, IEI organized the 35<sup>th</sup> National Convention of Textile Engineers during 11-12 March 2023 at Kolkata under the aegis of Textile Engineering Division Board [TXDB], IEI jointly with Department of Jute & Fibre Technology, University of Calcutta and in collaboration with Lohia Crop Limited, Kanpur & The Textile Association (India), West Bengal Unit at Kolkata. A National Seminar was also organized on the occasion on the theme **Resource Efficient Technologies in Textile Manufacturing**. Prof Asis Kumar Chattopadhyay, Hon'ble Vice-Chancellor, University of Calcutta graced the function as the Chief Guest and Shri Moloy Chandan Chakraborty, IDAS, Hon'ble Jute Commissioner, Government of India & Secretary, National Jute Board was present as the Guest of Honour.



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## 3<sup>rd</sup> Energy Transitions Working Group (ETWG) Meeting under India's G20 Presidency

The 3<sup>rd</sup> Energy Transitions Working Group (ETWG) Meeting was held in Mumbai from May 15<sup>th</sup> to 17<sup>th</sup>, 2023, as part of India's G20 Presidency. It brought together over 100 delegates from



G20 member countries, special invitees, and international organizations like the IEA and UNEP. Chaired by Shri Alok Kumar, Secretary of the Ministry of Power, Government of India, esteemed individuals from relevant ministries, including Shri Bhupinder Singh Bhalla, Shri Vivek Bharadwaj, and Shri Amrit Lal Meena, actively participated. Shri Raosaheb Danve, Minister of State for Railways, Coal, and Mines, delivered a special address.

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## From the President's Desk.....



I am delighted to connect with you through our IEI News as we gear up to celebrate the upcoming World Environment Day on June 5, 2023. This year, the global focus will be on the critical issue of plastic pollution under the campaign #BeatPlasticPollution.

Plastic pollution has become an alarming threat to our environment. With staggering production exceeding 400 million tonnes each year, and less than 10% being recycled, the consequences are dire. An estimated 19-23 million tonnes of plastic find their way into our lakes, rivers, and oceans, causing severe harm to our planet and its ecosystems.

It is disconcerting to know that microplastics have infiltrated our food, water, and air, posing potential risks to our health. Plastic products often contain hazardous additives, exacerbating the already grave concerns surrounding their usage. However, there is hope. Across the globe, remarkable efforts are underway to combat plastic pollution. World Environment Day serves as a catalyst to accelerate and scale up these actions, urging governments, companies, and stakeholders to address this crisis collectively.

I am hopeful that all stakeholders will actively participate in World Environment Day 2023 and demonstrate commitment and leadership in combating plastic pollution. Efforts such as promoting sustainable packaging and innovative waste management systems are being spearheaded by both the public and private sectors. As engineers, we have a unique role to play in finding innovative solutions. Through our expertise, we can contribute to the development and implementation of sustainable alternatives to single-use plastic. Let us utilize our knowledge and skills to make a significant impact on reducing plastic pollution.

World Environment Day 2023 presents an opportunity for us to showcase our dedication to preserving our environment. By raising awareness, promoting sustainable practices, and collaborating with stakeholders, we can create a lasting positive change.

Together, we can take decisive steps toward a cleaner, greener future. Let us pledge to Beat Plastic Pollution and inspire others to join us on this crucial journey.

# Resource Efficient Technologies in Textile Manufacturing

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Er C Debnath, President, The Institution of Engineers (India) was present in the inaugural session and addressed the audience. At the beginning, Dr Nirmal Das, Chairman of the West Bengal State Centre, IEI extended a warm welcome to the dignitaries on and off the dais and thanked them for attending the 35<sup>th</sup> National Convention of Textile Engineers. Following the welcome address, Lighting of the lamp took place in august presence of all the dignitaries on the dais with Saraswati Vandana. The Chief Guest of the event, Prof Asis Kumar Chattopadhyay, in his address, highlighted the need for sustainable and cleaner textile manufacturing process expressing the opinion that the present and future textile manufacturing processes should be energy and resource efficient. Shri Moloy Chandan Chakraborty, in his address, expressed his concern about enormous pollution caused by plastic. To overcome this, he appealed to use natural fibre products



more to save our environment. He also discussed on the need of suitable blend of natural and synthetic fibres. Er C Debnath, President, IEI in his deliberation, mentioned the achievements and activities of IEI. He also highlighted about achieving sustainability by eco-friendly and resource efficient processes. Prof (Dr) Sadhan Chandra Ray, Former Professor and Head, Department of Jute and Fibre Technology, University of Calcutta and Chairman, Textile Engineering Division Board, IEI highlighted the special features of National Convention and invited the young generation to be the member of this esteemed Institution and to be involved with the technical/scientific activities for the greater interest of the society. He also mentioned that it is the right time to relook the textile manufacturing process from the point of resource efficiency as well as protection of the environment. The Organizing Secretary of the event, Dr Surajit Sengupta elaborated on the theme, subtheme of the Seminar, and the objective of organizing the National Convention. Dr D B Shakyawar, Chairman, Textile Engineering Divisional Sub-Committee of West Bengal State Centre & Chairman of the Technical Committee of the National Convention, stressed the achievement of sustainable goals through efficient management of raw material input and recycle of materials. On the occasion, 'Souvenir cum Book of Abstract' and "Book of Papers" were released by the dignitaries on the dais. During the inaugural session, Mr S K Roy, Managing Director, AMER-SIL KETEX Private Limited, Kharagpur; Dr Anjan K Mukhopadhyay, Ex-Director, The Bombay Textile Research Association, Mumbai and Prof Abhijit Majumdar, Chair Professor, Department of Textile and Fibre Engineering, IIT Delhi were felicitated as eminent Textile Engineering personalities in recognition of their eminence and contribution to the profession of Textile Engineering. Dr Raju Basak, Honorary Secretary, West Bengal State Centre, IEI proposed the vote of thanks.

The inaugural session was followed by the First Technical Session, chaired by Prof S C Ray, Former Head, DJFT, CU, which consisted of the S N Bhaduri Memorial Lecture, State of Art Lecture and Invited lectures. Prof (Dr) Rabi Sankar Chattopadhyay, Emeritus Professor, Department of Textile and Fibre Engineering, IIT Delhi delivered the S N Bhaduri Memorial Lecture on the topic 'Hydraulic Properties of Fibrous Structure'. He discussed the hydraulic properties of jute and coir fibres, yarns and fabrics for their application in geo-textile. Prof Chattopadhyay explained the function of geo-textile to drain out liquid through their void spaces and mentioned that filtration, separation, drainage, reinforcement, liquid barrier and protection are the key

functional properties of geo-textile. He discussed the hydraulic properties of geo-textiles and the hydraulic conductivity of coir and jute yarns and fibre bundles. He opined that the water discharge capacity per tex of jute yarn is more than that of coir yarn and the hydraulic conductivity (discharge rate/unit pressure) is influenced more by porosity of the fibrous structure and remains practically the same with an increase in the hydraulic gradient.

Mr Siddhartha Chakrabarti, Chief Technology Officer, Thai Acrylic Fibre Co Limited, Aditya Birla Group, Thailand & Managing Director, PyroTex Industries GmbH, Aditya Birla Group, Germany delivered State of the Art Lecture on the topic 'State of the Art Technology for Future'. He stressed upon the importance of recycling of textile material and emphasized that sustainability, circularity and the Global Recycle Standard (GRS) are major emerging trends for the 'state of the art fibre'. He further opined that

waste fiber and virgin polymer-blended (1:1) fiber will be the new sustainable acrylic fiber for future use. Dr Anjan K Mukhopadhyay delivered a lecture on the topic 'Technological Challenges in Product and Process Development of Various Fibres' and focussed on the challenges during the development of value-added fibres. He emphasized the technological challenges regarding price competitiveness and optimization in product and process development. He further discussed the development of various PEEK fibres

and method of changing the crystal phase of PVDF. Prof Abhijit Majumdar delivered lecture on the topic 'Textile Engineering Education in India: How to fix the Problem'. Prof Majumdar in his address emphasized the need of unified course curriculum for the UG course on Textile Technology, as many of the syllabus content are not very pertinent in the today's context. He opined that the curriculum should be relevant and interesting coupled with the creation of teachers who can intellectually entertain the students.

During the second Technical Session, chaired by Prof (Dr) Rabi Sankar Chattopadhyay, an Invited Lecture was delivered by Dr Upender K Saroop, Vice President, Lohia Corp Limited, Kanpur on the topic 'Development of Polymer modified Smart Jute Bags for Packaging of Edible Commodities'. He elaborated on the recent development of food grade smart jute bags, made from circular weaving consisting of PP in warp and jute in weft direction (25:75). The products are lighter in weight, lower in cost, and have a great potential along with several other advantages, he added. Prof A K Samanta, Former Head, Department of Jute and Fibre Technology, University of Calcutta, delivered an invited lecture on the topic 'Ecofriendly Processing of Jute: A Journey towards Sustainability' and emphasized the carbon balancing of jute starting from jute cultivation, transposition, processing, products development and disposal. He also stressed the reevaluation of textile processing to avoid any non-environmentally friendly chemical, and explored the scope of enzyme processing. Mr Sudipto Mandal, Manager, Oerlikon Textile India Private Limited, Mumbai, delivered an Invited Lecture on the topic 'Machineries & Technologies for MMF Industry'. He mainly emphasized the development of processing line to prepare the textile grade fibre from the recycled Polyethylene Terephthalate (PET) bottle. Mr B N Bandyopadhyay, President, Kusumgar Corporates, Mumbai, delivered an Invited Lecture on the topic 'Sustainability and Beyond' and addressed the causes of environmental pollution caused by synthetic material. In his deliberation, he also expressed his concern about the carbon footprint, carbon mile and carbon neutrality from the synthetic materials. Prof Debasis Das, Former Head, Department of Jute and Fibre Technology, University of Calcutta, delivered an Invited Lecture on the topic 'Sustainable Coating of Jute Fabric for Achieving Moisture Vapour Permeable Waterproof Textile' and presented the innovation in the development of Polyvinyl Alcohol (PVA)-based breathable sustainable coating of textile to meet the future demand,

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## Recent Trends in Energy Conversion Technologies and Its Applications

Tripura State Centre of the Institution organized a One Day Seminar on the theme **Recent Trends in Energy Conversion Technologies and Its Applications** in association with the Tripura Renewable Energy Development Agency, Department of Electrical Engineering, National Institute of



Technology Agartala and Department of Electrical Engineering, Tripura Institute of Technology on 01 April 2023 under the aegis of Electrical Engineering Division Board [ELDB], IEI. Er D Radhakrishnan, Chairman, Tripura Electricity Regulatory Commission (TERC), graced the function as the Chief Guest. He discussed the rural as well as industrial energy consumption pattern in Tripura and also spoke on the "one grid" concept, highlighting the utility of energy storage systems such as pumped storage systems. He further mentioned about growth and prospects of Electric Vehicle segment in India. Er Mahananda Debbarma, Director General, Tripura Renewable Energy Development Agency (TREDA), Agartala, graced the occasion as the Guest of Honour and elaborated on demand-side as well as supply-side energy management strategies. He mentioned the issues and challenges for the implementation of renewable energy projects in Tripura and compared conventional and non-conventional energy conversion technologies from a techno-economic point of view. He further mentioned indigenous

technologies in remote areas of Tripura for harnessing energy from the nature. Dr P N Das, Professor & Head, Department of Electrical Engineering, NIT Agartala graced the occasion as Special Guest and explained direct energy conversion technologies such as solar cells, fuel cells, etc and explained efficient energy conversion processes and various operational strategies of modern power plants. Dr Bikram Das, Convener, Technical Committee of the Seminar addressed on the theme of Technical Session.

The Technical Session was chaired by Er Bibekananda Ray, Chairman, Technical Committee of the Seminar. Er Debabrata Sukladas, Joint Director, Tripura Renewable Energy Development Agency presented a paper on 'Renewable Energy Prospective and Promoting Green Energy in Tripura'. Dr Tirtharaj Sen, Principal, Women's Polytechnic, Hapnia, presented on the 'Design Aspect of Rotating Electrical Machines on the Basis of Magnetic Circuit Calculation'; Dr Bikram Das, Assistant Professor, Department of Electrical Engineering, NIT Agartala on 'Multilevel Inverters and their Applications as Energy Conversion'; Dr Prabir Ranjan Kasari, Assistant Professor, Electrical Engineering Department, NIT Agartala on 'Power Quality and Role of Interface Converter'; Er Sanjoy Sarkar, Electrical Engineering Department, Tripura Institute of Technology on 'Chaos Detection in Swing Dynamics for Stability Analysis of Power System'; Er Pratiksha Ghosh, Electrical Engineering Department, Tripura Institute of Technology presented on 'Analysis of Renewable Energy Resources for Designing of Green Building' and Er Tribhuan Kumar Singh & Er Akshay Singh, Electrical Engineering Department, Tripura Institute of Technology, presented their paper on the topic 'Load Flow Analysis of 135 MW Power System'. Earlier, Dr Subhadeep Bhattacharjee, Chairman, Tripura State Centre, IEI, delivered the welcome address. At the end of the session, Dr Mrinal Kanti Deb Barma, Honorary Secretary, Tripura State Centre, IEI, proposed the vote of thanks.

## IC Engine - Components Functionality and Manufacturability by Tear Down Analysis

Kattankulathur Local Centre, IEI organised One Day Workshop on the theme **IC Engine - Components Functionality and Manufacturability by Tear Down Analysis** on 10 March 2023 at Kattankulathur under the aegis of Production Engineering Division Board [PRDB], IEI. Prof (Dr) S Dhanalakshmi, Chairman, Kattankulathur Local Centre delivered the opening remarks. The resource person for the first technical session, Mr



Sangeeth Kumar Athiannan, Director, Digital-Twin Benchmarking Caresoft Global Private Limited, Chennai, delivered a lecture on the topic of 'Tear Down Analysis of IC Engine'. In his lecture, Mr Athiannan said that Internal Combustion (IC) engines are widely used in automobiles and play a crucial role in powering vehicles. To understand the components of IC engines and their functionality, Tear-down analysis can be performed to provide valuable insights into the manufacturing process, the different sub-systems of the vehicle, and the engine components. He explained the use of Vehicle CT Scan to identify design flaws and make necessary improvements. He discussed

the application of Reverse Engineering and CAD Models for product and system design, as well as the use of benchmarking data to compare the performance of vehicles.

In the second technical session, Mr Sambasivam Boobalan & Mr Karuppaiah Pradeep, Senior Engineers from RNTBCI, MWC, Chennai, delivered lecture on the topic 'Recent Advancements in Manufacturing of Automotive Systems'. While discussing the Steering System Manufacturing, the speakers explained how the steering system, one of the major sub-systems of the vehicle, controls its direction. The manufacturing process of the steering system involves the use of high-quality materials and precision engineering to ensure its smooth operation, he added. He further explained the working principle of power steering, the manufacturing process, assembly and functioning of the piston, cylinder, crankshaft, and connecting rod.

