



IEI NEWS

March 2024

Artificial Intelligence and IoT in Agriculture and Food Industry 4.0

4

Robotic Artificial Intelligence enabled Cyber Crime.....

6

Metal Casting Technology: The Backbone.....

7

Reports of Energy Conservation Day 2024

8

PROCEEDINGS of 104th AGM of IEI

12

News-in-Brief

14

IEI Diary

19

A CENTURY OF SERVICE TO THE NATION

Volume 30

Number 12

UNESCO WFEO World Engineering Day 2024

Conference & Special Executive Council Meeting in Lisbon, Portugal



The official delegation from The Institution of Engineers India (IEI) to the UNESCO WFEO World Engineering Day 2024 **Conference and Special Executive Council Meeting in Lisbon, Portugal**, was constituted by the Honorable President of IEI. The event took place on March 4th and 5th, 2024. As a National and Founder Member of the World Federation of Engineering Organizations (WFEO), IEI nominated the following representatives to participate in the event: Mr Ashok Kumar Basa, Executive Vice-President of WFEO, Mr S S Rathore, Chair, WFEO Committee on Information & Communication (WFEO-CIC) and Mr Navinchandra B Vasoya, National Member of the Executive Council of WFEO. However, Mr Vasoya was unable to attend due to prior personal commitments.

Contd. on page 2

Thirty-seventh National Convention of Environmental Engineers and National Seminar

Eco Friendly & Sustainable Approaches for Erosion, Landslide and Land Subsidence Management in the Hilly Regions

The 37th National Convention of Environmental Engineers was organized by **Himachal Pradesh State Centre** of the Institution during 26-27 October 2023 in association with Bureau of Indian Standards (BIS), University Institute of Technology (UIT), HP University and Uttarakhand Landslide



Mitigation and Management Centre under the aegis of the Environmental Engineering Division Board, [ENDB] IEI at Shimla. The event was a remarkable success and was graced by eminent personalities and experts in the field. A National Seminar was also organized on the theme **Friendly & Sustainable Approaches for Erosion, Landslide and Land Subsidence Management in the Hilly Regions**, which struck

Contd. on page 5

From the President's Desk.....

Retracted Research: Unveiling the Challenges in Scientific Publishing



In the realm of academic research, the integrity and trustworthiness of published papers stand as the bedrock of scholarly discourse. Yet, recent revelations have rocked the very foundation of scientific publishing, exposing a troubling surge in retractions worldwide. Various analyses, drawing from the repositories of Retraction Watch and numerous reputable journals, have indicated a significant uptick in retracted scientific papers. The year 2023, in particular, witnessed an unprecedented wave, with over 10,000 papers facing retractions—an alarming 2.5-fold increase from the previous year. Notably, a significant portion of these retractions trace back to journals under the banner of frontline publishers.

India, too, grapples with a concerning escalation in retractions, witnessing a manifold increase since 2010. The nation ranks third globally in this regard, with notable instances of retractions emerging from prestigious academic institutions. Plagiarism and duplication of papers emerge as prominent reasons behind these retractions.

The proliferation of predatory journals exacerbates the issue, with India leading in the publication of such dubious platforms. These journals, devoid of rigorous editorial oversight, cater to authors seeking quick publication at a hefty fee. Furthermore, the presence of shadow agencies, known as paper mills, highlights the intricate web of deceit permeating scientific publishing.

Retraction serves as a crucial mechanism to uphold the integrity of scholarly literature. However, discerning between genuine errors and intentional misconduct remains a complex endeavor. Nevertheless, deliberate manipulation, including data fabrication and plagiarism, constitutes a significant portion of retractions.

The repercussions of fraudulent research reverberate throughout academia and beyond. Despite retractions, a concerning number of retracted articles continue to receive citations, perpetuating misinformation. The delayed

Contd. on page 3

Conference & Special Executive Council Meeting in Lisbon, Portugal

Contd. from page 1

World Engineering Day (WED) 2024 was observed on March 4th, 2024, at the esteemed venue of Ordem dos Engenheiros in Lisbon, Portugal, the National Member of WFEO. The Opening Ceremony was graced by a distinguished array of dignitaries, including Elvira Fortunato, the Honorable Minister of Science, Technology & Higher Education of Portugal, Dr Lidia Brito, Assistant Director-General for Natural Sciences of UNESCO, Er Mustafa Shehu, President of WFEO, Prof Jose Vieira, Immediate Past President of WFEO, Er Seng Chuan Tan, President (Elect) of WFEO, Er Fernando A Sontos, President of Ordem Dos Engenheiros, Portugal, along with esteemed Past Presidents of WFEO and other notable personalities.

The focal point of the opening ceremony was the momentous occasion of physically handing over the copies of the book titled "Ethics in Artificial Intelligence: Bias, Fairness and Beyond," published by Springer Nature for IEI, which hosted the WFEO Committee on Information & Communication



(WFEO-CIC), with S S Rathore, Past President of IEI, serving as its Chair. The WFEO-CIC stands as one of the significant Standing Technical Committees of WFEO, diligently addressing various Sustainable Development Goals (SDGs) outlined by UNESCO. Noteworthy is the tenure during which IEI hosted the WFEO-CIC from 2015 to 2019, subsequently extended to 2019-2023 due to its commendable performance. It's a source of great pride that this collaboration resulted in the historic achievement of publishing a book by an International publisher under the stewardship of a Standing Technical Committee, a first in WFEO's history.

The President of WFEO, in his opening address, underscored the significance of this achievement, lauding IEI for its remarkable initiative. A poignant moment ensued when the President of WFEO invited the Honorable Minister, the ADG Natural Science UNESCO, Past Presidents, and President (Elect) of WFEO to join him at the dais as he received the physical copy of the book, marking a historic milestone for both WFEO and IEI. This moment resonated as a testament to the collaborative spirit and dedication towards advancing engineering ethics and knowledge, setting a precedent for future endeavors in the field.

The physical handover of the book took place immediately after the welcome speech by the President of WFEO at the onset of the opening ceremony. Subsequently, other dignitaries, including the Honorable Minister and senior UNESCO officials, delivered their addresses. Following the conclusion of

the opening ceremony, the Hackathon Awards Ceremony was conducted, followed by an enlightening address by Prof S.F de Azevedo, President of the Portuguese Academy of Engineers, Portugal.

The post-lunch session extended from 14:00 to 18:00, punctuated by a 30-minute tea break. During this time, speakers delved into various aspects of "Energy Transition & Sustainability." Mr. Basa and Mr. Rathore attended all these functions and sessions, actively engaging with the discussions and presentations.

On March 5th, a series of meetings for various Board Appointed Committees took place. Mr. Ashok Basa, Executive Vice-President of WFEO, participated in the Finance Committee & Executive Board meetings. Notably, owing to his commendable performance, Mr. Basa has been re-nominated as the Chair of the Strategic Planning Committee (SPC) for the term spanning 2023-2025, having previously held the position from 2022-2023. During the SPC session chaired by Mr. Basa, numerous significant suggestions were deliberated upon, aimed at enhancing the efficacy of WFEO and delineating its role within UNESCO and the UN. It is important to note that the Strategic Planning Committee holds immense importance within WFEO, being one of its pivotal Committees, comprising approximately ten members from across the globe.



As The Institution of Engineers India (IEI) had served the maximum allowable two terms hosting the WFEO Committee on Information & Communication (WFEO-CIC), it was time to transition this responsibility. Following Iraq's agreement to host the CIC, the Executive Council (EC) consented to transferring the WFEO Committee on Information & Communication (WFEO-CIC) to Iraq.

During the event, S.S Rathore participated in the meeting of All Committee Chairs and engaged in interactions with the President's Advisors Committee. Furthermore, both Mr. Basa and Mr. S.S Rathore actively participated in the Special Executive Council Meeting held from 4 pm to 6 pm on March 5th, contributing their insights and perspectives to the deliberations.

The UNESCO WFEO World Engineering Day 2024 Conference and Special Executive Council Meeting held in Lisbon provided a platform for global collaboration and exchange of ideas, with notable contributions from the Indian Delegation and other esteemed participants, shaping the future of engineering for sustainable development.

Certificate of Practice for Practising Chartered Engineers

The Corporate Members of the Institution having Chartered Engineer Certificate in the current grade of Membership with five years of experience as an Engineer in the relevant field can apply for **Practising Chartered Engineers Certification**. The Institution will issue **Practising Registration No.** for practising Chartered Engineers, which is valid for **five years**.

The application fee for empanelment is, Rs.5900/- (GST included), which may be paid through Demand Draft/ Multi-city Cheque in favour of "The Institution of Engineers (India)" payable at Kolkata.

The hard copy of application should reach to:-

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

Please visit : <https://www.ieindia.org/webui/IEI-RegistrationForPPCE.aspx> for more details.