In the third technical session, Mr S Kiran, Assistant Professor, Department of Automobile Engineering, SRMIST, elaborated on the 'Basics of IC Engine and its Subsystems' and explained the major vehicle sub-systems, including engine, transmission, suspension, and braking system. He also explained various components of the Exhaust System, including the exhaust manifold, catalytic converter, and muffler. A group activity was also organised on Tear Down Analysis of MPFI & CRDI engine. The outcome of the workshop is summarized as follows.

Tear-down Analysis of IC engine is able to provide valuable insights into the manufacturing process, different sub-systems of the vehicle, and the engine components. During the Workshop, students were able to witness

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highlighted by the SEM surface analysis.

The third Technical Session was chaired by Dr S N Chattopadhyay, Principal Scientist & Former Head, ICAR-NINFET. Dr Santanu Basak, ICAR-National Institute of Natural Fibre Engineering and Technology, Kolkata, delivered lecture on the topic 'A Sustainable Method for Development of Natural Fibre based Flexural Composite'; Dr Manik Bhowmick, ICAR-National Institute of Natural Fibre Engineering and Technology, Kolkata, spoke on 'Kans –Value Addition in Textile Field'; Dr Deb Prasad Ray, ICAR-National



Institute of Natural Fibre Engineering and Technology, Kolkata, spoke on 'Capsule-Based Retting Technology for Efficient Extraction of Jute Fibre'; Er Umasankar Mahapatra, Pulcra Chemicals India Private Limited, MH, spoke on Sustainable Textile Manufacturing: Using Safer Processing Chemicals' and Er Sekhar Das, ICAR-National Institute of Natural Fibre Engineering and Technology, Kolkata, spoke on 'Jute Fibre Property Variation along Length'.

During the fourth Technical Session, chaired by Dr Gautam Bose, Former Head, ICAR-NINFET, Er Bivekananda Basu, Former General Manager, RIL Group, Mumbai, delivered his presentation on 'Sustainability in the Textile Colleges, Frustration in the Education Sectors'; Dr R K Ghosh, ICAR-National Institute of Natural Fibre Engineering and Technology, Kolkata, deliberated on the topic 'Jute Stick Carbon, A Wonder Product for Circular Economy of Jute'; Er Manisha Jagadale, ICAR-National Institute of Natural Fibre Engineering and Technology, Kolkata, spoke on 'Potential of Banana Crop Waste to Transit Textile and Energy Sector towards Circular Economy: A Meta Analysis'; Dr Samita Gupta, Department of Textile Science, Clothing and Fashion Studies, J D Birla Institute, Kolkata, spoke on 'Development of Zero Waste Patterns and Garments: A Step towards Circular Economy'.

The fifth Technical Session was chaired by Dr Surajit Sengupta, Principal Scientist & Former Head, ICAR-NINFET. During the session, Er Debasis Chattopadhyay, Central tasar Research & Training Institute, Central Silk Board, Ranchi spoke on 'Studies on Utilization of Solar Energy in Tasar Post Cocoon Technology Operations'; Er G N Sreeveera discussed on 'Piezo Energy Harvesting using Low Frequency Piezo Electric Materials in Floor Carpet'; Dr Sanjoy Debnath, ICAR-National Institute of Natural Fibre Engineering and Technology, Kolkata, deliberated on the topic 'Nonwoven from Indian Flax Fibre Waste for Technical Application'; Er Suravi Borgohain, Orient Spun Silk and Processing Mills, Guwahati, Assam on 'Hand-woven Eri Silk Natural dyed with Turmeric as Bandage'; Dr Sanchita Biswas Murmu, ICAR-National Institute of Natural Fibre Engineering and Technology, Kolkata, discussed on 'Packing for Freshly Harvested Perishable Food from Jute Stick' and Dr Deepali Singhee, J D Birla Institute, Kolkata, on 'Use of Almond Shell Waste for Natural Dyeing of Silk'.

In the sixth Technical Session, chaired by Dr A K Samanta, Ms Antu Chandra, Department of Silpa-sadhana, Visva Bharathi University, Sriniketan, WB, delivered lecture on 'Children's Apparel Inspired by Cartoon Character'; L Ammyappan, ICAR-National Institute of Natural Fibre Engineering and Technology, Kolkata, on 'Functional Properties of Flax Shive : Jute Stick based Particle Board'; Ishita Sen, Department of Silpa-sadhana, Visva Bharathi University, Sriniketan, WB, spoke on 'Colours of the Earth'; Dr Shaon Ray Chaudhuri, Department of Microbiology, Tripura University,

Tripura West, spoke on 'An Attempt to make Ramie Degumming Effective and Economical'; Er Pratibha M, Department of Textiles and Apparel design, Periyar University, Salem, TN, spoke on 'Self-cleaning of Cotton Fabric coated with Carbon Nitride/Polyaniline Composite by Photocatalytic for Textile Application'; Ms Sayoni Nath, Government College of Engineering and Textile Technology Serampore, WB, spoke on 'Design and Production of Fashionable Home Furnishings by Reusing Old Saree: A Holistic Approach Towards Circular Fashion for Sustainability' and Ms Tithi Mitra, Department of Silpa-sadhana, Visva Bharathi University, Sriniketan, WB, spoke on 'Application of Reactive Dye for Handloom Sectors'.

The seventh Technical Session was chaired by Dr D B Shakyawar, Director, ICAR-NINFET. Ms Silpinwita Das, Department of Silpa-sadhana, Visva Bharathi University, Sriniketan, WB, delivered presentation on 'Natural Indigo – a Short Review'; Ms Adita Banerjee, Government College of Engineering and Textile Technology Serampore, WB, spoke on 'Modification of Delany and Bazley's Model for Jute Nonwoven Fabric'; Dr Nageshkumar T, ICAR-National Institute of Natural Fibre Engineering and Technology, Kolkata, discussed on 'Development and Evaluation of Bundle Strength Tester for Jute Fibre'; Er Devarun Nath, Government College of Engineering and Textile Technology Serampore, WB, spoke on 'Development of Jute Yarn Wound Unsaturated Polyester Resin Composite' and Dr Shweta Tuteja Rakshit, Department of Textile Science, Clothing and Fashion Studies, J D Birla Institute, Kolkata, spoke on 'Clothing Fasteners: Ease of Manipulation and Preference among Arthritic Women'.

The last Technical Session was chaired by Prof Debasis Das. Dr Sankar Roy Maulik, Department of Silpa-sadhana, Visva Bharathi University, Sriniketan, WB, discussed on 'Discharge Printing on Naturally Dyed Textiles'. Dr R Anil Kumar, Department of Textiles and Apparel Design, Periyar University, Salem, TN, spoke on 'Impact of Dyeing of Cotton, Linen and Viscose Fabric with River Water, Reverse Osmosis Water and Waste' and Dr Deepali Singhee presented her deliberation on 'Dyeing of Cotton with Natural Dyes Extracted from Regular Kitchen Waste'.

During the valedictory Function, Prof Rabi Chattopadhyay graced the occasion as Chief Guest. Prof (Dr) Sadhan Chandra Ray, Dr D B Shakyawar, Dr U K Saroop, Vice President, Lohia Corp Limited, Kanpur, the industry partner; Mr A K Mukherjee, President, TAI, WB Unit and Dr Surajit Sengupta, were present on the dais. The Chief Guest of the function mentioned that for sustainable textile production, input resources like, raw material, energy, man-power and infrastructure should be utilized judiciously. He also opined that neither natural nor synthetic fibres alone could fulfil the demand, thus both fibres should be amalgamated properly to achieve the best product and there is a need of awareness and guidelines for the reuse and recycling of used-textiles for developing useful products. Dr Saroop mentioned that the natural and synthetic polymeric fibres have their own positive and negative attributes and synthetics have better product properties and low cost. Mr Mukherjee applauded the efforts of the organizers for fruitful discussions during the National Convention and expressed satisfaction on behalf of TAI for joining with IEI. Chairman, TXDB, IEI, stressed the importance of skill development activities in the textile under-graduation curriculum and advocated for the production of cost-efficient, eco-friendly, and sustainable textile products. Dr Shakyawar urged for more R & D to upgrade the machinery for natural fibre extraction, processing and testing, by utilizing multi-disciplinary approaches to increase market acceptability and efficiency.

Based on the deliberations of the learned dignitaries and speakers, the following recommendations have been summed up.

*Emphasis should be given to the judicious use of resources like raw materials, water, energy etc. in textile processing and manufacturing*

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## Alternative Energy Systems

Karnataka State Centre, IEL organized an All India Seminar on the theme **Alternative Energy Systems** during 16-17 November 2022 under the aegis of Mechanical Engineering Division Board [MCDB], IEL at Bangalore. Sri Ravi Kumar IAS, Former Chief Secretary, Government of Karnataka and Chairman, Karnataka Electricity Regulatory Commission, graced the function as the Chief Guest. In his address to the audience, Sri Kumar highlighted the current scenario of energy systems and explained the significance of alternative energy systems in India. Dr B Shadaksharappa,



Principal, Sri Sairam College of Engineering, graced the inaugural session and addressed the importance of alternative energy systems. Earlier, Er B Lakshmana, Chairman, The Institution of Engineers (India), Karnataka State Centre, welcomed the dignitaries. Dr Enti Ranga Reddy, Honorary Secretary, The Institution of Engineers (India), Karnataka State Centre, proposed the vote of thanks.

The Inauguration session was followed by the first technical session on "Evaluating the Climate Change Mitigation Potential of Sustainable Urban Transport Measures in India". The speaker of the session was Prof (Dr)

Ashish Verma, Department of Civil Engineering, IISc Bengaluru. In his presentation, Prof Verma explained anthropogenic activities, global carbon dioxide emissions, black carbon emission and urban activities. The speaker focused on climate change, in particular about mitigation. The session mainly focused on reducing vehicle travel and thus reducing dependence on fossil fuels, which leads to more livable Indian cities. His core principles focus on ensuring equal energy access for all, promoting seamless and contactless safe travel, discouraging highly polluting and sky space occupying vehicles, and promoting cleaner vehicle technology. Mr Rathnakara Shastri, Avi Solar Tech, Bengaluru, delivered a presentation on the topic 'Heat Pump'. His entire session focused on reducing the use of conventional fuels in the environment and reducing the carbon footprint to safeguard. He also explained vapour compression refrigerators and the working principle of heat pumps. He explained the benefits of heat pumps which are eco-friendly with low running cost, high efficiency and low maintenance cost. The speaker further presented a comparative study between heat pumps geyser and solar tanks. Mr K R Dinesh, Electrical Audit Consultant, Vidyut Electrical Surveyors, Bengaluru presented a lecture on the topic 'A Key to Energy Conservation in Commercial and Residential Establishments'. His session mainly focused on evaluating the electrical health of buildings, including design efficiency, adherence to quality standards and factors related to aging. The speaker explained that the pre-construction stage includes design and execution, while the post-construction stage includes administrative measures and electrical reviews, which encompass electricity bills, cost estimation for remedial measures, health checkups and post-audit inspection. The technical phase includes electrical installation, design reviews, building drawings, thermography, physical inspections of terminations, lightning protection, assessment of harmonic distortion, performance testing of safety devices and cost estimation for remedial measures, as mentioned by the speaker. In the

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## IC Engine - Components Functionality and Manufacturability by Tear Down Analysis

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the assembly process of the steering system and learn about the different components involved. They were also able to observe the different sub-systems of the vehicle and gain an understanding of their functionality. Moreover, this analysis helped students understand the importance of precision engineering, the use of high-quality materials, and the critical role each component plays in the operation of a vehicle. These experiences will

undoubtedly help students gain valuable knowledge and skills, preparing them for future careers in the automotive industry. Finally, the findings from the Workshop highlight the importance of continuous improvement in the automotive industry and the need for manufacturers to utilize techniques such as CT Scans, Reverse Engineering, and benchmarking data to stay competitive. With advancements in technology and an increasing demand for environmentally friendly vehicles, the future of the automotive industry is promising, and opportunities for innovation are endless.

## Resource Efficient Technologies in Textile Manufacturing

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systems; Awareness and the development of eco-friendly and biodegradable textile products are the need of the day to achieve the sustainable goals; There is a need of zero-discharge process/manufacturing system with consideration of carbon footprint, carbon mile, carbon neutrality and net-zero; Emphasis should be given to updating the undergraduate (UG) course curriculum on Textile Technology with the goal of sustainability; The pollution generated due to the uncontrolled use of synthetic and non-environment friendly raw materials/chemicals/processes needs to be minimised with proper protocols and regulations; To address environmental pollution, the reduction of the consumption of unwanted products, the implementation of a scientific disposal system, and the reuse and recycling of these products are required, wherever applicable; Eco-friendly chemical and auxiliaries should be used for green manufacturing and supply chain management; Jute- synthetic union bags has a huge potential in packaging of various edible and non-edible commodities, due to the shortage of jute bags for this purpose, instead of using 100% poly-bags; There is no conflict between

natural and synthetic materials; both have their own area of application, recycling and disposal protocols. A combined and judicious effort of both types will bring success in both sectors along with sustainability; Natural fibre-based bio and green composites have the potential for technical applications and hence emphasis should be given accordingly; Extensive research is required to achieve sustainability in fashion garments; The biomass or waste of different fibrous product may also be explored for various industrial applications to promote circular economy; New innovations in various fabric manufacturing stages such as natural dyes, bio-mordants, enzyme processing, green chemicals for finishing, plasma technology, nano-technology, etc. need to be explored and adopted to keep up with the industrial 4.0 revolution; Emphasis should be given in R&D and entrepreneurship for developing energy efficient machine incorporating application of sensors and artificial intelligence; Policy decision-makers, promotional agencies and pollution control boards should be invited to share their opinion in seminars, conferences and interfaces.

## Wastewater Treatment Systems: Water Efficient Technologies and Opportunities

**Coimbatore Local Centre**, IEI organized All India Seminar on the theme **Wastewater Treatment Systems: Water Efficient Technologies and Opportunities** in association with the Department of Chemical Engineering, KPR Institute of Engineering and Technology (KPRIET), Coimbatore, during December 22-23, 2022 under the aegis of Chemical Engineering Division Board at Coimbatore. The programme started with welcome address



delivered by Prof (Dr) S Shanmugam, Chairman, Coimbatore Local Centre, IEI. Dr S Balasubramanian, Professor and Head, Department of Chemical Engineering, KPRIET presented an overview of the All India Seminar. Mr Thaj Mohammed Khaleel, Proprietor, Khaleel Tanning Company, Erode, graced the occasion as the Chief Guest and elaborated the significance of wastewater treatment and management. Mr Khaleel also delivered a lecture on the topic 'Handling of Wastewater and Sludge'. The speaker shared his expertise in the development of a wastewater treatment and implementation plant and discussed the associated challenges. The soft copy of the Seminar Proceedings was released in the form of a CD by the dignitaries on the dais.