Smart Textiles

Tamilnadu State Centre of IEI organized the 36th National Convention of Textile Engineers in Chennai during 06-07 October 2023 under the aegis of Textile Engineering Division Board [TXDB]. A National Seminar was also organized on the occasion on the theme **Smart Textiles**. Thiru Dharmendra Pratap Yadav, IAS, Principal Secretary to Government, Handlooms, Handicrafts, Textiles and Khadi Department, Government of Tamilnadu, graced the function as the Chief Guest and inaugurated the program. Er E R Eswaran, Hon'ble Member of the Legislative Assembly, Thiruchengode, Tamilnadu, was the Guest of Honour. The National Convention commenced with the ceremonial lighting of the lamp by esteemed dignitaries seated on the dais. Dr V Karthikeyan, presently Chairman, Tamilnadu State Centre, IEI, delivered the welcome address. Prof (Dr) P Mohanraj, Committee Member, Textiles, Tamilnadu State Centre, IEI and convener of the event delivered the thematic



address. Prof (Dr) Sadhan Chandra Ray, Chairman, Textile Engineering Division Board, IEI, presided over the inaugural function. On this occasion, Mr V Elangovan, Managing Director, SNQS Internationals Private Limited, Mr R Naresh, Managing Director, Shuttles & Needles Private Limited and Ergo G2 Engineers Private Limited and Prof Samrat Mukhopadhyay, Department of Textile and Fibre Engineering, IIT Delhi (in absentia) were felicitated as eminent engineering personalities for their outstanding contribution to the profession of textile engineering. The IEI Young Engineer Award in Textile Engineering Division for the year 2022-23 was presented to Dr Mukesh Bajya, Assistant Professor, Department of Textile Technology, Dr B R Ambedkar National Institute of Technology, Jalandhar, Punjab and Dr Satyaranjan Bairagi, Research Associate, Department of Textile and Fibre Engineering, IIT Delhi (in absentia). The event also witnessed the unveiling of a Souvenir and Technical Proceedings, symbolizing the advancement and knowledge exchange in the august presence of the dignitaries on the dais. Er K N Sivaraju, Honorary Secretary, Tamilnadu State Centre, IEI [Session 2021-23] proposed the vote of thanks.

Dr B K Chakrabarti Memorial Lecture was delivered by Dr J V Rao, Advisor and Former CEO, Textile Sector Skill Council, Government of India on the topic 'Business Opportunities in Technical Textiles'. Dr Wyyuru Amarnath, Managing Director, Sri Sankara Weaving Private Limited delivered Keynote lecture on the topic 'Significance of Innovations in Smart Textiles'. In his address, Dr. Amarnath emphasized the pivotal role of innovation in propelling the modern textile industry to unprecedented heights across diverse applications. He conveyed that the convergence of textiles and technology represents a groundbreaking frontier with immense potential to revolutionize industries spanning from fashion to healthcare. As innovation continues to

drive progress, this synergy between textiles and technology opens doors to new possibilities and advancements, shaping the future landscape of various sectors, mentioned Dr. Amarnath. Dr T Saravana Kumar, Founder & Director, Dev Innotech LLP, Karur, Tamilnadu, delivered Expert lecture on the topic 'Smart Sport Textiles: The Future of Sportswear' and focused on the bright prospects of smart textiles. He mentioned that this growth is being driven by a number of factors, including the increasing demand for wearable devices, the growing trend towards personalized training, and the rising popularity of smart clothing. Dr K M Pachiyappan, Associate Professor, Department of Costume Design and Fashion, PSG College of Arts & Science, Coimbatore, delivered Expert lecture on 'Smart Textiles'. He elucidated that smart textiles possess the remarkable ability to react to and adjust according to environmental stimuli originating from diverse sources. Expanding on his viewpoint, he expressed his belief that in the imminent future, the apparel industry is poised to lead the way in introducing smart textiles to the market by integrating flexible printed electronic technologies. Dr A Selvakumar, Associate Professor, Senior Grade, VIT Fashion Institute of Technology, Chennai, also delivered Expert lecture on the theme and stated that smart garment is embedded with sensors, processors, actuators, which are able to measure various vital and physical parameters through stimuli. Shri V R Karthikeyarayan, Associate Professor, Fashion Communication Department, National Institute of Fashion Technology, Chennai, delivered Expert lecture on 'How to Look Cool on Mars' and discussed the fashion and style in the context of Mars, a planet known for its' harsh conditions and barren landscapes.

Also during the technical sessions, papers were presented on different topics, namely; Development of Natural coir/ Moringa Oleifera Fiber Hybrid Composite Material for Thermal Insulation Applications; Preparation and Extraction of Microcapsules Filled with Essential Oils for Medical Textiles; Investigation of Plasma Treatment on the Moisture Management Properties of Cotton/Polyester Blended Knitted Fabrics; Pigment Dyeing of Polyester/ Cotton Blended Fabric through Cationization with CHPTAC and Dyeing in the Presence of Vanillin; Effect of Cationization on Direct Dyeing of Cotton; Development of Guduchi-based Antimicrobial Ayurveda; Review on Skin Fabric Friction and Thermo Physiological Behaviour of Skin Fabric Friction; Influence of Cyclic Tensile Straining Parameters on the Tensile Characteristics of Compact Yarns; Wild Animal Protective Textile Systems: Cut Resistant Fabric; Microbial Decolorization of Textile Dye Effluent; Insulation Elastic Textile Fabric with Heat-adjusting Sensor for Alleviating Men; Development of Thermal and pH Responsive Biocompatible Polymeric Hydrogel for All Purpose Bra Cushion; Eco-Friendly Dyeing of Various Fabrics Using Rubia Cordifolia; An Overview on Diabetic Insole; Wearable Electronic Textiles; Medical Textiles; Ceramic Coatings in Water Repellant Textiles; Integration of Cosmetics with Textile: An Emerging Area of Functional Textile Application of Textile Materials in Aerospace; Thermoregulated Textiles; Development and Characterization of Antimicrobial Super Absorbent; Bio-sludge Valorization in Textile Industry: A Thermo-chemical Approach etc.

During the valedictory function, Mr Vijay Kapoor, Founder, Derby Men graced the occasion as the Chief Guest. Er Milind Laxmikant Patil, Member, TXDB, IEI [Session 2022-23] addressed the audience. Prof (Dr) P Mohanraj summed up the proceedings of deliberation. Er K N Sivaraju proposed the vote of thanks.

From the President's Desk.....

Contd. from page 1

Retracted Research: Unveiling the Challenges in Scientific Publishing

detection of fraudulent studies exacerbates the problem, allowing flawed findings to influence public policy and technological advancements.

While efforts to improve detection methodologies and enhance editorial scrutiny are underway, challenges persist. The peer review process,

traditionally regarded as a bastion of quality assurance, faces scrutiny amid mounting retractions. Instances of manipulation, in the form of selective editing practices, underscore the vulnerabilities inherent in the review system.

As the scientific community grapples with these challenges, a concerted effort is needed to fortify the integrity of scholarly publishing. Vigilance, transparency, and robust editorial practices are essential to safeguarding the credibility of scientific research in the digital age.

Artificial Intelligence and IoT in Agriculture and Food Industry 4.0

An All India Seminar on the theme **Artificial Intelligence and IoT in Agriculture and Food Industry 4.0** was organised by **Rourkela Local Centre** during 12-13 August 2023 in association with Department of Food Process Engineering and Department of Computer Science and Engineering, National Institute of Technology Rourkela at Rourkela under the aegis of Interdisciplinary Coordination Committee, IEI. Prof Bibhudutta Sahoo, HoD, Department of Computer Science and Engineering, NIT Rourkela graced the function as the Chief Guest and Prof Parag Prakash Sutar, HoD, Department of Food Process Engineering, NIT Rourkela was the Guest of Honour. The programme started with the welcome speech delivered by Er Ajay Kumar Goswami, Chairman of Rourkela Local Centre [Session 2021-23]. He spoke about the relevance and importance of AI in Food and Agriculture industries. The Guest of Honour, Prof Parag Prakash Sutar informed the audience about the stringent regulations being practiced in the food industries by USA and Japan, the two major food importers from India. The Chief Guest, Prof Bibhudutta Sahoo, chronicled the technological advancements from manual to modern farming, ranging from robotics and agricultural drones to computer vision software, have entirely transformed modern agriculture. A souvenir was released on the occasion by the dignitaries present on the dais.

During six technical sessions, 29 papers were presented. Keynote Lectures were also delivered in technical sessions by eminent personalities from reputed academic institutes. Posters relevant to the various sub-themes



were displayed by the engineering students and evaluated by the experts. In the Demonstration session, live demonstrations were presented by students pertaining to drone applications for Agriculture, Robotics and Automation. The technical sessions were chaired by eminent experts in the related field. Papers were presented on emerging topics, namely; AI-based Image Classification in Food Quality Evaluation: Food Quality 4.0; Advancements in Computer Vision and Machine Learning for Food Quality Evaluation: A Comprehensive Review for the Food Industry; Development of Polyvinyl Acetate-Based Coating and its Effects on Papaya and Strawberry: Leveraging AI and Image Processing for Enhanced Quality; An Application of Image Analysis to Model Changes in Millet Kernel Water Absorption and Dimensions during Hydration at Different Temperatures; Application of IoT in Agriculture; Synergistic Effect of IoT, Big Data and AI in Agrifood Sectors; Application of Biosensors for Food Safety and Quality; Applications of Digital Technologies in Agri-food Processing Industry; IoT-driven Supply Chain Optimization: Block Chain Technology; Growing Applications of Hyperspectral Imaging in Millet Processing; Maize Leaf Disease Detection and Classification Using Inception v3; Cyclone Detection System Using Machine Learning; AI and Biosensors' Role in Food Shelf-life Detection; Application of Drone Technology in Agricultural Practices etc.

Recommendations emanating from the two-day deliberations are as follows:

The rapid evolution of technology in the era of Industry 4.0, characterized by integrating advanced technologies such as Artificial Intelligence (AI) and the Internet of Things (IoT). In the agricultural and food production industries, these technologies have enormous potential to solve major

problems need to be explored.

Enhanced research is recommended for application of AI and IoT in agriculture and food Industry, which includes precision agriculture, crop monitoring and disease detection, automated machinery and robotics, supply chain management, smart greenhouses, predictive analytics, water management, livestock monitoring, food quality assurance, and waste reduction.

AI and IoT technologies are readily scalable for use in substantial farms. In this way, farmers can maximize production and long-term viability by applying modern technologies to broad acreages.

Developing AI-driven prediction models that utilize data in real time from IoT sensors should be dispersed across farms. These models forecast possible disease outbreaks and insect infestations and give significant insights into crop health, moisture levels, and nutritional needs. Their efforts greatly improve the quality of food production as a whole and the efficiency with which resources are used.

The capacity of AI and IoT to explain complex subjects involving technology to ordinary people should be focused more.

With the use of AI algorithms, the necessary information may be used to predict how climate change would affect crop production. Accordingly, the farmers may modify their methods so that they can more effectively resist the effects of climate change.

Application of AI-enabled drones and robots with IoT sensors, that sow seeds and harvest crops without human intervention should be in practice. Technology like this helps farmers save time and money by reducing the need for manual work and making farming more consistent.

With the use of IoT and AI, agricultural products can be tracked from farm to fork, giving buyers insight into the safety, freshness, and sustainability of their purchases. Trust is bolstered, and more mindful consumption is facilitated by that transparency.

Farmers can efficiently estimate ideal planting timings and organize succession plantings by integrating historical environmental data with AI algorithms. Farmers may increase their harvests and lessen their susceptibility to weather extremes by adapting crops to their specific growing environments.

IoT sensors monitor soil moisture, provide weather conditions, and calculate how much water each plant needs in real-time. Algorithms powered by AI use this information to create optimal watering targets that provide plants with the right quantity of moisture at the right moment. As a result, growth improves while water use is minimized.

Stakeholders should support the use of AI and IoT in the food and farming industries because of the many advantages these tools provide. Integrating AI and IoT offers a chance to improve the industry and adapt to the needs of a fast-changing world in numerous techniques, including increased efficiency and sustainability, improved product quality, and increased market competitiveness.

As the world's population rises, so will the pressure on farmers to feed more people. With AI and IoT, the agricultural sector can increase productivity and better utilize resources to satisfy future food needs.

Integrating AI and IoT in the food and agricultural industries can be perceived as a mission that includes an extensive approach encompassing multiple dimensions. These dimensions include infrastructure development, skill enhancement, policy framework, research and development, technology localization, start-up ecosystem, pilot projects and demonstration farms, data sharing and collaboration, regulatory support, industry-academia collaboration, financial support, public awareness and adoption campaigns, monitoring and evaluation, as well as collaboration with global partners.

Eco Friendly & Sustainable Approaches for Erosion, Landslide and Land Subsidence Management in the Hilly Regions

Contd. from page 1

a chord with participants who gathered to share insights and expertise in tackling environmental challenges unique to hilly terrains. The distinguished Chief Guest of the event, Shri Nand Lal Sharma, CMD of Satluj Jal Vidyut Nigam (SJVN), Shimla, commended Himachal Pradesh State Centre, IEI, for organizing the National Convention. He emphasized the critical nature of the Convention, particularly in the aftermath of recent devastations in Shimla, including destructive landslides triggered by cloudbursts and heavy rainfall. He expressed his belief that such initiatives serve as a morale booster for the people of the state and play a significant role in the ongoing recovery efforts. Furthermore, he advocated for the adoption of cutting-edge technologies and innovative solutions to address these challenges effectively. He highlighted the potential of Remote Sensing, Geospatial Data, and advanced monitoring systems in predicting and managing such natural disasters. The event witnessed the gracious presence of Dr A J Singh, Director of University Institute of Technology (UIT), Himachal Pradesh University, Shimla, Er Ajay Gupta, Engineer in Chief, Himachal Pradesh Public Works Department (HPPWD) and Prof (Dr) Dinesh Kumar Vatsa, Vice Chancellor of Chaudhary Sarwan Kumar Himachal Pradesh Krishi Vishwavidyalaya, Palampur, as the Guests of Honour, who shared their valuable expertise and insights. Dr A J Singh stressed on the importance of finding solutions to the natural calamities, the importance of application of early warning systems, inter-disciplinary collaboration within various engineering disciplines in order to mitigate natural disasters. He highlighted the essence of ethics in engineering construction, stressed on halting of unplanned growth resulting in catastrophic devastation with deep social concerns. Er Ajay Gupta, highlighted the brutality of the repetitive occurrence of landslides in the Himalayan belt and emphasized the importance of adopting sustainable studies for landslides mitigation. He deliberated on the importance of adopting modern practices of soil enrichment by incorporating chemical additive compounds, advancement of soil enrichment technology and adoption of bio-Gem technology. Dr Vatsa, deliberated on the importance of addressing the detrimental effect of landslides in the Himalayan belt and urged the regulators to adopt vertical farming, protected cultivation, sustainable production, adopting modern technologies in farming. He deliberated on the importance of adopting renewable energy exploration, minimizing deforestation, adoption of slope stabilization, sustainable construction, and policy regulation for sustainable and progressive development. Er Jagdish Chand Singhal, Chairman of Environmental Engineering Division Board, [ENDB] IEI, presided over the inaugural session. In his address, Er Singhal emphasized the critical role of environmental engineers in preserving hilly regions. He appreciated the sincere effort of Himachal Pradesh State Centre, IEI, for organizing the National Convention on a relevant theme imperative to the hilly regions of the country and stressed on eco-friendly solutions and interventions to prioritize the eco-friendly approaches that can minimize environmental impact by the use of sustainable materials and practices. Prof Vatsa, also served as the Chairman of the Technical Committee and Convener of the National Convention ensuring its seamless execution. Er Pankaj Dadwal, Chairman- BOG, National Skill Development Forum [NSDF], IEI [Session 2022-23] delivered an insightful presentation on the Convention's theme, enriching participants with valuable knowledge and ideas. He said that collaboration with various stakeholders, including agencies like the National Institute of Disaster Management (NIDM), BIS and Uttarakhand Landslide Mitigation Management Centre in Dehradun will prove to be crucial for comprehensive solutions to landslide. On the occasion, Er A K Dinkar, Secretary, Central Board of Irrigation and Power, New Delhi & Former Engineer in Chief, Irrigation Department, Uttarakhand; Er Rajesh Bisaria, Environmental Expert, Arbitrator & Techno-legal Consultant and Dr Daljit Singh, Engineer-in Chief cum Technical Advisor, Punjab W/S & Sewerage Board, Chandigarh were felicitated as eminent engineering personalities for their relentless contribution to the field of Environmental Engineering. The IEI Young Engineers Award in Environmental Engineering Division for the year 2023-24 was presented to Dr Rakesh Kadaverugu, Senior Scientist, Cleaner Technology and Modeling Division, CSIR National Environmental Engineering Research Institute (NEERI), Nehru Marg, Nagpur, Maharashtra; Dr Ankit Agarwal, Assistant Professor, Department of Hydrology, Indian Institute of Technology Roorkee

and Dr C Nagendranatha Reddy, Assistant Professor & Research Coordinator, Department of Biotechnology, Chaitanya Bharathi Institute of Technology (A), Gandipet, Hyderabad, Telangana, for their outstanding achievement in the field of Environmental Engineering. Earlier, Er Vishwa Mohan Joshi, Chairman, Himachal Pradesh State Centre, IEI, set the stage with a warm welcome and an enlightening talk on the theme, highlighting the significance of ecofriendly practices in managing environmental concerns in hilly regions. Er Jaswant Singh, Honorary Secretary, Himachal Pradesh State Centre, IEI, proposed the vote of thanks at the end of the inaugural session. A souvenir was released on the occasion in the august presence of dignitaries on the dais.

The N V Modak Memorial Lecture was delivered by Prof (Dr) Satyendra Mittal, Geotechnical Engineering Group, Civil Engineering Department, Indian Institute of Technology Roorkee on the topic 'Sustainable Eco friendly Approach for Control of Land Subsidence in Hilly Regions through Nailing'. Prof Mittal, in his lecture explained the concept of soil nailing, soil reinforcement and ground improvement techniques prior to construction. He further enumerated the successful field application of the nailing techniques in hilly areas. The Dr G D Agrawal Memorial Lecture was delivered by Dr S K Gupta, Chairman, Envirotech Private Limited, New Delhi, on the topic 'GD – Redefined Purpose of Life' and remembered the academic brilliance of Prof Agarwal and his supportive and development initiatives in different professional assignments. Shri K Vijayaveeran, Scientist E, Director & Head, Bureau of Indian Standards (BIS), PARWANOO Branch Office, delivered presentation on the occasion.