Dr Soundarapandiyan Kamaraj, Former Professor, TNAU & Director, Non-Conventional Energy and Rural Development Society, Coimbatore, shared his expertise and delivered Keynote lecture on the topic 'Biogas and Waste Management' and discussed the installation of biogas plant in households and public communities. He further discussed on how to minimize waste and convert it into a useful energy source. Mr K Murugesan, Assistant Professor

(Sr Gr), Department of Chemical Engineering, KPRIET, shared his views on the topic 'Pharmaceutical Wastewater Treatment Using Photocatalysis'. He briefed the audience about recent technologies in wastewater treatment in pharmaceutical industry and also discussed about photocatalysis and its role in wastewater treatment. He also explained the method of handling xenobiotic components and their disposal into the environment. Lt Dr A K Priya, Professor, Department of Chemical Engineering, KPRIET, Coimbatore, delivered lecture on the topic 'Zero Waste Management'. The speaker elaborated on zero waste and the implementation of zero waste management in homes and industries. She further discussed waste-to-wealth techniques and their conversion into business. Dr R Umapiya, Assistant Professor (SI Gr), Department of Chemical Engineering, KPRIET, delivered a lecture on the topic 'Membrane Technology'. The speaker elaborated on the application of different membranes and the challenges faced when using membrane technology in industries. Dr Illangovan Rajan, Former Special Chief Engineer, PWD, Former Vice Chairman, Tamilnadu Water Resources Development Cell, PWD, WRD, Chennai, delivered a lecture on the topic 'Advances in Water Treatment'. The speaker elaborated on the developments and advancements of water treatment, government initiatives and policies, and cost-effective technologies for waste management. He also discussed various water resource facilities available in India.

During the technical sessions, papers were presented on the diverse topics that embraced the sub theme of the Seminar, namely, A Review on the Development of Compounds Generated from Biomass as Photocatalysts for Visible-light-Driven Photo degradation of Pollutants in Wastewater; Producing Biosurfactant Formation and Characterization of Streptomyces sp and Pseudomonas sp for Degradation of Azo Dye; Analysis of Anti-Microbial Activity of Gymnema Sylvestre R. Br Plant Extract; Study of Strength and Durability Characteristics of Ficus Exasperata Leaf Ash Concrete: Repair Working of Sewage System;  $\text{TiO}_2$ -Biomass Loaded Mixture's Photocatalytic Efficiency for Wastewater Treatment; Agricultural Wastewater Treatment Utilizing a Column-Based Adsorption Technique;  $\text{TiO}_2$  Nanocomposite Based on Graphene for Photocatalytic Degradation of Dyes in Water under Solar-Like Radiation; Synthesis, Characterization, and Photocatalytic Activities of  $\text{ZnCo}_2\text{O}_4$ ; Filtration Technologies in Wastewater Treatment, etc.

## 3<sup>rd</sup> Energy Transitions Working Group (ETWG) Meeting under India's G20 Presidency

*Contd. from page 1*

The Institution of Engineers (India) (IEI) delegation, comprising Er Mahendra Ratanlal Kothari, Vice President of IEI, and Er Kishanrao M Godbole, Chairman of the Navi Mumbai Local Centre, IEI, actively participated in the 3<sup>rd</sup> ETWG Meeting, demonstrating IEI's commitment to sustainable energy development at national and international levels.

India's G20 Presidency identified six priority areas to guide discussions and initiatives related to energy transition. These areas covered technology gaps, low-cost financing, energy security, energy efficiency, industrial low carbon transitions, responsible consumption, fuels for the future, and universal access to clean energy. The 3<sup>rd</sup> ETWG Meeting focused on these areas to identify best practices, policies, and innovative approaches for a just and inclusive energy transition.

In addition to the main meeting, eight side events provided additional insights into various aspects of energy transition. These events covered topics such as low-cost international finance, just transition roadmap, biofuels, offshore wind, decarbonization of hard-to-abate sectors, small modular reactors

(SMRs), G20 ETWG and B20 India Energy Perspective synergy, and energy efficiency promotion. They enriched the discussions with focused insights.

During the side event titled "Accelerating Energy Efficiency Progress and Promoting LiFE," held on May 17th, 2023, the Strategic Plan for Advancing Energy Efficiency Across Demand Sectors by 2030 was launched. Prepared by the BEE, SEforAll, and IEA, the plan presented recommendations to support Sustainable Development Goal 7 and the decarbonization efforts outlined in the Paris Agreement, furthering energy efficiency progress.

The 3<sup>rd</sup> ETWG Meeting served as a platform for global cooperation in clean energy transition. It witnessed insightful deliberations on the priority areas, contributing to a collective roadmap for sustainable and equitable growth. The side events provided focused insights into specific aspects of energy transition, enriching the discussions. The launch of the Strategic Plan for Advancing Energy Efficiency Across Demand Sectors demonstrated a commitment to accelerating energy efficiency progress. India's G20 Presidency remains dedicated to strengthening global cooperation in clean energy transition, building upon the achievements made.



## Role of Power Converters and Drives for Electrical Vehicles

**Tiruchirappalli Local Centre, IEI**, in association with the Department of Electrical and Electronics Engineering, K Ramakrishnan College of Engineering (Autonomous), Tiruchirappalli, organized an All India Workshop on the theme **Role of Power Converters and Drives for Electrical Vehicles** during 17-18 February 2023. Dr G A Pathanjali, Managing Director, High

Energy Battery, Tiruchirappalli, graced the occasion as the Chief Guest & Keynote Speaker and inaugurated the Workshop. Dr Pathanjali, in his address, mentioned the earlier introduction of electric vehicles with silver zinc batteries. He further discussed the advancements in this field, such as the reduction in the weight of the battery, improved battery performance, and the introduction of brushless rotors with high efficiency. He further discussed the role of converters in electric vehicles. Dr D Srinivasan, Principal, K Ramakrishnan College of Engineering (Autonomous), Tiruchirappalli, in his address highlighted the 'Make in India' initiative by the Government of India and the numerous new products that have emerged as a result. He discussed the development of Lithium-Ion batteries and fuel cells, as well as the success achieved by Maruti Suzuki India Limited in their venture with hybrid vehicles. Earlier, Er B Balasubramanian, Chairman, Tiruchirappalli Local Centre, IEI, welcomed the gathering. Dr S Dharmalingam, Member, Electrical Engineering Division Board [ELDB] and

Convener of the Workshop, briefed on the theme and highlighted the rapid development of the global and Indian electric vehicle market. He further explained the objective of NITI Aayog, Government of India, to achieve EV sales penetration for commercial cars, private cars, passenger buses and two and three-wheelers by 2030. This goal is in line with the aim to achieve net-zero carbon emissions by 2070. Er Kevin Ark Kumar, Honorary Secretary, Tiruchirappalli Local Centre, IEI, proposed the vote of thanks.

During the first technical session, the resource person was Dr K Karthick, Manager, Business Development Group (BDG), BHEL, Tiruchirappalli. In his lecture, Dr Karthick provided an overview of electric vehicle technologies and the major subsystems of electric vehicles. He explained electric vehicle power trains, role of transmission, various configuration of power trains, types of Hybrid electric vehicles, major electrical subsystems for electric bus, Lithium Ion battery charging and discharging characteristics, thermal runaway of Lithium Ion battery etc. Mr B Senthilkumar, Head, Research and Development, Jascon Energy Private Limited, Tiruchirappalli, conducted the second technical session on Battery Management System for electric vehicles. He explained the functionality of the system and the classification of battery management systems based on communication, voltage balancing, system switching, and applications. Dr Shelas Sathyan, Assistant Professor, Electrical & Electronics Engineering Department (EEE), NIT Tiruchirappalli, was the resource person for the third technical session and explained the classification of EV charging systems, onboard battery chargers, bridgeless topology etc. Dr Jose Thankachan, Assistant Professor, EEE Department, NIT Tiruchirappalli handled the fourth technical session and explained the driving range of electrical vehicles, battery electrical vehicles, plug-in electric vehicles, classification of electrical machines, direct torque control, switched reluctance motors etc. Dr S Senthil Kumar, Associate Professor, Department of EEE, NIT Tiruchirappalli, was the resource person for the fifth technical session. He explained battery specification for different electrical vehicle segments, vehicle to grid / grid to vehicle concepts, potential hurdles to grid to vehicle concept, power flow control etc. During the valedictory session, Er. B Balasubramanian, Chairman, Tiruchirappalli Local Centre, IEI welcomed all. Dr S Dharmalingam was also present on the dais. At the end of the even, Er Kevin Ark Kumar proposed the vote of thanks.



### One Day Seminar under the aegis of Interdisciplinary Coordination Committee

## Solar Electric Tractor – An Affordable and Clean Energy Solution



**Telangana State Centre, IEI** organized One Day Seminar on the theme **Solar Electric Tractor – An Affordable and Clean Energy Solution** on 16 February 2023 at Hyderabad under the aegis of Interdisciplinary Coordination Committee [ICC], IEI. Er B Brahma Reddy, Chairman,

Telangana State Centre, IEI presided over the session and welcomed the speakers and dignitaries present. Er Ramu Banoth, Managing Director, Canorx Motors Private Limited, Khammam, Telangana, graced the occasion as Chief Guest and also delivered lecture on the occasion. Dr Ch Balachand, Assistant Professor, College of Agricultural Engineering, Kandi, Sangareddy & Convener of the event introduced the Chief Guest and briefed about the seminar. During the technical session, the first lecture was delivered by Er Balu Prabarakya, Program Manager TASK, Canorx Motors Private Limited. The second lecture of the session was delivered by Ms Kalavathi Ramu Banoth, CEO & Managing Director, Canorx Motors Private Limited. The third talk was delivered by Er P Krishna Murthy, IT Research Head & Board Member, Canorx Motors Private Limited. The fourth talk was by Er Suresh Babu, Tech Design lead, Canorx Motors Private Limited. The fifth lecture was delivered by Er Uday Naik, Technology Lead, Canorx Motors Private Limited. Dr G Venkata Subbaiah, Honorary Secretary, Telangana State Centre, IEI proposed vote of thanks and thanked all the participants, speakers and session chairs.

## Data Analytics: End to End AI Solutions & Augmented Analytics

**Jharkhand State Centre, IEI**, organized an All India Seminar on the theme **Data Analytics: End to End AI Solutions & Augmented Analytics** during 25-26 March 2023 under the aegis of Interdisciplinary Coordination Committee [ICC], IEI. The All India Seminar encompassed various facets of Data Analytics, Artificial Intelligence and Augmented Analytics. Technology professionals from the industry and academia elucidated different facets of these emerging technologies during the Seminar. The presentations by learned authors and discussions provided deep insights on the topic to the delegates and participants. The Seminar focussed on scopes that may be brought up through innovative thinking that helps in developing better



technology and research exploration. The Inaugural Session began with the arrival of Chief Guest, Prof (Dr) Shuchitangshu Chatterjee, Vice Chancellor, RKDF University, Ranchi, Guest of Honour and Keynote Speaker, Dr Bhaskar Karn, Dean, Student Affairs, BIT Mesra, Ranchi and Distinguished Speaker, Mr Dhiraj Barpujari, System Administrator, IT Department, IIM Ranchi. The event started with lighting of lamp. Er Mohammad Iquebal Alam, Chairman, Jharkhand State Centre, IEI; Dr Manoj Kumar, Honorary Secretary, Jharkhand State Centre, IEI and Convener of the Program, Er Kunal Sinha, welcomed all the dignitaries present on the occasion.

Er Mohammad Iquebal Alam, Chairman, Jharkhand State Centre, IEI welcomed the Chief Guest, Guest of Honour, Distinguished speaker, and the dignitaries present in the session. Er Kunal Sinha, Chairman, Technical Committee and Convener of the Seminar briefed about the theme of the Seminar and explained how this emerging technology is proving boon towards the modern life and spoke about future research aspects. Distinguished Speaker, Dr Dhiraj Barpujari thoroughly explained how Artificial Intelligence and Augmented Analytics are helping the data analysts in solving problems in data science for providing smart solutions. Guest of Honour and Keynote Speaker, Dr Bhaskar Karn delivered presentation on 'How to Connect and What to Think'. He explained the ideology of Artificial Intelligence, Machine Learning and the evolution of technology

where computer system are simulated to process human intelligence. Chief Guest, Prof (Dr) Shuchitangshu Chatterjee, presented a detailed explanation on Data Analytics and focused on how data and its interpretation can help organizations and government in strategy planning and building. The inauguration session concluded with a vote of thanks from Dr Manoj Kumar, Honorary Secretary, Jharkhand State Centre, IEI.

The first technical session of the Seminar was chaired by Mr Pallab Banerjee, Assistant Professor, ASET, AMITY University, Ranchi. The Keynote lecture was delivered by Ms Tannisha Kundu, Assistant Professor, AIIT, AMITY University, Ranchi on the topic 'Computer Vision Based Fire Alarm System: A Case Study in End-to-End AI Solution'. There were four presentations on the topics; Analyzing Reliability in Internet of Things Applications; Sign Language Prediction using Convolutional Neural Network; A Survey on Cloud Security Issues and Techniques using Cloud Computing; IPL Winner Prediction Using Machine Learning Algorithm.

The second technical session was chaired by Dr K Sridhar Patnaik, Associate Professor, Computer Science and Engineering, BIT Mesra, Ranchi. The Keynote lecture was delivered by Mr Biresh Kumar, Assistant Professor, AIIT, AMITY University, Ranchi on the topic 'The Critical Analysis of Internet of Things in Global Sustainable Development'. Further, there were four presentations on the topics; A Comparative Review of Firefly Algorithm; Natural Disaster Prediction using ML: A Comprehensive Analysis; Multiple Disease Prediction System using Machine Learning Algorithm and Object Classification Using Deep Learning.

The third session of the Seminar was chaired by Mr Biresh Kumar, Assistant Professor, AIIT, AMITY University, Ranchi. The Keynote lecture was delivered by Dr Kanika Thakur, Professor & HoD, ASET, AMITY University, Ranchi on the topic 'Augmented Analytics'. In this session, there were four presentations on the topics; Predictive Modeling of Disease Outbreaks Using Big Data Analytics: A Case Study; Data Analytics: Impact of Resultant on Analytics with Pre-Data Filtration Process; Plant Leaf Disease Detection Using Machine Learning Algorithms; and Deep Learning based Chatbot for Event Management of Universities.

In the Valedictory session, Er M R Kumar, GM, MECON Limited addressed the gathering with his remarks on the themes of the technical sessions. Er Kunal Sinha, Chairman Technical Committee and Convener of the Seminar summed up the proceedings of the two day deliberations highlighting the summary on the sessions. His address was followed by concluding remarks delivered by Er Mohammad Iquebal Alam. Vote of thanks was presented by Dr Manoj Kumar.