During the technical sessions, eminent professionals delivered invited lectures on different topics. Dr Shantanu Sarkar, Director, Uttarakhand Landslide Mitigation and Management Center, Dehradun, delivered an Invited Talk on 'Slope Stability Assessment and Scheme of Mitigation Measures'; Dr K V Uday, Associate Professor, IIT Mandi, delivered an Invited Talk on 'Erosion Quantification and Bio-engineering Measures'; Dr Mahesh Sharma, Assistant Professor, UIT, HP University, Shimla, on the topic 'Preliminary Assessment of the Shiv Bawdi Landslide in Shimla, Himachal Pradesh, India'; Er V Sankaranarayan, Shiraz Swan, Deepak Kumar, Shashank Shekhar Khare and Nitin Thakur on 'Hydropower Projects and Landslides in The Himalaya Region, A Review by SJVN as a Hydropower Project Developer' and Cdr Dr Bhaskar M Bhandarkar, Chairman, Marine Engineering Division Board, IEI [Session 2022-23] on the topic 'Disaster Management during Landslides'.

Further, Special Invited Talks were delivered by notable speakers from the relevant field. Colonel Parikshit Mehra, Civil Engineering Batch 1999-2003, 201 Engineer Regiment, Madras Engineering Group, Corps of Engineers, delivered Special Invited Talk on the topic 'Sustainable Approaches for Connectivity in Himalayan Region; Stabilization Measures, Avalanche Protection Structures and Tunnels'; Prof Dr Surya Prakash, Head, CBRN and Cyber Disaster Risks Management, National Institute of Disaster Management, New Delhi on 'Restoration of Affected Areas after Landslide and Land Subsidence Event and Case Studies'; Shri Rajnish Kumar Nath, Regional Sales Manager, Geobruigg India Private Limited on 'Geo-hazard Mitigation Solutions for Himalayan Region and Similar Geology'; Shri Ram Asra Khural, BRES, MIRC, Border Roads Organisation on 'Sustainability Approach For Development of Hill Roads'; Dr Tanmay Gupta, Assistant Professor, Jaypee University of Information Technology, Wakanaghat, Solan on 'Solan's Landslide Challenges and Potential Transformation by Cutting Edge Mitigation Techniques'; Dr G. Rameshwar Rao, Director, Dr D Venkat Reddy, Advisor, Center for Climate Change-Environmental Management, Anita Aggarwal, Faculty and Head I/c, CCC- EM Division, Engineering Staff College of India (ESCI), Hyderabad on 'Field Investigation Techniques for Assessment of Active Landslides and Mass Movements in Hilly Terrains in Himachal Pradesh and Uttarakhand States of India with Inputs to Develop Sustainable Remedial Measures for the Stability of the Strata: A Typical Analysis'; Dr Labh Singh Bhari, Chairman, Punjab and Chandigarh State Centre, IEI and Prof Dr Shallu Sehgal, Associate Professor, SILB Solan, HP delivered Special Invited talk on 'Harnessing Technology for Eco- Friendly and Sustainable Hilly Region'.

On the occasion, the IEI Young Engineer Awardees shared their thoughts and aspirations.

Contd. on page 6

Robotic Artificial Intelligence enabled Cyber Crime and Animation Development

Agra Local Centre, IEI, organized a One Day Workshop in association with Department of Electronics and Communication Engineering, BSA College of Engineering & Technology, Mathura, Uttar Pradesh, on the theme **Robotic Artificial Intelligence enabled Cyber Crime and Animation Development** on 11 September 2023 in Agra under the aegis of Electronics and Telecommunication Engineering Division Board [ETDB], IEI. Er Rajnesh Kumar Yadav, Honorary Secretary, Agra Local Centre, IEI in his opening remarks, explained the role of IEI, its functioning and contribution in the society and academics. The workshop was inaugurated by Advocate Umashankar Agrwal, Chairman, BSA College of Engineering & Technology, Mathura. Mr Bhawan Singh, Registrar, BSA College of Engineering and Technology, Mathura, advised the students for practical study on cyber crime and animation development.

During the technical sessions, Mr Vishal Lal Goswami, Assistant Professor, HOD, ECE Department, BSACET, introduced the students on 'Robotic and Its Application in the field of Space, Cyber security and Animation'. Mr Farhan Aziz, Assistant Professor, ECE Department, BSACE explained about popular hardware tools like Quarky, Arduino, Sensors, Motors and Modules. In the workshop, Er. Paras Yadav, a Robotic Trainer from Ishwara Electrical Private Limited, delved



into the foundational principles of Artificial Intelligence (AI) and elucidated on the concerning issue of AI-enabled cybercrime. His comprehensive presentation aimed to raise awareness about the unethical applications of AI and strategies for its prevention in practical contexts. He discussed on ethical and unethical use of cybercrime and its impact in the society. During the hands-on practical session, projects on robotic components, project development based on Arduino, sensors, modules, programming software etc. He also the Rover Module of Chandrayan 3. Er Rajnesh Kumar Yadav explained about cyber crime awareness techniques and discussed cyber fraud cases.

Eco Friendly & Sustainable Approaches for Erosion, Landslide and Land Subsidence Management in the Hilly Regions

Contd. from page 4

Dr Rakesh Kadaverugu delivered presentation on the topic 'Landslide Susceptibility Modeling using MaxENT'; Dr Ankit Agarwal spoke on Landslide Mitigation and Dr C Nagendranatha Reddy deliberated on the topic 'Integrating Sustainable Strategies for Biomediation of Complex E Wastewater embedded with Renewable Energy Generation and Resource Recovery'. Also, Shri Ankit Verma, Geo Spar, Geo Engineering Company, New Delhi delivered lecture on Ground Improvement, Slope Stabilisation, Rockfall, Mitigation & Foundation Engineering'. A panel discussion was also organized on the occasion.

During the valedictory function, Dr A J Singh, Director, UIT, HP University graced the function as the Chief Guest. The session was chaired by Er Viswa Mohan Joshi. Recommendations emanating from the technical deliberation are as follows.

Enhancing Research and Development

Collaboration with organizations such as BIS, NIDM, UIT and NDMA is required to prioritize research and development efforts towards eco-friendly and sustainable approaches for erosion, landslide, and land subsidence management specifically tailored to hilly regions.

Field surveys and comprehensive geological studies should be conducted on regular basis to identify the key hotspots prone to erosion, landslides, and land subsidence in hilly regions, and develop targeted solutions based on the local terrain and geological characteristics.

Practical solutions available from guidelines provided by the National Disaster Management Authority (NDMA) be applied to enhance the effectiveness of erosion, landslide, and land subsidence management strategies in hilly regions.

Sustainable practices be incorporated as recommended by the NDMA, such as adopting vegetative measures, contour plowing, and slope remediation techniques etc.

Promoting Community Awareness and Education

Specialized training programs should be organised for the local communities, engineers, and architects on eco-friendly and sustainable practices for erosion, landslide, and land subsidence management in hilly regions.

Collaboration with NIDM & NDMA should be pursued for utilizing their resources on community awareness, which includes brochures, pamphlets, and documentaries, to explain the causes, impacts, and preventive measures.

Implementing Early Warning Systems

More collaboration with UIT and the local government be explored to develop

and install early warning systems specifically designed for hilly regions, incorporating real-time data on rainfall, soil moisture, ground movement, and other relevant parameters.

Communication channels to be established to ensure timely dissemination of warnings and advisories to communities residing in vulnerable areas, enabling them to take preventive measures and evacuate if necessary.

Training and capacity building to relevant stakeholders should be provided on the operation and maintenance of early warning systems, as well as the interpretation of warning signs and indicators specific to hilly regions.

Adopting Sustainable Land Use Practices

Guidelines in collaboration with BIS, UIT and NDMA for sustainable land use practices in hilly regions should be developed considering factors such as slope stability, soil conservation, and water management.

Implementation of green infrastructure be promoted, such as terraced farming, retention ponds, and green belts, to mitigate erosion, landslides, and land subsidence while also promoting sustainable agriculture and biodiversity conservation.

The use of traditional and indigenous knowledge in land management practices as well as the integration of traditional engineering techniques with modern ecofriendly approaches be encouraged more.

The NDMA's recommendations for slope stabilization techniques, such as the use of rock buttresses, geotextiles, and bioengineering methods, in land use planning and development activities in hilly regions be utilized in proper way.

Strengthening Collaboration and Knowledge Sharing

Workshops, conferences, and joint research projects should be organised on regular basis involving experts from BIS, UIT, NIDM, NDMA and other relevant stakeholders, focusing on the specific challenges and solutions for erosion, landslide, and land subsidence management in hilly regions.