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## Innovative Technique for Effective Research Paper Communication

Jamshedpur Local Centre, IEI, organized One Day Seminar on the theme **Innovative Technique for Effective Research Paper Communication** on 25 March 2023 in Jamshedpur. Prof Amresh Kumar, Dean Academics, NIT Jamshedpur attended the function as the Chief Guest. Prof Kumar in



his address highlighted the importance of the Workshop in the academic perspective and motivated the participants. Mr Dinesh Kumar Prasad, Former Honorary Secretary, Jamshedpur Local Centre, IEI; Prof Shalendra Kumar, Member- Executive Committee IEI and Dr Satish Kumar, Program Coordinator were present on the dais. Prof Amresh Kumar delivered his presentation on the topic, 'Plagiarism Issue in Academic and Research'. He accompanied his talk with a presentation shared using Turnitin software, which highlighted the importance of plagiarism in academics,

legalities etc. Several important case studies and the steps taken up by NIT Jamshedpur to address plagiarism were also discussed. Dr Vishesh Ranjan Kar, Associate Dean - Academics: Recognition and Accreditation, NIT Jamshedpur delivered a presentation on the topic 'Selection of a Research Topic and Writing an Effective Research Proposal'. In his eloquent speech he highlighted the steps involved in selecting a research topic through brainstorming, reading general background, searching relevant keywords, continuous updating the knowledge base etc. He then shared his expertise in writing a research proposal. In the next lecture session, Dr Akansha Shukla, Assistant Professor, Department of Humanities, Social Science and Management, NIT Jamshedpur deliberated on the topic 'Writing of Literature Review / Research Article'. In her engaging talk, she introduced the participants to literature review, its classification, ways to read and analyse it, and highlighted the fact that literature review is an ongoing process until completion of the thesis. The last lecture of the session was delivered by Dr Shwati Sudha, Assistant Professor, Department of Humanities, Social Science and Management, NIT Jamshedpur on the topic 'Effective Communication and Ethics in Research'. The speaker highlighted the importance of effective communication that is relevant, complete, clear, equitable, fluent and prompt. She explained the barriers in communication, the important of research ethics, etc. The seminar concluded with the valedictory address by Dr Satish Kumar, Associate Professor, Mechanical Engineering Department, NIT Jamshedpur.

## Alternative Energy Systems

Contd. from page 5

next technical session, Mr Jhenkar H M, Manager, PV Projects delivered presentation on the topic 'Powering Indian Enterprise with Roof Top Solar' and explained about solar roof top operation, its purpose and usage.

On the second day, the first technical session commenced with the presentation by Mr U B Reddy, Managing Director, Enerfra (India) Private Limited, Bengaluru, on the topic 'Dharmic Perspective to combat Climate Change – Renewable Energy'. In his presentation he highlighted the Vedic heritage, Vedic Scriptures, Rig Vedas and their connections with climatic conditions. He explained non-fossil fuel power generation from renewable energy to meet the power requirements, which in turn reduces total projected carbon emissions and positively impacts the economy. He further briefed about state-wise wind power installation and its benefits. Sri Praveen Singhal, Vice President (Power), MSPL Limited, presented on 'Wind Energy – An Alternative Source of Energy'. He explained the concept of wind masts, followed by discussing the advantages, limitations, and opportunities of wind power generation. The speaker focused on several points including an ambitious growth plan to reach 150GW wind installations by 2030; The installation of larger wind turbines to maximize wind potential, hybrid solutions using wind, solar and batteries for effective load management, repowering smaller ones to larger wind turbines for better utilize favourable sites, increased use of technology to optimize power generation and improve operations & maintenance, monetizing green attribute through carbon trading, application of next-generation climate technologies, such as green hydrogen and an increased focus on offshore projects to utilize large coast line area etc. In the next technical session, Dr H Naganagouda, Former Director, National Training Centre for Solar Technology, KPCL, delivered a presentation on the topic 'Renewable Energy & Energy Conservation for Sustainability'. The speaker explained about Renewable Energy, Ocean Thermal Energy, Wind Energy, Tidal Energy, Hydro Thermal energy etc and focused more on industry relevant energy resources. He

further enriched the participants with lively interaction. The Speaker of the last technical session of the event was Dr Lakshminarayana Bhatta, Jyothi Institute of Technology, Bengaluru. Dr Bhatta delivered a lecture on the topic 'Carbon Capture and Storage – a Vital Technology to Reduce Green House Emissions' and explained carbon emission and their effects, followed by the technology to capture and store the carbon, which prevents pollution in the atmosphere and reduces greenhouse gas emissions.

During the valedictory function, Shri K P Rudrappaiah, Managing Director, Karnataka Renewable Energy Development Corporation, (KREDL) was the Chief Guest. In his address, Shri Rudrappaiah discussed about the current development in renewable energy sources and their initiatives. The recommendations emanated from the two-day deliberation has been briefed as follows.

*It is required to promote more renewable energy generation. This includes hydrogen, bio-fuels, batteries, pumped hydrogen, compressed air, thermal storage, and superconducting magnetic storage. Additionally, there is a need to enhance storage capacity and utilization; Sources such as wind energy, geothermal energy, hydro power, ocean energy, and bio-energy need to be maximally identified; Under the purview of energy management, the energy storage value chain should include feasibility studies, testing, engineering development, construction and operations; Under green energy management, provisions should be made to monitor environmental impact, optimize traffic control and the transport system; Challenges of grid based renewable energy & subsequent mitigation methods should be addressed properly; Intermittent renewable energy generation, and identifying opportunities should be taken into account urgently; It is essential to finalize fixed tariffs for wind and solar projects; There should be a separate policy for retail/domestic investors, as well as a minimum five-year validity for project allotments; Rooftop solar power plants in domestic, educational institutions, industries and offices need to be encouraged.*

# 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

### Delhi

Delhi State Centre, IEI observed World Engineering Day for Sustainable Development on 04 March, 2023 at New Delhi. Chief Guests of the session were Dr S M Goel, Council Member, IEI and Shri R S Tyagi, Former Member, Delhi Jal Board. Dr Goel in his address highlighted that engineering profession has always played an essential role in the development of human welfare and ensured that future generation of engineers will be able to design critical solutions to address local and global challenges. Shri Tyagi stressed the development of strategic frameworks and best practices for the implementation of engineering solutions for sustainable development. Dr Santosh Kumar Singh, Chairman, Delhi State Centre, IEI, welcomed the Chief Guests and shared his valuable insights on the topic. Er Rajesh Sharma, Honorary Secretary, Delhi State Centre, IEI, proposed the vote of thanks.



### Karnataka

Karnataka State Centre, IEI observed 'World Engineering Day for Sustainable Development' and 'National Safety Day' on 04 March, 2023 at Bengaluru. A Seminar was organized on this occasion. Dr Enti Ranga Reddy, Honorary Secretary, Karnataka State Centre, IEI, emphasized the importance of safety in engineering practices in his welcome address. He further mentioned the significance of World Engineering Day for Sustainable Development and National Safety Day. Dr Venkatesha K, Co-Convener, emphasized the need for safety precautions in cellular technologies and discussed the challenges & risks involved in their use. The Speaker of the session, Shri D C Jagadeesh, Former Director, Department of Factories, Boilers, Industrial Safety and Health, Bengaluru discussed workplace safety and emphasized the need for organizations to prioritize safety in their operations. The Speaker of the session, Mr V Sudarshan, Managing Director, Spectrum Tool Engineers Private Limited & Spectrum Techvision Private Limited, Bangalore focused on sustainable development and the role of engineering in achieving it. He further shared his insights on the challenges and opportunities in sustainable engineering and emphasized the need for innovative with sustainable solutions.



### Punjab & Chandigarh

Punjab & Chandigarh State Centre, IEI observed World Engineering Day for Sustainable Development on 03 March, 2023 in association with Baba Banda

Singh Bahadur Engineering College, Fatehgarh Sahib at Chandigarh. Dr Labh Singh Bhari, Chairman, Punjab & Chandigarh State Centre, IEI and Dr Lakhvir Singh, Principal, Baba Banda Singh Bahadur Engineering College, welcomed the Chief Guest of the event, Prof (Dr) Tara Singh Kamal, Former Vice President, IEI and all the participants, enlighten the importance of World Engineering Day. The Key Speaker of the event was Er Gurleen Kaur Dhaliwal, Assistant Professor, Baba Banda Singh Bahadur Engineering College. Er Ramanpreet Kaur, Assistant Professor, Baba Banda Singh Bahadur Engineering College, also spoke on the occasion. Er Swinder Singh, Honorary Secretary, Punjab & Chandigarh State Centre, IEI proposed the vote of thanks at the end of the event.



### Tamilnadu

Tamilnadu State Centre, IEI observed World Engineering Day for Sustainable Development on 15 March, 2023 at Chennai. Chief Guest of the event, Dr (Smt) TAMILISAI Soundararajan, Hon'ble Governor of Telangana & Hon'ble Lt. Governor of Puducherry inaugurated the event & delivered the thematic address. Guest of Honour of the event Mr K Mohan Reddy, Director (P&P), Director (Power), Additional IC, NLC India Limited, Neyveli, who elaborated in detail about the general principles for sustainable engineering of the future. Er S Kannan, Chairman, Tamilnadu State Centre, IEI, delivered the welcome address. Dr T M Gunaraja, Past President, IEI, presented the history of IEI. Dr G Ranganath, Chairman CATE, IEI, explained about World Engineering Day for Sustainable Development. Er D Gokul, Honorary Joint Secretary, Tamilnadu State Centre, IEI, delivered the theme of the event. Er K N Sivaraju, Honorary Secretary, Tamilnadu State Centre, IEI, proposed the vote of thanks.



### Telangana

Telangana State Centre, IEI observed World Engineering Day for Sustainable Development on 04 March, 2023 at Hyderabad. Dr Srinivasa Rao M, Convener of the event, introduced the Chief Guest & Speaker of the event, Shanti Swaroop Bhatnagar Awardee Dr S Venkata Mohan, Principal Scientist, CSIR-Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad. Dr Rao delivered a speech with high quality content and pragmatic information about the theme of the event. Er B Brahma Reddy, Chairman, Telangana State Centre, IEI, delivered the welcome address and presided over the function. Dr I Satyanarayana Raju, Council Member, IEI, Prof (Dr) Ramana Naik B, Immediate Past Chairmen and





Committee Members of Telangana State Centre, IEI, attended the program. Dr G Venkata Subbaiah, Honorary Secretary, Telangana State Centre, IEI, proposed the vote of thanks at the end of the event.

### Uttar Pradesh

Uttar Pradesh State Centre, IEI, observed World Engineering Day for Sustainable Development on 04 March, 2023 at Lucknow. The Chief Guest of the event was Shri Ashok Kumar Srivastava, Former Director of Uttar Pradesh Power Corporation Limited (UPPCL). On this occasion, a book on 'Fundamentals of Propulsion' was released by Prof (Dr) Aryanendra Kumar Johri, Former Chief Scientist, Indian Council of Scientific and Industrial Research and currently Visiting Professor of Aeronautical Engineering. Earlier, Er Masarrat Noor Khan, Chairman, Uttar Pradesh State Centre, IEI welcomed all the guests. Er V B Singh, Council Member, IEI, Mr V P Singh, SCC Member and Er R K Trivedi, Former Chairman, Uttar Pradesh State Centre, IEI, and other members attended the program. Dr Jaswant Singh, Honorary Secretary, Uttar Pradesh State Centre, IEI, proposed the vote of thanks.



### LOCAL CENTRES

#### Allahabad

Allahabad Local Centre, IEI observed 'World Engineering Day for Sustainable Development' on 04 March, 2023 at Allahabad. An Expert Lecture was organised on the theme. Er Rajendra Prasad Upadhyay, Chairman, Allahabad Local Centre, IEI welcomed the Chief Guest & Expert Speaker of the event, Prof Ravi Prakash, Department of Mechanical Engineering, MNNIT Allahabad and emphasized on the applicability of engineering innovations for sustainable development. Prof Ravi Prakash shared his experience and expertise in the field of energy sustainability. He envisaged on the sustainability concept, which needs to be entailed in our daily life. He explained the concept of renewable energy, particularly solar energy and its usage in cooling applications and in agriculture. Er Jai Kirti Singh, Honorary Secretary, Allahabad Local Centre, IEI, proposed the vote of thanks at the end of the session.



#### Alwar

Alwar Local Centre, IEI, observed World Engineering Day & National Safety Day on 04 March, 2023 in association with Alwar Engineers Association in Alwar. The Chief Guest of the event, Er Sangeet Arora, Superintendent Engineer, PWD, Alwar, expressed his views on World Engineering Day. Earlier, Er Ashok Kumar Gupta, Chairman, Alwar Local Centre, IEI, welcomed the guests and dignitaries and presented his views about World Engineering Day and National Safety Day. Keynote Speaker of the event, Er Subhash Chandra Joshi, Immediate Past Chairman, Alwar Local Centre, IEI, spoke about the role of engineering for development of society and expressed his views on National Safety Day. Command Speaker of the program, Er Sarvesh Sharma, Former Process Safety Head, Reliance Petrochemicals delivered lecture on domestic safety and road safety. Er R C Sharma, Honorary Secretary, Alwar Local Centre, IEI, proposed the vote of thanks.



#### Chandrapur

Chandrapur Local Centre, IEI observed World Engineering Day for Sustainable Development on 04 March, 2023 at Chandrapur. The speakers of the event were

Mr Shreekanth Matte, Principal Verification Engineer, ARM Embedded Systems Private Limited; Dr Z J Khan, Principal, RCERT, Chandrapur and Dr R K Krishna, Executive Council Member & Faculty, Department of ECE, RCERT, Chandrapur. Earlier, Er Madhukar Krushnaji Shende, Chairman, Chandrapur Local Centre, IEI, welcomed the guests, dignitaries and participants. Er Yogendrasingh D Parihar, Honorary Secretary, Chandrapur Local Centre, IEI, proposed the vote of thanks.



#### Gwalior

Gwalior Local Centre, IEI, observed World Engineering Day for Sustainable Development on 04 March, 2023 at Gwalior. The speakers of the event were Er Anuj Pratap Gaur, Technical Head, Smart City Corporation, Er Balbir Singh Sikarwar, Deputy Chief Engineer, Smart City Project, Gwalior and Er D K Rathore, Executive Engineer, EE PHE Department. Er Gaur narrated the history of World Engineering Day and spoke about its importance. Er Balbir Singh Sikarwar described this day as an opportunity to promote engineering as a career and highlighted how engineering can change the world for the betterment of society. Er Rathore shared his valuable insights on the topic. Earlier, Er Radha Kishan Khetan, Chairman, Gwalior Local Centre, IEI, welcomed all those present in the session. Dr (Ms) Sulochana Wadhwani, Honorary Secretary, Gwalior Local Centre, IEI, proposed the vote of thanks at the end of the program.



#### Jabalpur

Jabalpur Local Centre, IEI, observed World Engineering Day on 04 March, 2023 through online mode. The Guest Speaker of the event, Dr Indra Kumar Khanna, Group Director, Takshshila Institute of Engineering and Technology, Jabalpur, said that the day provides an opportunity to raise awareness about the critical role that engineering plays in sustainable development and to encourage young people to pursue their careers in engineering. The Keynote Speaker, Dr Akhilesh Choudhary, Assistant Professor, Department of Mechanical Engineering, NIT Hamirpur, spoke on the topic 'Hydrogen: The Next Generation Fuel'. He explained that hydrogen is a clean, versatile, abundant energy carrier with potential to replace fossil fuels. It has a wide range of applications from transportation to power generation and can contribute sustainable development as the next-generation fuel. He mentioned that hydrogen can be produced from a variety of renewable and non-renewable sources. When used in fuel cells, hydrogen only produces water and heat, making it a highly attractive fuel option for reducing greenhouse gas emissions and addressing climate change. Earlier, Er Prakash Chandra Dubey, Chairman, Jabalpur Local Centre, IEI, welcomed the Guest Speaker, Keynote Speaker and dignitaries. He highlighted the need for creating a better and sustainable world by promoting use of innovative technologies and solutions that can address the challenges of climate change, environmental degradation and social inequality. At the end, Er Ashish Chakraborty, Organizing Secretary & former Chief Engineer, MPPGCL summarized the deliberations and described the vital role that engineers play in achieving sustainable development goals. The programme was moderated by Dr Rajeev Jain, Head, Mechanical Engineering Department, Kalaniketan (Polytechnic) College, Jabalpur. Er Sanjay Kumar Mehta, Honorary Secretary, Jabalpur Local Centre, IEI, proposed the vote of thanks.

#### Kancheepuram

Kancheepuram Local Centre, IEI observed World Engineering Day for Sustainable Development on 10 March, 2023 in association with Department of Electrical and Electronics Engineering,



Jerusalem College of Engineering, Chennai in Chennai. Dr G Shanmugasundar, Honorary Secretary, Kanchepuram Local Centre, IEI addressed the audience. Dr S Vinod, Professor and Head, EEE Department, Jerusalem College of Engineering and Dr Ramesh S, Principal, Jerusalem College of Engineering addressed the audience. The Chief Guest and Keynote speaker of the event, Dr P Lakshmi, Professor, Electrical and Electronics Engineering, CEG Campus, Anna University, explained the recent trends in electric vehicle and compared the performance of fuel engine with electric vehicle.

#### Kochi

Kochi Local Centre, IEI, observed World Engineering Day 2023 on 04 March, 2023 through online mode. Er Salahudheen P A, Chairman, Kochi Local Centre and Council Member, IEI, delivered the welcome address. He welcomed the speaker of the event, Prof (Dr) N Anantharaman, Former Professor (HAG) & Dean (Academic) NIT Trichy, as well as the senior members and other dignitaries. He highlighted the importance of World Engineering Day and provided a brief history and evolution of the engineering profession. Prof (Dr) G Madhu, Council Member, IEI, introduced the Speaker. Prof (Dr) N Anantharaman discussed the importance of World Engineering Day in general and sustainable development in particular. He further elaborated on innovation and UN SDGs. Er Babu K S, Honorary Secretary, Kochi Local Centre, IEI proposed the vote of thanks.

#### Kollam

Kollam Local Centre, IEI observed World Engineering Day for Sustainable Development 2023 on 06 March, 2023 in Kollam in association with Baslios Matthews II College of Engineering, Kerala, IEI Mechanical Students' Chapter, Kollam. Dr Premlet, Former HoD and Professor of Physics, TKM College of Engineering, Kollam, inaugurated the programme and also delivered a lecture on the topic 'Sustainability: Its Future and Challenges'. Prof Abraham Sam Thomas, Academic Coordinator and Dr L Padma Suresh, Principal, Baslios Mathews II College of Engineering, also spoke on the occasion. Dr (Prof) Ms Sheeba R, Honorary Secretary, Kollam Local Centre, IEI, addressed the august audience.



#### Kozhikode

Kozhikode Local Centre, IEI observed World Engineering Day for Sustainable Development on 09 March, 2023 in association with Graduates Association of Civil Engineers (GRACE) and Indian Concrete Institute (ICI), Calicut Centre in Kozhikode. Er Ismayil O V, Grace State Vice President & Chartered Engineer welcomed the gathering and Er Sasi K V, Committee Member, Kozhikode Local Centre, IEI, introduced the theme Speaker of the event, Mr Jeesh Venmarth, Founder and Mentor of C-DISC Technologies LLP. Er S Komanchery, Chairman, Kozhikode Local Centre, IEI chaired the session and gave a brief introduction about the day. Er K Shaju, Honorary Secretary, Kozhikode Local Centre, IEI proposed the vote of thanks.



#### Meerut

Meerut Local Centre, IEI observed 'World Engineering Day for Sustainable Development' on 04 March, 2023 through online mode and a webinar was organized on the occasion. Er Rajneesh Kumar, Immediate Past Chairman, Meerut Local Centre, IEI, presided over the meeting and welcomed the members of IEI. Speaker of the event, Prof (Dr) K L A Khan, Dean IEC and Professor, Mechanical Engineering Department, KIET, Ghaziabad, said that engineering innovation has played a significant role in shaping the modern world by introducing new technologies & products that have transformed

various industries, including healthcare, transportation, communication, energy and manufacturing. He opined that innovation in engineering is crucial in solving complex problems, improving productivity, enhancing safety and advancing human progress. Er Raj Pal Agarwal, Honorary Secretary, Meerut Local Centre, IEI, proposed the vote of thanks at the end of the session.

#### Roorkee

Roorkee Local Centre, IEI, observed 'World Engineering Day for Sustainable Development' on 06 March, 2023 in Roorkee. Dr Ashish Pandey, Chairman, Roorkee Local Centre, IEI, in his welcome address explained the importance of World Engineering Day and highlighted the importance of sustainable development in engineering domain. Speaker of the event, Er Ramesh Narain Misra, Former Chairman and Managing Director, SJVN Limited, delivered speech on 'Creating Resilience in Sustainable Hydropower Development through Innovations'. Er Vineet Kumar Saini, Honorary Secretary, Roorkee Local Centre, IEI, proposed the vote of thanks at the end of the event.



#### Upper Assam

Upper Assam Local Centre, IEI observed 'World Engineering Day for Sustainable Development' on 11 March, 2023 in Dibrugarh. In the beginning, Er Sasanka Pratim Deka, Chairman, Upper Assam Local Centre, IEI & Executive Director (ESIC & DOR), OIL India Limited delivered the welcome address. Er Ramesh Ch Das, DGM (MSO-Mines), Oil India Limited and Er Rakesh Kalita, Manager (Excavation), NEC, Coal India Limited, delivered lecture on the theme. Er Debajeet Sarma, Honorary Secretary, Upper Assam Local Centre, IEI, proposed the vote of thanks at the end of the event.



#### Vadodara

Vadodara Local Centre, IEI observed World Engineering Day 2023 on 04 March, 2023 in Vadodara. Speaker of the session, Dr Vijay Singh, Senior Principal Engineer (Electrification Business), Vice President, ABB India Limited delivered expert talk on the theme and discussed on engineering innovation and technological advancement. He further stressed on forwarding the engineering, R&D and innovations output towards sustainable development. Earlier, Er Ambikesh Natvarlal Padhya, Chairman, Vadodara Local Centre, IEI welcomed all the participants. Er Keyurkant Manibhai Thakkar, Honorary Secretary, Vadodara Local Centre, IEI, proposed the vote of thanks.

#### Visakhapatnam

Visakhapatnam Local Centre, IEI observed World Engineering Day for Sustainable Development on 04 March, 2023 in Visakhapatnam. Guest Speaker of the event, Dr Raghupatruni Bhima Rao, Director, Aryan Institute of Engineering & Technology, Bijupatnaik University of Technology, Bhubaneswar, Chief Scientist (Retd), RRL, Bhubaneswar and Council Member, IEI, in his Lecture said that the first hydro-electric power station of India located at the waterfall is still generating power. He further spoke on lithium exploration in potential geological domains and elaborated on beach sand, a potential source for rare earths, R&D on rare earths and so on. Er Venkata Satya G Pakki, Chairman, Visakhapatnam Local Centre, IEI, presided over the function and Er Rapeti Nageswara Rao, Honorary Secretary, Visakhapatnam Local Centre, IEI, welcomed the participants.





# 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

#### Jammu & Kashmir

Jammu & Kashmir State Centre, IEI observed World Water Day 2023 on 22 March 2023 in Srinagar. A Seminar was organized on the theme 'Accelerating Change'. Prof (Dr) Rakesh Sehgal, Director, NIT Srinagar, was the Chief Guest. Er Rashid Ahmad Dar, Chief Engineer, MED Kashmir and Er Basharat Jeelani Kawoosa, Chief Engineer, Jal Shakti PHE, were the Guests of Honour. Mr Mohammad Irfan Shah and Ms Toiba Shafat Koul from SSM College of Engineering, along with Mr Mehraj Bhat, highlighted the urgent need to accelerate change in the field of water conservation and management. Er Ferdous Ahad Bhat, Honorary Secretary, Jammu & Kashmir State Centre, IEI, welcomed the participants and emphasized the importance of water conservation & Management, as well as the role of engineering community in accelerating change in this area. This Seminar provided a platform for the participants to exchange ideas and explore innovative solutions faced by the water sector; raising awareness about the importance of water conservation and management.



#### Karnataka

Karnataka State Centre, IEI, observed World Water Day 2023 in association with Indian Water Works Association, Bengaluru Centre & Dayananda Sagar College of Engineering, Bengaluru on 24 March 2023 through online mode. A seminar was organised on the topic 'Accelerating Change to Solve the Water and Sanitation Crises'. The session started with welcome address delivered by Er M Lakshmana, Chairman, Karnataka State Centre, IEI. Dr H K Ramaraju, Convener of the event highlighted the challenges faced in water sector and the role of engineers in finding solutions. Guest of Honour of the session, Dr B G Prasad, Principal, Dayananda Sagar College of Engineering, Bengaluru, stressed the importance of water management & the need for sustainable water solutions. Speakers of the event were Mr K N Rajiv, Chief Engineer, Bangalore Water Supply and Sewerage Board (BWSSB) and Dr N S Srinivasa Rao, Chief Consultant, Tata Consulting Engineering Services. Mr Rajiv spoke on the topic of the seminar and mentioned that addressing the water and sanitation crisis required a multi-faceted approach, involving policy changes, infrastructure investments, public awareness campaigns and community engagement. He emphasized that policymakers must prioritize investments in water and sanitation infrastructure including the development of new technologies for water treatment and waste management and spoke that Government has to ensure water supply and sanitation facilities are available and accessible to everyone, particularly in underserved communities. Dr N S Srinivasa Rao delivered lecture on 'Sewage Treatment Plants – An Overview' and focused on the importance of sewage treatment plants (STPs) and the challenges associated with their design, construction and operation. He emphasized the critical role of STPs in maintaining the environment's health, safety and stated that sewage treatment is essential to prevent water pollution and protect human

health from water-borne diseases. He discussed various types of STPs with their working principles. Dr Rao emphasized the need for continued investment in STPs & the development of new technologies to enhance their performance and added that the STPs are a crucial component of sustainable development, requires ongoing attention and support from policymakers, government and communities.

#### Maharashtra

Maharashtra State Centre, IEI observed World Water Day 2023 on 08 April 2023 in Mumbai. Speaker of the event, Dr Pradip Kalbar, Associate Professor, Centre for Urban Science and Engineering (CUSE), IIT Bombay delivered lecture on the topic 'Urban Water Infrastructure Management: Achieving Sustainability and Building Resilience'. In his address, Dr Kalbar highlighted the growing complexities of Urban Water Infrastructure (UWI) with rapid urbanization and economic development. He focused on India's international commitment to achieve sustainable development goals and emerging climate change crisis, which necessitates the provision of sustainable and resilient infrastructure. He discussed the need for sustainable infrastructure addressing the economic, social, environmental, technical dimensions and resilient infrastructure reducing the potential risk of disruption in service and allowing the recovery within acceptable time and cost. Earlier, Mr Mahendra Ratanlal Kothari, Chairman, Maharashtra State Centre & Vice President, IEI welcomed all and delivered introductory remarks. Mr Vijay Chandrakant Kamble, Honorary Secretary, Maharashtra State Centre, IEI, co-ordinated the programme and proposed the vote of thanks.



#### West Bengal

West Bengal State Centre, IEI observed World Water Day 2023 on 22 March 2023 in Kolkata. The programme started with welcome address delivered by Dr Nirmal Das, Chairman, West Bengal State Centre, IEI. Dr K K Mahanta, Principal Scientist, ICAR – Central Soil Salinity Research Institute, Regional Research Station, Canning Town, West Bengal was the Theme Speaker on the occasion. The speaker elaborated the present status and future perspectives of demand in water sources in national and global context. Dr Raju Basak, Honorary Secretary, West Bengal State Centre, IEI proposed the vote of thanks. Dr Laxmikanta Nayak, Convenor, Agricultural Engineering Division, West Bengal State Centre, IEI coordinated the event.



### LOCAL CENTRES

#### Agra

Agra Local Centre, IEI observed World Water Day 2023 on 26 March 2023 in Agra. Er Anil Kumar Goyal, Chairman, Agra Local Centre, IEI, presided over the function. Keynote Speakers of the event were Er Dinkar Saxena, Member Environment, Environment Consultant, Agra; Er Pramit Sharma, Associate

Professor, RBS Engineering Technical Campus, Bichpuri and Er Vikash Dubey, Assistant Professor, Department of Civil Engineering, BSA College of Engineering and Technology, Mathura. Er Rajnesh Kumar



Yadav, Honorary Secretary, Agra Local Centre, IEI welcomed the guests along the participants, and highlighted the issues related to theme. Er Pramit Sharma said that water scarcity is a global problem effecting millions of people worldwide and emphasized the urgent needs of an individual's, communities, institutions to take responsibility for meaningful change. Er Vikash Dubey, highlighted the global water crisis affecting million in worldwide and emphasized on individual actions required. Er Dinkar Saxena emphasized for efficient use of water for human life to ensure the availability and sustainable management of water for all by 2030. He mentioned that ground water provides almost half of drinking water worldwide to sustain ecosystems and to maintain the base flow of river.

### Aligarh

Aligarh Local Centre, IEI observed World Water Day 2023 on 20 March 2023 in Aligarh. Dr (Mrs) Salma Shaheen, Chairman, Aligarh Local Centre, IEI delivered the welcome



address and introductory remarks. Chief Guest of the session, Prof Shamim Ahmad, Ex Principal, University Women's Polytechnic, Aligarh Muslim University, Aligarh emphasized the importance of water in different spheres and stressed the need for engineers in policy making to incorporate aspects of water security and measures to reduce the wastage of water. Guest of Honour, Prof S H Mohsin, Director General, SSITM, Aligarh shared his thoughts on the importance of water and its need. Theme speaker of the event, Mr Mohammad Ahsan, Superintending Engineer, UP Jal Nigarm (Urban), Aligarh explained the history of World Water Day, Water Hydrologic Cycle and information about Aligarh's population & water demand. Dr Sameera, Associate Professor, University Polytechnic (Boys), Aligarh Muslim University, Aligarh also spoke on the occasion.