A centralized database and platform be constituted for sharing best practices, case studies, and research findings related to eco-friendly and sustainable approaches, ensuring that the knowledge is easily accessible to policymakers, engineers, and other stakeholders.

Cross-learning and exchange programs between hilly regions facing similar challenges, fostering collaboration and enabling the transfer of effective solutions and strategies should be encouraged and facilitated more.

Metal Casting Technology: The Backbone of Futuristic Manufacturing

West Bengal State Centre, IEI, has organized One Day Seminar on **Metal Casting Technology: The Backbone of Futuristic Manufacturing** under the aegis of Metallurgical and Materials Engineering Division Board [MMDB], IEI, on the occasion of the commemoration of Late Haridas Nandy on 05 August 2023 in Kolkata. Dr Nirmal Das, Chairman, West Bengal State Centre, IEI [Session 2021-23] delivered the welcome address and mentioned that, after graduating in the field of Metallurgy from Bengal Engineering College Shibpur [presently IEST Shibpur] in the year 1944, Late H Nandy's



professional journey started in steel foundry and metal casting sectors in eastern India and shortly he emerged as a distinguished expert in the field. The seminar was formally inaugurated by Prof (Dr) Samiran Chaudhuri, Past President, IEI. In his Inaugural address as the Chief Guest, he paid his rich tribute to the great memories of Late H Nandy and adored him as the living encyclopedia of IEI. Er R P Gupta, Past President, IEI, graced the function as Special Guest. In addition to paying tribute to his mentor, the late H Nandy, he shared insights from his

extensive experience as a seasoned metallurgist. Gupta reminisced about the traditional practices in metallurgy, focusing on the extraction of metals from ores and their subsequent refinement for practical applications. He highlighted how these practices, once staunchly adhered to by the late Nandy, have undergone remarkable transformations in contemporary times.

Thereafter, the technical sessions' theme was eloquently elucidated to the participants by Er. Subrata Chandra, the Convener of the Materials and Metallurgical Engineering (MME) Division at the West Bengal State Center (WBSC) of IEI.

During two technical sessions, four eminent speakers delivered their presentations. The first technical session was chaired by Er R P Gupta, Past President, IEI.

The first technical lecture of the session started with the Commemorative Key note lecture delivered by Prof P P Chattopadhyay, Director, National Institute of Advanced Manufacturing Technology (NIAMT), (Erstwhile NIFFT), Ranchi on "Engineering Science of Solidification: From Art to Automation". In his lecture he highlighted that the solidification processing of metals has evolved over millenniums, in wider spectrum of applications, involving large varieties of metals and processes. He provided a succinct overview of solidification processing, emphasizing its diverse combinations of metals, processes, and applications. These features, he noted, are intricately connected with relevant phenomena and length scales. For instance, he illustrated how the scope of physically tracking phenomenological features in bottom-up solidification routes, such as 3D printing, across both length and time scales, contrasts with the limitations inherent in top-down processes, where such access is unfeasible.

The presentation then delved into the foundational knowledge framework of solidification in metals, followed by detailed discussions on an integrated multi-scale modeling approach. This approach forms the basis of solidification simulation processes. He adeptly explained the evolution of engineering science knowledge in solidification, highlighting its convergence through theoretical, computational, and experimental advancements.

Furthermore, he underscored how this framework, which underpins solidification processing endeavors, plays a pivotal role in expediting the translation of emerging knowledge into new technologies and ensuring the development of right-first-time products.

It was followed by an Invited lecture delivered by Prof (Dr) NR Bandyopadhyay, Professor, IEST Shibpur & Former Chairman, MMDB, IEI on the topic 'Metal Castings: One of the Most Efficient and Versatile Manufacturing Processes in the Present Era'. He said that the emergence of concepts like Industry 4.0 and the Fourth Industrial Revolution have been in circulation since at least 2014. This ongoing revolution continues to introduce fresh and innovative implementations across industries worldwide. The metal casting industry is currently experiencing its own version of the fourth revolution, witnessing a surge in the adoption of Internet of Things technology by suppliers, foundries, and end-users to enhance operational efficiency. In this context, he said that Additive Manufacturing is the future. The process of 3D printing is already replacing conventional methods of casting soon. He further added that 3D printing has the calibre to replace the process of casting itself. There is great potential in the incorporation of the prehistoric process of metal casting and contemporary additive manufacturing.

The second technical session was chaired by Sri S N Laha, Distinguished Consultant & Member MME, WBSC, IEI. Speaker of the session, Prof A K Chakrabarti, Former Professor, IIT Kharagpur, delivered presentation on the topic 'Cast Steel Research Vis-a-vis Microalloyed Steels'. He gave a brief summary of three aspects of cast steel research. In the initial part he described notable improvements achieved by multiple micro alloying. The product of cast steel base composites and the scope of forging such composites were reported in the second part. In the third part he mentioned how modification of inclusions may reduce tool wear during machining of cast in products. Last Speaker of the day, Dr D De Sarkar, CEO, Indian Copper Development Centre, Kolkata, discussed on the topic 'Sustainability of Non-Ferrous Metal Casting Units – Some Important Issues'. He stated that man and metals have an age old relationship. Different periods of early human civilization have been named after metals, *i.e.*, copper age, bronze age, iron age. The two important sources for the history of Indian Metallurgy are archaeological excavations and literary evidences. Archaeological excavations conducted in various parts of our country clearly reveal ancient knowledge of extraction, melting, casting and further working of metals to various shapes. But literary evidence has not been studied to the extent it deserves.

The valedictory session was chaired by Prof (Dr) N R Bandyopadhyay. In his initial annotation he expressed his satisfaction for the absorbing deliberation by the expert guest speakers, followed by lively interaction. He extended sincere and hearty welcome to the guest and participants present during the day long proceedings. Reporting of technical sessions was conducted by Er G C Chattopadhyay, Former Co-Chairman, MME Division and Former Joint Secretary, WBSC, IEI. In his concise summary of the technical proceedings, he noted the extensive coverage provided by distinguished speakers across two comprehensive technical sessions during the seminar. Topics ranged from traditional metallurgical practices to the rapid and relentless technological advancements unfolding on a global scale within production and industrial development sectors. Furthermore, he highlighted the exploration of new and emerging fields, offering exciting opportunities for both aspiring students and seasoned professionals alike. The vote of thanks was proposed by Prof (Dr) Sumit Chabri, Joint Convener, MME Division, WBSC, IEI, who also earlier briefly introduced all the Guest Speakers prior to their lecture. He extended heartfelt thanks to all guests and participants as well as to those who have diligently worked behind the scenes, their silent efforts having played an integral and indispensable role in the resounding success of this event. The seminar was attended by nearly 100 delegates from both industry and academia.

IEI Celebrates Energy Conservation Day

The Energy Conservation Day was celebrated by the Institution on December 14, 2023. Brief accounts of celebration as received from various Centres are reported hereunder.

STATE CENTRES

Assam



Assam State Centre, IEI, observed Energy Conservation Day 2023 at Guwahati on 14 December 2023. Er Monojit Misra, Honorary Secretary, Assam State Centre, IEI, delivered the welcome address.

Invited Speaker of the event, Prof Debendra Chandra Baruah, Department of Energy and Director of Centre for Multidisciplinary Research, Tezpur (Central) University, Tezpur, delivered lecture on 'Energy Conservation Scenarios in different Sectors of Economic Importance with Special Reference to Policy and Perspectives of Assam'. He mentioned about the potential of solar and bio-energy based technologies in the North Eastern Region of India. He emphasized the importance of renewable energy technologies in achieving net zero emissions and Sustainable Development Goals (SDGs) by India in particular. The event was chaired by Er Mahesh Barkataki, Chairman of Assam State Centre. At the end, Er Pulak Sarmah, Immediate Past Honorary Secretary, Assam State Centre, IEI, proposed the vote of thanks.

Karnataka



On 10 January 2024, Karnataka State Centre, IEI, observed Energy Conservation Day 2023 through hybrid mode and a lecture was organized on the topic 'Energy Conservation, Efficiency & Climate

Change'. Chief Guest of the event, Shri N Amaranath, CEO & GM of KSPDCL, Karnataka, stressed on decentralized distribution of energy for empowering people at grassroots level. Speaker of the event, Prof S S Murthy, Former Vice Chancellor, Central University of Karnataka discussed about energy management and discussed on accelerating battery driven minibuses for narrow roads, metro rail and suburban train as public transport.

Kerala

Kerala State Centre, IEI, observed Energy Conservation Day 2023 on 14 December 2023 at Thiruvananthapuram. Er P Balakrishnan Nair, Chairman, Kerala State Centre, IEI, welcomed the participants. Speaker of the event, Dr P S Chandramohan, Former Principal, Government Engineering College & Former Director, Agency for New and Renewable Energy Research and Technology [ANERT], delivered lecture on the topic 'Energy & Environment'. Er K R Suresh Kumar, Honorary Secretary of Kerala State Centre proposed the vote of thanks at the end of the event.