### Asansol

Asansol Local Centre, IEI observed World Water Day 2023 on 28 March 2023 in Asansol. Chief



Guest of the session, Dr P P Bhattacharjee, Principal, Asansol Engineering College highlighted water conservation practice by means of judicious use of water to reduce unnecessary water usage. Speaker of the session, Ms Rima Ghosh, Scientist/Engineer 'SF', Control Dynamics Design Group, U R Rao Satellite Centre (URSC), Indian Space Research Organization (ISRO), Bangalore delivered her speech on the topic 'Attitude Control of Satellites in Space' and focussed on ensuring availability of water for future generations, conservation of habitats etc. Earlier, Er Tarun Tapan Lahiri, Chairman, Asansol Local Centre, IEI delivered the welcome address. Er Sumanta Karmakar, Honorary Secretary, Asansol Local Centre, IEI proposed the vote of thanks at the end of the session.

### Belagavi

Belagavi Local Centre, IEI observed World Water Day 2023 on 24 March 2023 at Belagavi. An invited talk was organized on the topic 'Be the Change

You Want to See in the World'. Er Devendrappa Kenchakkanavar Veeranna, Honorary Secretary, Belagavi Local Centre, IEI delivered the welcome address and Er R T Jangal, Chairman, Belagavi Local Centre, IEI presided over the function. Prof (Dr) Sharad Joshi, Principal, KLE Institute of Technology, Hubballi in his Keynote speech discussed on climatic change and its effect on mankind with illustrations. Er B G Dharenni, Committee Member, Belagavi Local Centre, IEI proposed the vote of thanks.



### Bhimavaram

Bhimavaram Local Centre, IEI observed World Water Day 2023 on 27 March 2023 in association with Department of Mechanical Engineering and Department of Civil Engineering, SRKR Engineering College, Bhimavaram through online mode. Chief Guest of the session, Dr P A R K Raju, Dean R&D, Head, Water and Environment Technology Research Centre, SRKR Engineering College delivered lecture on the topic 'Blue and Green Economy – Amber and Red Water Quality: The Godavari Delta Development Saga' and also presented about Land Water Resources Division in India. Earlier, Er Karanam Suresh Babu, Chairman, Bhimavaram Local Centre, IEI welcomed the Chief Guest and participants of the virtual session. Prof Nookala Gopala Krishna Murthy, Honorary Secretary, Bhimavaram Local Centre, IEI proposed the vote of thanks.

### Dhanbad

Dhanbad Local Centre, IEI observed World Water Day 2023 on 22 March 2023 in association with Civil Engineering Department, BIT, Sindri, Dhanbad in Dhanbad. Dr D K Singh, Director, BIT Sindri was the Chief Guest.



Prof Biswajit Paul, Honorary Secretary, Dhanbad Local Centre, IEI, chaired over the session. Prof Vikrama Pandey, Civil Engineering Department, BIT, Sindri introduced the theme of the day and delivered lecture on the topic 'Conservation of Water Resource and Tips to Save Domestic Water'. Dr Maya Raj Narayan Ray, Associate Professor, Civil Engineering Department, BIT Sindri, delivered lecture on 'Drinking Water Global Scenario and Climate Change'. Er Nipen Kumar Das, Assistant Professor, Civil Engineering Department, BIT Sindri delivered lecture on 'Recent Findings and Climate Change Scenarios in water Resources'.

### Ghaziabad

Ghaziabad Local Centre, IEI observed World Water Day 2023 on 31 March 2023 in Ghaziabad. Dr S C



Gupta, Former Honorary Secretary, Ghaziabad Local Centre, IEI briefed about the theme of the day. Er J L Pal, Former Chief Engineer, UP Irrigation was the Keynote Speaker of the event. Er M K Agarwal, Past Chairman, Ghaziabad Local Centre, IEI emphasized the urgent need for individuals, communities, institution to take responsibility for bringing about meaningful change by changing water consumption and management practices. He highlighted the current challenging scenario facing by India in respect to water availabilities, quality, limited supply and hence waste water recycling & reuse can prove to be feasible and financially viable options to achieve sustainability. Er Raghunandan Prasad Sharma, Chairman, Ghaziabad Local Centre, & Council Member, IEI extended warm welcome to the participants



and dignitaries on the dais. Er R R Tanwar, Council Member, IEI apprised the members regarding present activities and future plan of the Institution. Er Ashok Kumar, Honorary Secretary, Ghaziabad Local Centre, IEI proposed the vote of thanks at the end of the program.

### Gorakhpur

Gorakhpur Local Centre, IEI observed World Water Day 2023 on 22 March 2023 at Gorakhpur in association with Gandak Flood Circle, Gorakhpur, Department of Irrigation, Uttar Pradesh. A Seminar was organized on the occasion. Er R P Tiwari, Former Engineer in Chief & HoD, Department of Irrigation, Uttar Pradesh was the Chief Guest. Er G N Pandey, Former Engineer-in-Chief (Mechanical), Department of Irrigation, Uttar Pradesh; Er Manoj Kumar, Superintending Engineer, Tube Well Circle, Gorakhpur, Department of Irrigation, Uttar Pradesh and Er J B Rai, President, Malaviya Alumni Association were the Guests of Honour. Er M P Kandoi, Former Superintending Engineer, Irrigation Department, Uttar Pradesh was the Keynote Speaker. Earlier, Er Pawan Kumar Mishra, Chairman, Gorakhpur Local Centre, IEI delivered the welcome address and briefed about the importance of the day. Er Ramesh Chandra Pandey, Honorary Secretary, Gorakhpur Local Centre, IEI proposed the vote of thanks at the end of the program.



### Gwalior

Gwalior Local Centre, IEI observed World Water Day 2023 on 22 March 2023 in Gwalior. Speakers of the event were Er U S Pandey, Former Executive Engineer, PHE; Er R K Batra, Retired Irrigation Engineer, PHE and Er K K Saraswat, Retired Superintendent Engineer PHE. Er U S Pandey in his speech highlighted the steps to be taken for water saving according to UN and mentioned that lakhs of peoples die every year due to lack of sanitation, hygiene and access to clean water. He emphasized on the improvement of the efficacy of water across all sectors and sustainable supply and withdrawal of freshwater to address the water shortage. Er R K Batra in his lecture strongly advocated for the efficient use of water, changes in daily water usage practice to save significant amount of water for future. Er K K Saraswat focused on water monitoring and the changes required to solve water and sanitation crises. Er Prabhat Bhargawa, Past Chairman, Gwalior Local Centre, IEI highlighted that water harvesting, desalination, water efficiency, waste water treatment, recycling and reuse technologies should be expanded through international collaboration and capacity building support. Earlier, Er Radha Kishan Khetan, Chairman, Gwalior Local Centre, IEI the delivered welcome address.



### Jamshedpur

Jamshedpur Local Centre, IEI observed World Water Day 2023 on 27 March 2023 through online mode. The welcome address was delivered by Prof (Dr) Anil Kumar Choudhary, Past Honorary Secretary, Jamshedpur Local Centre, IEI. Speaker of the session, Dr (Mrs) Seeram Madhuri, Assistant Professor, National Institute of Technology Jamshedpur discussed the importance of water conservation & management at various locations and stressed on protection & management of water bodies, rivers and lakes. In this webinar, sanitation related health problems, importance of hygiene and its benefits and importance of educating people towards accelerate change were discussed. Er Shanti Das Bhattacharjee, Honorary Secretary, Jamshedpur Local Centre, IEI proposed the vote of thanks at the end of the webinar.

### Jabalpur

Jabalpur Local Centre, IEI observed World Water Day 2023 on 22 March 2023 at Jabalpur. Dr K N Agrawal, Ex Secretary, Water Resources Department, Government of Madhya Pradesh, Bhopal was the Chief Guest and Shri Vinod Sharma, Jal Sanrakshan Abhiyan, Jabalpur and Er H S Gond, Chief Engineer, Jal Jeevan Mission, Jabalpur were the Guests of Honour. The Keynote address was delivered by Dr Suresh Vishwakarma, Chartered Engineers Pacific, Vancouver, Canada. Earlier, Er Prakash Chandra Dubey, Chairman, Jabalpur Local Centre, IEI welcomed the guests and participants. Dr K N Agrawal highlighted the importance of different irrigation schemes, the Narmada Tribunal, Interlinking of Ken-Betwa River and other projects, modify state irrigation by pressurised pipe system and emphasized the importance of water and its conservation. Er Sanjay Kumar Mehta, Honorary Secretary, Jabalpur Local Centre, IEI proposed the vote of thanks.



### Kanyakumari

Kanyakumari Local Centre, IEI in association with Federation of Civil Engineers Association of St Xavier's Catholic College of Engineering observed World Water Day 2023 on 30 March 2023. Chief Guest of the event, Er P Sagaya Arokia Raj, Dean, Cape Institute of Technology, Nagercoil emphasized the urgent need to tackle the water crisis facing our planet. He expressed his concerns about the change in climate patterns resulted in prolonged drought. Dr S Arumuga Perumal, Chairman, Kanyakumari Local Centre chaired over and Er S Natarajan, Honorary Secretary, Kanyakumari Local Centre, IEI also spoke on the occasion.



### Kochi

Kochi Local Centre, IEI observed World Water Day 2023 on 22 March 2023 through online mode. Speaker of the session was Prof (Dr) S Shrihari, Professor, Department of Civil Engineering, NIT Surathkal, Karnataka. The programme was started with the welcome address delivered by Er Salahudheen P A, Chairman, Kochi Local Centre and Council Member, IEI. He narrated the historical background of observance of the day with current situation and importance of water crisis in various locations. Prof Shrihari explained the term sustainable development from various perspectives to understand its importance in multiple development activities. He explained various water purification methods employed in different locations of the world and the modern technological innovations and development, namely nanotechnology, biomimetic membrane technology, acoustic methods, etc. Prof (Dr) G Madhu, Council Member, IEI introduced the Speaker of the session. Er Babu K S, Honorary Secretary, Kochi Local Centre, IEI proposed the vote of thanks at end of the webinar.

### Palghat

Palghat Local Centre, IEI observed World Water Day 2023 on 23 March 2023 in Palakkad. Guest speaker of the event, Dr Keerthy M Simon, Assistant Professor, Civil Engineering Department, NSS College of Engineering, Palakkad delivered lecture on the theme of the day. The speaker in her address focussed on prevention of water borne diseases by means of promotion of hygiene education, construction and maintenance of sanitation facilities, expansion to the access of affordable sanitation products etc. Earlier, Er Madhana Mohan



K, Chairman, Palghat Local Centre, IEI was delivered welcome address to the Speaker, audience and to raise awareness, inspires action to tackle the water and sanitation crisis. Prof (Dr) Pradip C, Honorary Secretary, Palghat Local Centre, IEI proposed the vote of thanks at the end of the program.

#### Ranipet

Ranipet Local Centre, IEI observed World Water Day 2023 on 07 April 2023 through online mode. A webinar was organised on the topic 'Water Resources Management in Tamilnadu – Challenges & Way Forward' on the occasion. Er M Salai Manalan, Chairman, Ranipet Local Centre, IEI highlighted present day scenario & lifestyle with respect to challenges & conservation of water and introduced the Speaker of the day, Er Arun Balu I, Assistant Engineer, Special Design Division, Tamilnadu Water Resources Department, Chennai. The speaker discussed at a length the water resources at Tamilnadu, interstate and intra state interlinking of rivers, lift irrigation schemes at Tamilnadu etc.

#### Tiruchirappalli

Tiruchirappalli Local Centre, IEI observed World Water Day 2023 on 21 March 2023 in association with Computer Society of India, Tiruchirappalli Chapter; Safety Quality Forum, New Delhi; Indian Institute of Metals, Tiruchirappalli Chapter; Indian Institution of Industrial Engineering, Tiruchirappalli; Kumari Arivial Peravai Kanyakumari and Indian Society for Non-destructive Testing, Trichy Chapter through online mode. Er D Harsha, Past Chairman, Tiruchirappalli Local Centre, IEI presided over & welcomed the Speaker of the session, Er K Manuraj, Former Chief Engineer, PWD/WRO, Tiruchirappalli. Er Kevin Ark Kumar, Honorary Secretary, Tiruchirappalli Local Centre, IEI proposed the vote of thanks at the end of the program.

#### Tumakuru

Tumakuru Local Centre, IEI observed World Water Day 2023 on 29 March 2023 at Tumakuru. A seminar was organised on the topic 'Accelerating Change to



Solve the Water and Sanitation Crisis'. Chief Guest of the event, Dr Devaraja Reddy N J, Hydro-Geologist and Rain Water Harvesting Advisor, Chitradurga explained the extent to which farmers are being dependent upon the ground water, explained bore well recharge structure and so on. Earlier, Prof (Dr) Sridhar K N, Chairman, Tumakuru Local Centre, IEI delivered the welcome address. Dr Suresh D S, Honorary Secretary, Tumakuru Local Centre, IEI proposed the vote of thanks.

#### Udaipur

Udaipur Local Centre, IEI observed World Water Day 2023 on 22 March 2023 at Udaipur. Chief Guest of the function, Er Vipin Jain, Superintending Engineer, Public Health Engineering Department, Udaipur spoke on changing the system for utilizing available resources in a proper manner. He discussed on recharging ground water and stressed on conservation and protection of water. Er Chandra Prakash Jain, Chairman, Udaipur Local Centre, IEI welcomed the Chief Guest of the event and explained that water is life and living being is impossible without water. Er Purushottam Paliwal, Honorary Secretary, Udaipur Local Centre, IEI presented his views on World Water Day and also proposed the vote of thanks at the end of the event.



#### Vadodara

Vadodara Local Centre, IEI observed World Water Day 2023 on 22 March 2023 at Vadodara. Speaker of the session was Dr Upendra D Patel, Head, Civil Engineering Department, Faculty of Technology and Engineering, The Maharaja Sayajirao University of Baroda. Earlier, Er Ambikesh Natvarlal Padhya, Chairman, Vadodara Local Centre, IEI delivered welcome address. Er Keyurkant Manibhai Thakkar, Honorary Secretary, Vadodara Local Centre, IEI proposed the vote of thanks.



## Project Management Associates Weekend Programme



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- 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 **2, 3, 9, 10 June 2023**. The relevant material is available in the link <https://www.pma-india.org/brochures>.