Manipur

On 14 December 2023, Manipur State Centre, IEI, observed Energy Conservation Day 2023 at Imphal. Er Swamikanta Singh L, Chairman, Manipur State Centre, IEI, presided over the function and discussed the methods and needs for energy conservation. Chief Guest of the event, Mr H Shantikumar Singh, Managing Director, Manipur State Power Distribution Company



Limited (MSPDCL), explained various measures adopted by MSPDCL and BEE towards energy conservation. Theme Speaker of the event, Dr Huirem Neeranjan Singh, Assistant Professor,

Department of Mechanical Engineering, NIT, Manipur, spoke on the needs of energy conservation and the ways it can be conserved. He stressed that energy conservation is vital due to depleting energy reserves in the world. At the end, Er Thokchom Subhashchandra Singh, Honorary Secretary, Manipur State Centre, IEI proposed the vote of thanks.

Mizoram

On 14 December 2023, Mizoram State Centre, IEI, observed Energy Conservation Day 2023 at Mizoram and a Seminar was organized on 'Frugality in Energy Use'. Speaker of the event was Dr Chittatosh Bhattacharya, Deputy Director, National Power Training Institute, Durgapur. Topics discussed in the Seminar were energy efficiency, energy productivity, energy intensity, Energy Conservation (Amendment) Act, 2022, impact of energy efficiency, importance of energy efficiency, cost effectiveness, reduction of carbon footprint, etc.

West Bengal

West Bengal State Centre, IEI, observed Energy Conservation Day 2023 at Kolkata on 14 December 2023. A Seminar was organized on the topic 'Energy Modesty for Sustainable Development'. Er Sandip Kumar Deb, Council Member, IEI, and Chairman,



Architectural Engineering Division Board, IEI, [Session 2021-23] delivered the welcome address. Er Prasun Kumar Chakrabarty, President, Energy Club, Former Director, West

Bengal Power Development Corporation Limited, explained the theme of the event. Chief Guest of the function, Dr S P Gon Chaudhuri, Visiting Professor, IEST Shibpur, Member, WBREDA Board & Chairman, International Solar Innovation Council, underscored the imperative of integrating renewable energy sources with conventional ones. He emphasized the gradual phasing out of fossil fuels from our energy generation processes. Dr Sarobindu Mohanta, Consultant, FICCI, Accredited Energy Auditor emphasized the need of skill development for energy and resource conservation; Mr Tamal Kumar Bhattacharyya, Scientific Officer-G, Variable Energy Cyclotron Centre, Department of Atomic Energy, Government of India, focused on future of nuclear energy; Dr Bishaljit Paul, HoD, Electrical Engineering Department, Narula Institute of Technology, Kolkata, explained the general aspects of energy conservation and Mr Richik Ghoshthakur, Research Scientist, NB Institute of Rural Technology, Kolkata, discussed the various aspects and challenges of solar photovoltaic cell. Mr Ashoke Kumar Sarkar, President-Elect, ISHRAE, Kolkata Chapter, focused on the passive cooling for buildings; Swami Kamalasthananda, Principal, Vivekananda Centenary College, discussed the energy and water conservation measures adopted in his Institution. Dr Manas Pratim Das, Executive Officer, Science Cell, All India

Radio, emphasized the need of education and training of personnel with sustainable practices and creation of mass of awareness and Dr Devashish Konar, Consultant Psychiatrist, Immediate Past President, IPSWB & IACAM, Vice President, IACAPAP stressed the role of human, effect of climate on human behavioural pattern and importance of change in lifestyle. Er Anirban Datta, Honorary Secretary, West Bengal State Centre, IEI facilitated the conduct of the entire event. In a fitting conclusion, he extended his gratitude to all participants and contributors by proposing the vote of thanks.

LOCAL CENTRES

Aligarh



On 16 December 2023, Aligarh Local Centre, IEI, observed Energy Conservation Day 2023 at Aligarh. Dr (Mrs) Salma Shaheen, Chairman, Aligarh Local Centre, IEI,

delivered the welcome address. Chief Guest of the event was Prof Aasim Zafar, Chairman and Professor, Department of Computer Science, AMU, Aligarh and Guest of Honour of the event was Er Sanjay Kumar Mittal, MPSEZ Utilities Limited, Mundra, Gujarat. Prof Zafar shared his views about the importance of energy conservation and stressed on alternative energy sources. He explained various scenarios of optimally and efficiently replacing conventional energy. Er Mittal shared his valuable insights on energy conservation and emphasized the relevance of energy conservation in addressing the climatic concern.

Ananthapuram



On 15 December 2023, Ananthapuram Local Centre, IEI, observed Energy Conservation Day 2023 at Ananthapuram. Prof (Dr) Ms Chigarapalle Shoba

Bindu, Chairman, Ananthapuram Local Centre, IEI, welcomed the guests and opined that energy conservation is one of the major ways to replace non-renewable sources of energy with renewable sources. Chief Guest of the event, Dr Kishan Naik, Associate Professor, Department of Studies in Mechanical Engineering, University BDT College of Engineering, Davangere, emphasized on energy conservation and the optimal use of electricity. He suggested that fossil fuels, crude oil, coal, natural gas, etc generate sufficient energy in our daily life but their demands create the depletion of natural resources. At the end, Dr M Rama Krishna Reddy, Honorary Secretary, Ananthapuram Local Centre, IEI, proposed the vote of thanks.

Asansol



On 14 December 2023, Asansol Local Centre, IEI, observed Energy Conservation Day 2023 at Asansol. Dr Debashis Sarkar, Chairman, Asansol

Local Centre, IEI and Er Bidhan Chandra Debnath, Honorary Secretary, Asansol Local Centre, IEI, welcomed all. Guest of Honour of the event was Er Sumanta Karmakar, Immediate Past Honorary Secretary, Asansol Local Centre, IEI and Speaker of the event was Mr Ayandeep Sarkar, Student Member, Asansol Local Centre, IEI. Mr. Ayandeep addressed the significance of energy conservation, highlighting its pivotal role in preserving non-renewable resources. By curbing the consumption of fossil fuels, he emphasized, we not only mitigate environmental impact but also alleviate financial burdens, thus bolstering consumer economies. Mr. Ayandeep stressed the imperative for researchers to innovate and devise energy-efficient solutions aimed at prolonging the sustainable utilization of

fossil fuels. At the end, Er Bidhan Chandra Debnath, Honorary Secretary, Asansol Local Centre, IEI, proposed the vote of thanks.

Aurangabad

On 23 December 2023, Aurangabad Local Centre, IEI, observed Energy Conservation Day 2023 through online mode. Speaker of the event, Er Uttam G Zalte, Former Director (Operations), Maharashtra State Electricity Transmission Company Limited (MSETCL), delivered lecture on the topic 'Post Independence Journey of Power Sector in India'. Er Zalte focused on National Policies of Energy Sector, Electricity Act 2003, Consumption and Generation of Power in India, National Electricity Policy 2005, etc. Er K M I Sayyad, Honorary Secretary, Aurangabad Local Centre, IEI, introduced the Speaker. Prof (Dr) Ulhas Bhanudasrao Shinde, Chairman, Aurangabad Local Centre, IEI, proposed the vote of thanks.

Indore



On 14 December 2023, Indore Local Centre, IEI, observed Energy Conservation Day 2023 at Indore. Er Dinesh Kumar Shukla, Chairman, Indore Local Centre, IEI, welcomed

the dignitaries. Chief Guest of the event, Hon'ble Member of Parliament, Er Shankar Lalwani shared his views about the role of engineers in energy conservation and focused on more application of solar energy. Guest of Honour of the event, Er Abhilash Mishra, IAS, Assistant Commissioner, Indore Municipal Corporation, spoke on bio-CNG plant set up where large amount of CNG gas is being produced from the waste and is used as fuel in public transport. Er R P Goutam, Immediate Past Chairman, Indore Local Centre, explained the change in demand and supply in power.

Kalaburagi

On 14 December 2023, Kalaburagi Local Centre, IEI, in association with Smt V G College for Women, Kalaburagi observed Energy Conservation Day 2023 at Kalaburagi. Er Seetharam Munnur, Honorary Secretary, Kalaburagi Local



Centre, IEI, welcomed the Speaker of the event, Dr S N Mulgi, Professor, Sharanbasava University, Kalaburagi, Karnataka. Dr Mulgi, delivered lecture on 'Significance of Energy Conservation'. The Speaker encouraged the students in scientific research particularly in the field of solar cells, renewable energy sources and efficient system developments. Dr Sridhar R Pande, Chairman, Kalaburagi Local Centre, IEI, presided over the function and spoke on the importance of energy conservation.

Kanchepuram

On 14 December 2023, Kanchepuram Local Centre, IEI, in association with Department of Electrical and Electronics Engineering, Saveetha Engineering College, observed Energy Conservation Day 2023 at Chennai. A seminar was organized on the topic 'Energy Security in The Age of Energy Transition: Balancing Reliability and



Sustainability'. Chief Guest of the event was Dr S Sivarasu, BEE Certified Energy Auditor. Dr R Senthil Kumar, Professor & Head/EEE, Saveetha Engineering College, Tamilnadu also graced the occasion and addressed the audience. Special Keynote address was delivered by Prof (Dr) S Ramesh, Chairman, Kanchepuram Local Centre, IEI. The seminar concentrated on developing in-depth knowledge of the complexities surrounding energy security within the context of ongoing energy transitions.

Kanyakumari

On 14 December 2023, Kanyakumari Local Centre, IEI, organized Energy Conservation Day 2023 at Kanyakumari. Er S Bright Selvin, Chairman, Kanyakumari Local Centre, IEI, welcomed all and presided over the function. Keynote Speakers of the event were Dr J Prakash Arul Jose, Principal, Annai Engineering College, Kumbakonam and Prof (Dr) Marsaline Beno M, Dean of Research, St Xavier's Catholic College of Engineering, Nagercoil and Honorary Secretary, Kanyakumari Local Centre, IEI. Dr Jose shared his valuable insights to reduce energy consumption in both personal and professional spheres. Dr Beno shared comprehensive strategies for sustainable energy conservation. He discussed long term planning and systematic changes that organizations and communities can adopt to promote energy efficiency and underscored the crucial role of strategic planning in achieving desired results and fostering a sustainable future.

Mangalore



On 12 December 2023, Mangalore Local Centre, IEI, observed Energy Conservation Day 2023 at Mangalore. Er Umesh Bhat K V, Chairman, Mangalore Local Centre, IEI, presided

over the function. Er Chinnagiri Gowda H C, Honorary Secretary, Mangalore Local Centre, IEI, welcomed the gathering and introduced the Speaker of the day, Er Shakuna Udupa, DGM (Technical Services), Mangalore Chemicals & Fertilizers Limited.

Meerut



On 14 December 2023, Meerut Local Centre, IEI, organized Energy Conservation Day 2023 at Meerut. Er Raj Pal Agarwal, Chairman, Meerut Local Centre, IEI, Er

Subhash Chandra Mittal, Honorary Secretary, Meerut Local Centre, IEI, Mr Sukhnandan Tyagi, Principal, Ram Sahay Inter College, Meerut, shared their views about energy saving.

Munirabad

On 14 December 2023, Munirabad Local Centre, IEI, in association with Department of Mechanical Engineering, Rao Bahaduri Y Mahabaleswarappa



Engineering College, Ballari, observed Energy Conservation Day 2023 at Munirabad. Prof (Dr) S M Shasidhar, Chairman, Munirabad Local Centre, IEI, shared his valuable insights about the importance of

energy conservation. Speaker of the event, Er Shabad Khan, Manager of JSW Energy Limited, Toranagallu, emphasized that every energy saving endeavour contributes to the fabric of progress. He urged the attendees to be mindful of their choices for a brighter and sustainable future.

Muzaffarpur

On 15 December 2023, Muzaffarpur Local Centre, IEI, observed Energy Conservation Day 2023 at Muzaffarpur. Dr Aseem Kumar Thakur, Chairman, Muzaffarpur Local Centre, IEI, in his welcome address, emphasized the objective of the event to raise awareness about the crucial aspects of energy saving. The esteemed Chief Guest of the event, Dr Raju M Tungayat, Principal of Government Engineering College, Samastipur, emphasized the critical necessity for individuals, communities, and institutions to collaborate in effecting meaningful change in energy conservation efforts. Special Invitee



of the event, Dr Anjani Kumar Mishra, Principal, Government Polytechnic, Vaishali stressed on changing our habit about energy consumption and management practices.

Er Lok Ranjan, Honorary Secretary, Muzaffarpur Local Centre, IEI, advocated the increased use of renewable energy sources instead of non-renewable energy and at the end of the event, proposed the vote of thanks.

Nagpur

On 16 December 2023, Nagpur Local Centre, IEI, observed Energy Conservation Day 2023 at Nagpur and organized a Workshop on 'Energy Conservation'.



The event witnessed the presence of Chief Guest of the event Er Ravikiran Maske, Vice President (Elect), Indorama and Guest of Honour of the event, Er Vilas Motghare, Chief Engineer, Koradi Power

Station. Dr V K Khare, Former Director, Power Grid Corporation and former Technical Member, Government of UP, was also present on the occasion. In the concluding session, the Chief Guest was Dr Nitin Labhshetwar, Chief Scientist, NEERI, Nagpur and the Guest of Honour was Dr Manish Wath, Chief Engineer, MSCDL, Mumbai. At the end, Er Mahesh Rajaram Shukla, Honorary Secretary, Nagpur Local Centre, IEI, proposed the vote of thanks.

Navi Mumbai



On 15 December 2023, Navi Mumbai Local Centre, IEI observed Energy Conservation Day 2023 at Belapur. Dr Nilajkumar Najukrao Deshmukh,

Chairman, Navi Mumbai Local Centre, IEI delivered the welcome address. Dr Mohan B Dagaonkar, Former City Engineer and Additional Commissioner, Navi Mumbai Municipal Corporation explained about Energy Conservation Day. At the end, Er Prabhakar Shankarrao Phulari, Honorary Secretary, Navi Mumbai Local Centre, IEI proposed the vote of thanks.

Neyveli



On 14 December 2023, Neyveli Local Centre, IEI observed Energy Conservation Day 2023 at Neyveli. Er M Venkatachalam, Chairman, Neyveli Local Centre,

IEI presided over the event. Er Appavu Eraniyan, Honorary Secretary, Neyveli Local Centre, IEI, welcomed all. Keynote Speaker of the event, Er M Venkatachalam delivered presentation on the topic 'Need & Trends in Conservation and Sustainability'. At the end, Er M Anbalagan, Joint Honorary Secretary, Neyveli Local Centre, IEI, proposed the vote of thanks.

Pune

Pune Local Centre, IEI, in association with Indian Water Works Association (IWWA), Pune Centre, observed Energy Conservation Day 2023



at Pune on 16 December 2023. Er Vasant Dattatraya Pandarkar, Chairman,

Pune Local Centre, IEI delivered the welcome address. Keynote speaker of the event, Dr Shavaru Tirthakar, CME Kirkee, Pune delivered lecture on 'Sequencing Batch Reactor (SBR) – A Promising Technology for Waste Water Treatment'.

Thanjavur

On 28 December 2023, Thanjavur Local Centre, IEI, observed Energy Conservation Day 2023 through virtual platform. Prof (Dr) N Venkatachalapathy, Chairman, Thanjavur Local Centre, IEI, welcomed all and introduced the Guest Speaker of the event, Dr D Thayalnayaki, Assistant Professor (SG) & Head, Department of Civil Engineering, PMIST University, Thanjavur. Er Senthamil Kumar S, Honorary Secretary, Thanjavur Local Centre, IEI, proposed the vote of thanks.

Tuticorin

On 15 December 2023, Tuticorin Local Centre, IEI, observed Energy Conservation Day 2023 at Tuticorin. Er I Maria Michael Raj, Past Chairman, Tuticorin Local Centre, IEI, welcomed the august audience and explained the objectives of energy conservation day. He underscored the vital significance of energy conservation and advocated for increased awareness regarding its importance in our everyday activities, as well as the promotion of energy-efficient practices.



Er I Emeron Irudayaraj, Director, Sacred Heart Institute of Engineering, Tuticorin, delivered the Keynote address. He urged the necessity for adoption of

energy efficient services for national security, personal financial security, higher savings, etc and stressed that energy can be conserved by reducing wastages and losses, improved operation and maintenance. He suggested that by adopting green engineering practices, we can improve the life cycle of the components. At the end, Er Sivageerthi T, Honorary Secretary, Tuticorin Local Centre, IEI, proposed the vote of thanks.

Vadodara

Vadodara Local Centre, IEI, observed Energy Conservation Day 2023 at Vadodara on 19 December 2023, Prof (Dr) Satishkumar Kantilal Joshi, Chairman, Vadodara Local Centre, IEI, delivered the welcome address. Speaker of the event, Mr Kamal Prajapati, Head – Business Development India (West & South Region), Secure Meters Limited, delivered lecture on the theme 'Energy Security is Equivalent to Energy Transition' and stressed on securing energy supplies at an affordable price. Mr Nalin Gupta, Senior Divisional Electrical Engineer (Traction), Vadodara Division, Western Railways, spoke about energy transition to build more sustainable energy system, and thereby reducing the exposure to fuel price volatility and brings

down energy bills. He suggested that clean energy and fossil fuel system co-exist and both are required to deliver reliable energy services. At the end, Dr (Ms) Hireni Rajnikant Mankodi, Honorary Secretary, Vadodara Local Centre, IEI, proposed the vote of thanks.

Visakhapatnam

On 14 December 2023, Visakhapatnam Local Centre, IEI, observed Energy Conservation Day 2023 at Visakhapatnam and organized a technical lecture on 'Save Energy, Save World'. Speaker of the event, Mr R V Ramana Rao, former Superintending



Engineer, APEPDCL/APSEB, Senior Consultant & Lead Auditor IRS and Certified Energy Auditor highlighted the critical role of energy conservation in protecting the environment, reducing greenhouse gas emissions and saving money through decreased electricity usage. Dr B Venkataramana, Immediate Past Chairman of Visakhapatnam Local Centre presided over. Earlier, Dr K V Rama Mohana Rao, Immediate Past Honorary Secretary of the Centre welcomed the gathering.