**Exam Dates for Level C:** 17, 23, 24 June 2023

**Exam Dates for Level D:** 17 June 2023

**Exam Venue:** Secure and Seamless Online Exam & Assessment

**For more details, please contact:**

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# News-in-Brief

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

## STATE CENTRES

### Karnataka

Organized the Annual Commemoration Lecture to mark the merger of the erstwhile Mysore Engineers' Association with IEI on the theme 'Impact of Digitalization on Engineering Design & Manufacturing – Industrial & Strategic Contexts' on 29 October 2022 in Bengaluru. The Speaker of the event, Dr U Chandrasekhar, Former Additional Director, GTRE, DRDO & Visiting Professor, IIT Bombay explained, how digitalization can impact the domain of sustainability in manufacturing. He further explained Business Model Innovation (BMI) and its use in integrating work-related infrastructure.

Organized the Prof B R Narayan Iyengar Memorial Lecture on the topic 'Experiences of a Mechanical Engineer in Aeronautical Industry' on 28 January 2023 through hybrid mode. The Speaker of the event was Mr K Prakash, Former Executive Director, Mission and Combat Systems R & D Centre, Hindustan Aeronautics Limited. Mr Prakash shared his experiences in Aeronautical Industry with Mechanical Engineering background. He discussed on HAL's Design and Manufacturing lines including Basic Trainers, helicopters and advanced fighter aircraft. He explained the intricacies and complexities as a part of aircraft R&D, manufacturing, maintenance and upgrades, to meet the country's defence requirements.

Observed International Women's Day and a Seminar was organised on the theme 'DigitAll: Innovation and Technology for Gender Equality' on 08 March 2023 in Bengaluru to recognize the achievements of women in engineering and promote gender equality in the field. Smt Gangubai Mankar, IAS, Director, AJSK Directorate, Revenue Department, GoK graced the occasion as Chief Guest. Dr Enti Ranga Reddy, Honorary Secretary, Karnataka State Centre, IEI said that International Women's Day is an event when women are recognized for their achievements. He emphasized a gender responsive approach to innovation, technology and digital education to increase the awareness of women and girls regarding their rights and civic engagement. On the occasion, women engineering professionals were also honoured for their contribution in engineering and technology.

### Kerala

Organized a technical talk in association with IEEE, CSI, INSARM, ASI, SSI, ISTD, SAME, IITArb, PIM, IETE on 'Disaster Management – A Practical View' on 04 January 2023 in Thiruvananthapuram. The Speaker of the event was Dr R Murukesan, Former Chief Engineer, Kerala PWD.

Organized a technical talk in association with IEEE, CSI, INSARM, ASI, SSI, ISTD, SAME, IITArb, PIM, IETE on 'Business Skills for Engineers and Scientists' on 11 January 2023 in Thiruvananthapuram. The Speaker of the event was Mr E J Francis, Former Group Director, CCQG, VSSC, ISRO.

Organized a technical talk in association with IEEE, CSI, INSARM, ASI, SSI, ISTD, SAME, IITArb, PIM, IETE on 'Management of Anxiety and Stress' on 18 January 2023 in Thiruvananthapuram. The Speaker of the event was Mr P Sekharan Kutty, Former AGM (Retd), Indian Overseas Bank.

Organized a technical talk in association with IEEE, CSI, INSARM, ASI, SSI, ISTD, SAME, IITArb, PIM, IETE on the topic 'Engineers as Arbitrators' on 25 January 2023 in Thiruvananthapuram. The Speaker of the event was Dr Sunil Vasudevan, Former Deputy Chief Engineers, PWD, Kerala.

### Madhya Pradesh

Organized a webinar on 'Failure Mode Effective Analysis (FMEA) of Wind Turbines' on 31 January 2023. Guest Speaker of the event was Dr Abhishek

Choubey, Associate Professor, Department of Mechanical Engineering, SISTEC-R, Bhopal. Dr Choubey in his lecture mentioned that it is easy to classify the components of wind turbines on the basis of severity and probability of the failure.

### Maharashtra

Organized a Webinar on 'Climate Change Risks, Resilience and Management – Causes of Global Warming and Climatic Changes: Its Impacts and Mitigation Measures' on 20 August 2022. Convener of the event, Prof Rajendrakumar V Saraf, Chairman, Viraj Envirozing India Pvt Ltd and Convener, Environmental Engineering Division, Maharashtra State Centre, IEI delivered briefly on Sustainable Development. Guest Speaker of the event, Prof (Dr) Debashish Raha, discussed about the effect of burning of uncontrolled fossil fuel towards increased greenhouse gas concentration, climate change, increasing cost of operation, maintenance and renewal. Dr M B Dagaonkar, Former City Engineer and Ex AMC, NMMC and Former Council Member, IEI summed up the proceedings of deliberation.

### Tripura

Observed Transport Day on 10 November 2022 and a seminar was organised on the topic 'Efficient and Economical Solution for Traffic Congestion in Urban Areas of Agartala City' on 10 November 2022 at Agartala. Guest of Honour of the event was Mr Rothluanga Darlong, Superintendent of Police (Traffic), Agartala and Special Guest of the event was Mr Mahendra Kambey Chakma, Assistant Municipal Commissioner, Agartala Municipal Corporation. They emphasized on the improvement of traffic management in Agartala city. Special Speaker of the event, Dr Partha Pratim Sarkar, Associate Professor, Department of Civil Engineering, NIT Agartala discussed on the multiple factors for traffic congestion in the urban areas of Agartala City. Some of the remedial measures discussed during the Seminar include; provision of sub urban transit; optimizing signal timings at important intersections; implementation of flexible time schedule etc.

On 28 February, 2023, Tripura State Centre, IEI observed National Science Day in association with Department of Science, Technology and Environment, Government of Tripura in Agartala. A seminar was organised on the topic 'Global Science for Global Wellbeing'. Er Animesh Das, IAS, Director, Department of Science, Technology and Environment, Government of Tripura graced the function as Chief Guest. Guest of Honour of the event was Prof Badal Kumar Datta, Dean, Faculty of Science, Tripura University (A Central University). Special Speaker of the event was Dr Suman Deb, Head, Department of Computer Science and Engineering & Chairman, Institute Innovation and Start up, NIT, Agartala. In this program, the Speakers discussed the perspective view for observing National Science Day and highlighted how the outcome oriented global collaboration are required to address the global challenges and how the progress and development of Indian Science have contributed for the mankind.

## LOCAL CENTRES

### Ananthapuram

Organized Royal Charter Day on 09 September 2022 at Ananthapuram. A Seminar was also organized on the occasion. Keynote Speaker of the event was Dr V Venugopal Reddy, Ex. Principal, Professor and Head, Mechanical Engineering Department, JNTUA College of Engineering. Prof C Sashidhar, Registrar, JNT University, Ananthapuram also spoke on the occasion.

Organized 55<sup>th</sup> Engineers' Day 2022 on the theme 'Smart Engineering for a Better World' on 15 September 2022 at Ananthapuram. Keynote Speaker of the event Prof P R Bhanu Murthy, Director of Faculty Development, JNT University, Ananthapuram mentioned the role of IEI to take stock of various capacity and capability building initiatives in the crucial sectors like road and rail connectivity, drinking water, agriculture, healthcare and nutrition, affordable house and better governance through smart technologies to achieve Sustainable Development Goals in a phased manner. He told that the theme encompasses issues of environmental sustainability and stressed on specific roadmap towards building a smart infrastructure and trying to replicate a generic global template. He further emphasized synergy between industry, academia and thus fostering an ecosystem where different players can participate by sharing their best practices and action plans for switching to a smart infrastructure for a sustainable and prosperous future.

#### Gwalior

Organized World Television Day 2022 on 21 November 2022 at Gwalior. Speakers of the event were Prof R K Khetan, Former Professor in Madhav Institute of Technology & Science(MITS) & Former HoD, Jiwaji University; Col A S Bais, Retired Colonel from Indian Army and Ms Palak Agarwal, from MITS, Gwalior.

#### Kadapa

Organized a Technical Seminar on 'Machine Learning and Its Applications' on 26 November 2022. Speaker of the event, Mr B Ammanni, Academic Consultant, Department of Digital Techniques for Design & Planning, Dr YSR Architecture and Fine Arts University, Kadapa, discussed about Machine Learning Algorithms, applications etc.

#### Kanpur

Organized a Lecture on 'Next Generation of Chemical Manufacturing and Waste Management' on 30 October 2022 at Kanpur. Guest Speaker of the event, Dr Sanjiv Kumar Gupta, Former Head, Department of Chemical Engineering, H B T University, Kanpur discussed on process intensification, advanced separation processes, new energy forms for thermal processes, computational modelling, automation, robotics, computing and intelligent systems. He mentioned in detail about the development of smaller intensified process equipment with production rates as equivalent to those of current equipment, which results in significantly improved material utilization, reduced energy and capital requirement, safer equipment designs. He explained about the separations, the most energy-intensive and inefficient operation in the chemical and allied industries which have the ability to achieve advancement in both materials like membranes and processes like membrane reactors. Carbon dioxide capture and sequestration technologies are another valuable application for advanced separations, he explained further. He also discussed the waste management methodology in various industries and the associated challenges.

Organized Lecture on 'Applications of Fracture Mechanics' on 30 November 2022 through online mode. Guest speaker of the session, Dr Rajeev Kumar, Associate Professor, Axis Institute of Technology & Management, Kanpur explained the application of fracture mechanics for design of engineering structures with relative comparison to stress or stiffness based approach. He also discussed at a length the application of fracture mechanics in development of cracks and its subsequent propagation.

#### Kanyakumari

Organized a Special Seminar on 'Digital Transformation and Innovation Ecosystems' on 08 November 2022 at Nagercoil. Keynote Speaker of the session, Prof M Moni, Professor Emeritus and Chairman, CDSA & CISTA explained the need of digital transformation in India and Sustainable Development Goals.

Organized a Special Seminar in association with IET, Kanyakumar Local Network and IETE Trivandrum, Nagercoil PAC on the topic 'Campus to Corporate Shift' on 25 November 2022 at Nagercoil. Keynote Speaker, Mr

R Rajiv Subramoniyam, HR ATOS explained the gap between industry and academia and discussed the roadmap to overcome the issues.

#### Kollam

Arranged Industrial visit to Travancore Titanium Product Limited, Thiruvananthapuram on 12 November 2022 at Thiruvananthapuram. The purpose of this visit was to acquaint the members and students about the machineries used in this industry and the practical methods, technologies, processes used to produce titanium products.

#### Mangalore

Organized a Lecture Programme on 'Use of Kannada (Regional Language) in Engineering Education' on 09 November 2022 at Mangalore. Chief Guest of the session was Dr Bhaskar Malwa, Post Doctoral Fellow and Assistant Professor, Civil Engineering Department, St Joseph's College of Engineering, Mangalore.

Organized World Habitat Day 2022 on the topic 'Mind the Gap – Leave No One and Place Behind' on 15 November 2022 at Mangalore. Chief Guest of the event was Mr Rajendra Kalbavi, Project Director, DK Nirmithi Kendra. In his address, Mr Kalbavi mentioned about inadequate housing due to unplanned urbanization and stressed for more investment to provide affordable housing to all with access of electricity, water, sanitation, transport and other basic services. Prof Raghunatha Rai, Principal, A J Institute of Technology and Engineering, Mangalore also spoke on the occasion.

#### North Bengal

Organized a lecture meeting on 'Impact of Urbanization on Groundwater' on 06 January 2023 at Jalpaiguri. Theme Speaker of the event, Er Sandipan Ganguly, Assistant Professor, Department of Civil Engineering, Jalpaiguri Government Engineering College, Jalpaiguri discussed about the increased urbanization worldwide and discussed about the essential infrastructure facilities of towns, namely water supply, solid waste collection and sewage water collection. He mentioned that the demand of drinking water in cities usually cannot be satisfied by the catchment area of the city itself as precipitation discharges are lower than the demand and thus groundwater abstraction for big cities mostly results over exploitation of the city catchment.

#### Palghat

Organized a webinar on 'Supply Chain Basics for Engineers Lessons in Competing to Excel' on 06 August 2022. Keynote Speaker of the event, Prof Suren Palakkal, Adjunct Professor, Campbell University, USA discussed about different aspects of Supply Chain and role of product design in supply chain.

Organized Group Discussion on the topic 'India Poised to Push Semiconductor Manufacturing in Big Way to Become a Global Player. Prospectus of India Becoming a Global Player' on 28 January 2023 at Palakkad. Mr Madhana Mohan K, Chairman, Palghat Local Centre, IEI explained about semiconductor, its usage, semiconductor industry, semiconductor fabrication, investment in the semiconductors industry and the Indian scenario. Dr Pradip C, Honorary Secretary, Palghat Local Centre, IEI presented the global requirement of semiconductor chips and the leading manufacturing companies in the world. Dr N C Balakrishnan, Former MD/CEO of various PSU's; Mr A V Rajappan, MD, Navabharath System and Devices Pvt Ltd; Mr N M Ravidanath, Former Head, BPL Group of Companies; Mr A Kesavan, Former Senior Manager, FCRI, Palakkad; Mr A Ramesh, Chief Manager (Maintenance), Arya Vaidya Sala Factory Complex, Palakkad; Mr K A Vijayaraghavan, Former GM, KAMCO, Kanjikode; Mr K Unnikrishnan, Executive Engineer, PWD (Retd); Mr R Ramadas, GM (Retd), National Aluminium Company Limited (NALCO) participated in the discussion.

#### Ranipet

Organized a webinar on 'Sustainability – Need in the Indian Context' on 31 August 2022. Speaker of the event, Mr John Sushil Packiaraj, School of



Civil Engineering, Vellore Institute of Technology, Vellore discussed the key points of sustainability. The speaker mentioned about sustainable use of energy by using lesser energy to get the same work done. He mentioned about critical elements of sustainability in today's scenario such as no poverty-zero hunger, good health and well being, quality education, gender equality, clean water & sanitation, affordable & clean energy, sustainable cities & communities, climate action, life on land and so on. He highlighted on sustainability aspects in buildings such as, need for careful engineering; thermal efficiency of building; cooling strategies; Lighting, HVAC.

Organized a lecture programme on 'Green Electronics' on 22 December 2022 through online mode. Speaker of the event was Er A Mohammed Mian, Associate Professor, Electronics and Communication Engineering Department, C Abdul Hakeem College of Engineering & Technology, Melvisharam. The key points discussed in the webinar include; e-waste & its generation aspects; categorization of electric & electronic waste & its relative quantum; worldwide waste generation; harmful elements in e-waste such as lead, cadmium, mercury, PBDE, etc; traditional disposal methods for e-waste like incineration, land-filling, recycling; different aspects of green electronics; lean design in electronics, green electronic materials & components like biodegradable conductors, electronics, semiconductors, carbon nanotubes & fibers, grapheme, etc.

### South Gujarat

Organized Debate Competition on the topic 'Productivity: Green Growth & Sustainability' in association with South Gujarat Productivity Council, South Gujarat Chamber of Commerce & Industry and Think India to celebrate Productivity Week and India's G20 Presidency on 12 February 2023 at Surat. Chief Guest of the event, Shri Ajay Kumar Tomar, IPS, Commissioner of Police, Surat in his Keynote address explained the concept of productivity in detail and requested to increase productivity by harnessing the talents of individual. He further emphasized on technical knowledge advancement to save resources and time.

### Udaipur

Organized a Technical Talk on 'Role of Members for the Growth of The Institution of Engineers (India), Udaipur Local Centre' on 31 October 2022 at Udaipur. Keynote Speaker of the event, Mr Rajkumar Singh Chouhan, Additional Chief Engineer, PWD, Udaipur in his address spoke about the necessity of growth and about the parameters & challenges ahead in terms of growth of IEI. He discussed briefly about the benefits provided by IEI like R&D Grants for members; Guest house facilities; practice as an engineering profession; access to technical publications; continuous professional development; Chartered Engineer Certification; participation in technical events; registration as a Professional Engineer; regular publication of journals; value added benefits provided to the members of IEI etc.

### Tiruchirappalli

Organized a Lecture in association with Computer Society of India, Tiruchirappalli Chapter; Indian Institute of Welding, Tiruchirappalli branch; Indian Welding Society Southern Zone; Indian Institute of Metals, Tiruchirappalli Chapter; Indian Institution of Industrial Engineering, Tiruchirappalli; Kumari Arivial Peravai Kanyakumari and Indian Society for Non-destructive Testing, Trichy Chapter on 'Additive Technology- a step towards Smart Manufacturing' on 12 July 2022 through online mode. Speaker of the session was Dr Nirmal Das, Chairman, West Bengal State Centre & Council Member, IEI & Former DGM (SO G), Electronics Corporation of India Limited under Department of Atomic Energy and Professor of International Institute of Management Sciences, Kolkata. Dr Nirmal Das spoke in details about additive technology. In his presentation he showed how future is turning towards additive technology and its benefit in every facet of our life right from food, healthcare, construction, aviation, automobiles and other industrial usages.

Organized a Lecture on topic "Productivity Improvement in Pre Weld, Post

Weld using Induction Heating Solutions. SWAT accelerating GTAW 10x Productivity" in association with Computer Society of India, Tiruchirappalli Chapter; Indian Institute of Welding, Tiruchirappalli Branch; Indian Welding Society, Southern Zone; Indian Institute of Metals, Tiruchirappalli Chapter; Indian Institution of Industrial Engineering, Tiruchirappalli; Kumari Arivial Peravai Kanyakumari and Indian Society on 19 July 2022 through online mode. Speaker of the event was Er Nimesh Chenoy, Marketing Director, M/s Sigma Weld Electronics Devices Worldwide Private Limited, Mumbai. The speaker discussed at a length Induction Heating, SigmaWeld Accelerated TIG (SWAT), GTAW automated SWAT and so on.

Organized a Lecture in association with Computer Society of India, Tiruchirappalli Chapter; Indian Institute of Welding, Tiruchirappalli branch; Indian Welding Society Southern Zone; Indian Institute of Metals, Tiruchirappalli Chapter; Indian Institution of Industrial Engineering, Tiruchirappalli; Kumari Arivial Peravai Kanyakumari and Indian Society for Non-destructive Testing, Trichy Chapter on the topic 'Manufacturing Process Inspection' on 26 July 2022 through online mode. Speaker of the session was Dr Sheela Siddappa, Principal Data Scientist, Data & AI Services Unit, Kyndryl, Bangalore. Dr Siddappa discussed about sound based ML approach for detection of internal defects during welding.

Organized a Lecture on the topic "Ethics & Emerging Technology" in association with Computer Society of India, Tiruchirappalli Chapter; Indian Institute of Welding, Tiruchirappalli branch; Indian Welding Society Southern Zone; Indian Institute of Metals, Tiruchirappalli Chapter; Indian Institution of Industrial Engineering, Tiruchirappalli; Kumari Arivial Peravai Kanyakumari and Indian Society for Non-destructive Testing, Trichy Chapter on 09 August 2022. Speaker of the session was Dr Sundar Vedantham, Director of Software Development, Intel Corporation, USA. The speaker elaborated about Moore's Law, Artificial Intelligence, Deep Learning, Neural Network, Moral Machine Survey etc.

Organized a Lecture in association with Computer Society of India, Tiruchirappalli Chapter; Indian Institute of Welding, Tiruchirappalli branch; Indian Welding Society Southern Zone; Indian Institute of Metals, Tiruchirappalli Chapter; Indian Institution of Industrial Engineering, Tiruchirappalli; Kumari Arivial Peravai Kanyakumari and Indian Society for Non-destructive Testing, Trichy Chapter on 'Clean Energy Solutions for the Emerging World' on 16 August 2022 through online mode. Speaker of the session was Dr S Ingersol, Scientist H, Former Group Director, LPSC/ISRO, Bangalore. Mr G Madhuramani, Chairman, Indian Institution of Industrial Engineering, Tiruchirappalli introduced the Speaker.

Organized a Lecture in association with Computer Society of India, Tiruchirappalli Chapter; Indian Institute of Welding, Tiruchirappalli branch; Indian Welding Society Southern Zone; Indian Institute of Metals, Tiruchirappalli Chapter; Indian Institution of Industrial Engineering, Tiruchirappalli; Kumari Arivial Peravai Kanyakumari and Indian Society for Non-destructive Testing, Trichy Chapter on 'Work Place Safety and Ergonomics' on 23 August 2022 through online mode. Speaker of the session was Dr Kuruva Gopanna, Manager, Safety Department, Bharat Heavy Electricals Limited, Tiruchirappalli.

Organized a Lecture in association with SQF, New Delhi; Computer Society of India, Tiruchirappalli Chapter; Indian Institute of Welding, Tiruchirappalli branch; Indian Welding Society Southern Zone; Indian Institute of Metals, Tiruchirappalli Chapter; Indian Institution of Industrial Engineering, Tiruchirappalli; Kumari Arivial Peravai Kanyakumari; and Indian Society for Non-destructive Testing, Trichy on 'Engineering in Thirukural' on 20 September 2022 through online mode. Speakers of the event were Dr P S Kumar, Executive Director, M/s Prithivi Grow Care Private Limited, Chennai and Dr S Ashokan, Director, Nature Shine Herbals Private Limited, Chennai.

Organized a Lecture in association with SQF, New Delhi; Computer Society of India, Tiruchirappalli Chapter; Indian Institute of Welding, Tiruchirappalli branch; Indian Welding Society Southern Zone; Indian Institute of Metals,

Tiruchirappalli Chapter; Indian Institution of Industrial Engineering, Tiruchirappalli; Kumari Arivai Peravai Kanyakumari and Indian Society for Non-destructive Testing, Trichy Chapter on the topic 'Artificial Intelligence and Robotics: The Future Decoded' on 27 September 2022 through online mode. Speaker of the session was Dr Munish Jindal, Founder & CEO, Hover Robotix & Founding President, MENTORx, New Delhi. Mr G Madhuramani, Chairman, Indian Institution of Industrial Engineering, Tiruchirappalli has introduced the Speaker to the audience. In this webinar, various topics were deliberated on data science, Artificial Intelligence, Deep Learning, Supervised and Unsupervised Machine Learning, Natural Language Processing, Image Recognition, Speech Recognition, Robotics etc.

### Trichur

Organized a webinar on 'Satyan King-Pin-Drive for Electric Vehicle' on 19 November 2022. The Speaker of the event, Dr T N Sathyanesan, Former Professor, Department of Mechanical Engineering, Government Engineering College, Thrissur discussed about rapid use of electric vehicles all over the world and the new method of power transmission from electric motor to the front wheel through king pin. Dr Sunil Kumar CP, Chairman, Trichur Local Centre, IEI explained that king-pin is a mechanical element connecting the stub axle and front axle beam of the car. The steering movements to stub axles holding the front wheel transmission shafts are facilitated by the king-pins, he added.



## 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 June 2023

Sl. No.	Name of the Course	Scheduled Dates
1.	Construction of Building without Bricks and Motar	05 - 09 Jun 23
2.	Process, Technology and Application of Aerospace Materials	05 - 07 Jun 23
3.	GEM Procurement Procedures - Gem Account operation from Basic to expertise (Buyer module) (Online)	05 - 09 Jun 23
4.	Mining Plan, Environmental Management Plan, Project Report, Project Evaluation, Application of Software, GIS, RS & ISO -14001:2015	05 - 09 Jun 23
5.	Contract Management and Dispute Resolution in Projects	05 - 09 Jun 23
6.	Air pollution Monitoring & Modeling using Software Applications - Theory & Practical's.	07 - 09 Jun 23
7.	Operation, Maintenance and Quality Assurance of High-pressure valves and Heat Exchangers	07 - 09 Jun 23
8.	Latest Techniques in O&M of Steam Turbine & its Auxiliaries, Governing System	07 - 09 Jun 23
9.	Total Quality in Vigilance	07 - 09 Jun 23
10.	Building Finisher & Rehabilitation Works	12 - 16 Jun 23
11.	Metal Additive Manufacturing and its Applications	12 - 15 Jun 23
12.	AWS Cloud Administration	12 - 14 Jun 23
13.	Application of GIS, GPS & RS in Environmental Data Management.	13 - 15 Jun 23
14.	Transmission Line Construction (Survey, Design of lines and construction practices)	13 - 16 Jun 23
15.	Ecology and Biodiversity	19 - 21 Jun 23
16.	Blockchain Technology for Industry 5.0 (Online)	19 - 23 Jun 23
17.	Advances in Industrial Heat Treatment of Metals and Alloys	19 - 21 Jun 23
18.	Laboratory Management System Awareness & Internal Auditing (As per ISO / IEC 17025 : 2017 & NABL Requirements)	19 - 22 Jun 23
19.	Flood Analysis Using Advanced Software Techniques	19 - 23 Jun 23
20.	Distribution Transformers - O&M achieving Zero Breakdown	20 - 23 Jun 23
21.	Performance Evaluation of Sewage Treatment Plants - Practical Aspects and Field Visits.	21 - 23 Jun 23
22.	Safe Operation- In-Pit & Dump Slopes Stability in Mining & Highway Projects, Haul Roads Safety	21 - 23 Jun 23
23.	Kinematics & Dynamics of Robots	26 - 28 Jun 23
24.	Work Culture, Ethics and Values for Scientists and Technologists	26 - 28 Jun 23
25.	Insurance and Risk Management in Power Utilities (Online)	26 - 28 Jun 23

For detail information please contact:

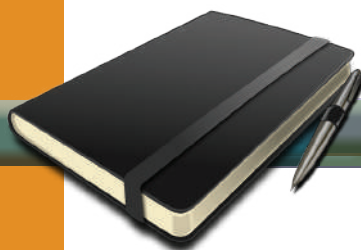
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# IEI DIARY



## Aerospace Engineering Division

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]

All India Seminar on **"Innovative Trends and Aspects of Nanotechnology: Fueling the Chemical Industry's Future"**

Coimbatore, September 21-22, 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

## Civil Engineering Division

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 **"Restrengthening of Old Building & Civil Structures by Retrofitting"**

Dehradun, June 10-11 2023

The Honorary Secretary, IEI, Uttarakhand State Centre, Near ISBT Flyover, Saharanpur Road, Dehradun, 248002, Telefax: 0135-2641190/9412056431, E-mail: uttarakhandsc@ieindia.org, Website: www.ieiuksc.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 08-09, 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.ieilbelagavi.org]

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

Jabalpur, November 25-26, 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

## Computer Engineering Division

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: ieijscjharkhand.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]

Thirty-sixth National Convention of Computer Engineers on **"Blockchain Technology for Artificial Intelligence of Things (AIoT)"**

Salem, October 17-18, 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: salemlc@ieindia.org; Website: www.ieislcm.org]

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

Kanchepuram, October 18-19, 2023

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

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

Kanchepuram, June 07-08, 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 **"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 Workshop on **"Role of IoT in Smart Grid Technology and Applications"**

Hosur, August 03-04, 2023

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

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

Tiruchirappalli, September 27-28, 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: tiruchirappalllc@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: hpssc@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 : tnscc@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: tiruchirappalllc@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: Kaloar, 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 Engineering on **"Eco-friendly & Sustainable Approaches for Landslide and Land Subsidence Management in Hilly Regions"**

Shimla, September 15-16, 2023

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

**Marine Engineering Division**

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, July 22, 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"**

Kancheperum, August 25-26, 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 **"Industry 4.0 for Eco-friendly Marine Solutions"**

Colombo, November 17-18, 2023

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

**Mechanical Engineering Division**

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]

One Day Workshop on **"Scope for Mechanical Engineers in HVAC and R Sector"**

Puducherry, July 10, 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 "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: puducherry@ieindia.org, Website: www.ieipsc.org]

**One Day Seminar on "Thermal Power Plant Bottom Ash - Sustainable Utilization for Tomorrow"**

Kolkata, July 28, 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 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: assam@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: nagpur@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]

**All India Seminar on "Advancements, Challenges and Opportunities in Electric Vehicles"**

Coimbatore, September 26-27 2023

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

**All India Seminar on "Interfacing Mechanical Engineering with Artificial Intelligence and Machine Learning"**

Coimbatore, October 10-11, 2023

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

**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: rajasthan@ieindia.org

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

Kolkata, November 17-18, 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**

**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: kanchepuram@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: jharkhand@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: bareilly@ieindia.org]

**Textile Engineering Division**

**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, Chempauk, Chennai 600005 [☎: 044-25360614 /9962950333, E-mail: tns@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: udaipur@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, Roukela 769008, Odisha [☎: 0661-2472709, E-mail: rourkelal@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: durgapur@ieindia.org; Website: www.ieidurgapur.org]

**All India Seminar on "Green Technologies for Sustainable Development"**

Pune, September 02-03, 2023

The Honorary Secretary, IEI, Pune Local Centre, Abhiyanta Bhavan, 1332 J M Road, Shivajinagar, Pune 411005 [☎: 020-25533376 / 25520239 (Admin Incharge: 8380042746), E-mail: punelc@ieindia.org; Website: www.ieipune.org]

## Superannuation from IEI



Mr Chhotelal Yadav, an employee of the Bihar State Centre of the Institution has superannuated from the services of IEI on May 31, 2023. He joined the Institution on November 01, 1989 and rendered his services to the Institution over a period of 33 years.

IEI wishes Mr Chhotelal Yadav and his family a happy and healthy life in future.



# The Institution of Engineers (India)

## Notification for R&D Grant-in-Aid

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

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

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

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

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

Kindly go through the guidelines (visit link <https://www.ieindia.org/webui/IEI-Activities.aspx#RnD-Initiative>) before filling up the application.

## 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](mailto:datamemb@ieindia.org)

The form is available in IEI Website:

[https://www.ieindia.org/WebUI/ajax/Downloads/WebUI\\_PDF/HIGHLIGHTS\\_DOCUMENT-3332.pdf](https://www.ieindia.org/WebUI/ajax/Downloads/WebUI_PDF/HIGHLIGHTS_DOCUMENT-3332.pdf)

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