Warangal

On 14 December 2023, Warangal Local Centre, IEI, in association



with Talla Padmavathi College of Engineering, Kazipet, observed Energy Conservation Day 2023 at Warangal. Dr Anumula Rama Chandra Reddy, Chairman, Warangal Local Centre, in his welcome

speech, stressed the need on reducing unnecessary energy consumption. The Chief Guest of the event, Dr. G Amba Prasad Rao, Professor (HAG), Department of Mechanical Engineering, NIT Warangal, underscored the importance of prudent energy usage. He advocated for the adoption of energy-efficient technologies, including the utilization of star-rated energy devices, as well as other innovative approaches to promote energy conservation. Guest of Honour of the event, Dr Anumula Rama Chandra Reddy, Chairman, Warangal Local Centre, IEI, spoke about the activities of Warangal Local Centre and stressed on reducing unnecessary energy consumption. Dr A V Giridhar, Honorary Secretary, Warangal Local Centre, IEI, highlighted the role of engineers in promoting energy efficiency and emphasized the unity within the engineering community and at the end of the session, proposed the vote of thanks.

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:-

Deputy Director (Membership)

The Institution of Engineers (India)

8 Gokhale Road, Kolkata 700020

Email: datamemb@ieindia.org

The form is available on IEI Website:

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

Hundred-and-fourth Annual General Meeting of The Institution of Engineers (India)

PROCEEDINGS

The 104th Annual General Meeting (AGM) of The Institution of Engineers (India) was held at 1400 hrs on 29 Dec 2023 at Hotel Royal Orbit, Nagpur Road, Jabalpur (M.P.).

Attended by 176 Corporate Members, the meeting was chaired by Er Shivanand Roy, FIE, President, IEI. The President welcomed the Past Presidents, President-elect and Corporate members of IEI present at the meeting.

On being invited by the President, the Secretary and Director General read out the Notice of the meeting published in November 2023 issue of IEI News.

ITEM 1 Confirmation of Minutes of the 103rd Annual General Meeting held on 18 Dec 2022 at Chennai

The Minutes of the 103rd Annual General Meeting held on 18 December 2022 at Chennai have been circulated in the March 2023 issue of IEI News, [Vol. 29, No. 12]. President invited comments on the Minutes from the members present.

The Corporate Members present unanimously Resolved that the Minutes of the 103rd Annual General Meeting of The Institution of Engineers (India) held on 18 December 2022 at Chennai be confirmed.

ITEM 2 To receive the Annual Report of the Council and the Audited Accounts of The Institution of Engineers (India) for the year ended on 31 March 2023

(a) Annual Report

President invited comments from the members present on the Annual Report of the Council for the year 2022-2023 as circulated.

The Corporate Members present unanimously Resolved that the Annual Report of the Council for the year 2022-2023 be received.

(b) Audited Accounts

President then invited comments on the Audited Accounts of The Institution of Engineers (India) for the year ended on 31 March 2023.

The Corporate Members present unanimously Resolved that the Audited Accounts of The Institution of Engineers (India) for the year ended on 31 March 2023 be received.

ITEM 3 To receive the report on the composition of the Council for the Session 2023-2024

On being requested by the President, the Secretary and Director General reported the following composition of the Council for the Session 2023-2024:

Dr G Ranganath, President

(1) Under provisions of Bye-Law 4(a)(ii) (02)

Dr Hemant O Thakare, by virtue of his being the President (Session 2021-22), shall become Member of the Council for the Session 2023-2024:

There being more than one who served in the office of the President, IEI for the session 2022-23 and in view of the divergent opinions of the Corporate Members present, the President in Chair decided that the decision of filing the Council seat of the Immediate Past President for the Session 2023-2024 is kept in abeyance.

(2) Under provisions of Bye-Law 4(a)(iii) (17)

The Corporate Members elected to the Council from the following State Centres for sessions 2023-2027 shall be Members of the Council for its Session 2023-2024:

Bihar	:: Ajoy Kumar Sinha
Madhya Pradesh	:: R K Rathore
Rajasthan	:: Sajjan Singh Yadav

Further, one Corporate Member from Jharkhand State Centre shall become member of the Council for the Session 2023-2024 on clearance of the result by the President. Another Corporate Member from West Bengal State Centre shall become member of the Council for the Session 2023-2024 on completion of the election process.

Elected for the Sessions 2022-2026:

Kerala	:: Dr G Madhu
--------	---------------

As election from Andhra Pradesh State Centre to the Council could not be conducted under this Bye-Law, co-option to the Council for session 2023-2024 may be done under provision of Regulation 17.

The Corporate Members elected to the Council from the following State Centres shall continue as Members of the Council for the Session 2023-2024:

Elected for the Sessions 2021-2025:

Delhi	:: Devendra Gill
Gujarat	:: Sandeep B Vasava
Karnataka	:: Dr M Chowde Gowda
Maharashtra	:: Manish Mahendra Kothari
Odisha	:: Dr Nutan Kumar Dash
Tamilnadu	:: Dr G Ranganath
Telangana	:: M Shyamprasad Reddy
Uttar Pradesh	:: V B Singh

Elected for the Sessions 2019-2023 and with term extended upto 2023-2024:

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

(3) Under provisions of Bye-Law 4(a)(iv) (31)

The following elected members from 15 Engineering Divisions for the Sessions 2021-2025 shall become members of the Council for the Session 2023-2024 :

Aerospace (1)	:: Dr Venkitakrisnan P V
Agricultural (1)	:: Prof (Dr) Nemichandrappa M
Architectural (1)	:: Mr Sandip Kumar Deb
Chemical (2)	:: Dr Raghupatruni Bhima Rao Prof (Dr) Ms Shilpa Tripathi
Civil (5)	:: Mr M Nagaraj Dr I Satyanarayana Raju

	Mr P Surya Prakash
	Dr S M Goel
	Dr Anil Joseph
Computer (2)	:: Dr Amit Kumar Das
	Prof (Dr) Chandrashekara S N
Electrical (4)	:: Mr R R Tanwar
	Dr S Dharmalingam
	Mr A Sekar
	Mr K K Gopalakrishnan Nair
Electronics & Telecommunication (4)	:: Dr (Ms) G Padmavathi
	Prof (Dr) G S Mundada
	Dr Aloknath De
	Mr S S Mutha
Environmental (1)	:: Mr J C Singhal
Marine (1)	:: Cdr B M Bhandarkar
Mechanical (5)	:: Dr Enti Ranga Reddy
	Prof (Dr) K Venkatasubbaiah
	Prof (Dr) Brahma Raju K
	Mr Sajjan Singh Yadav
	Dr R Venkatesan
Metallurgical & Materials (1)	:: Mr K K Mehrotra
Mining (1)	:: Prof (Dr) Netai Chandra Dey
Production (1)	:: Dr Seeram Satyanarayana
Textile (1)	:: Dr Sadhan Chandra Ray

Under provisions of Bye-Law 4(b)(i) (31)

By virtue of being Chairmen of the following State Centres for the Sessions 2023-2025, following persons have become ex-officio members of the Council for its Session 2023-2024:

Andhra Pradesh	:: Prof (Dr) C V Sriram
Andaman & Nicobar	:: Ms T Shanthy
Arunachal Pradesh	:: Prof (Dr) M Chandrasekaran
Assam	:: Mahesh Barkataki
Bihar	:: Jai Prakash Narayan
Chhattisgarh	:: Prof (Dr) Sanjay Kumar
Goa	:: Anwar Isaac Khan
Gujarat	:: Maheshkumar Rambhai Patel
Jammu & Kashmir	:: Iftikhar Ahmed Hakeem
Jharkhand	:: Dr Mahesh Kumar Gupta
Karnataka	:: M Nagaraj
Kerala	:: P Balakrishnan Nair
Maharashtra	:: Anand Wamanrao Jawanjal
Manipur	:: Swamikanta Singh L
Meghalaya	:: Frederick E Kharshiing
Mizoram	:: Prof (Dr) Saibal Chatterjee
Odisha	:: Prof (Dr) Sudhansu Sekhar Dash
Puducherry	:: Dr S Thirougnaname
Rajasthan	:: Mahendra K Chauhan
Tamilnadu	:: Dr V Karthikeyan
Telangana	:: Dr G Venkata Subbaiah
Uttarakhand	:: Narendra Kumar Yadav
Uttar Pradesh	:: Satya Prakash

By virtue of the extension of the term of the Delhi State Centre Committee including its Chairman by one more session upto 2023-2024, Dr Santosh Kumar Singh has become the ex-officio member of the Council for its session 2023-24.

The Chairman of the West Bengal State Centre shall become ex-officio member of the Council for session 2023-24 after assumption of office and under provision of Regulation 7(a).

By virtue of being Chairmen of the following State Centres for the Sessions 2022-2024, following persons shall continue to be ex-officio members of the Council for its Session 2023-2024:

Haryana	:: Rajeev Vasudeva
Himachal Pradesh	:: Vishwa Mohan Joshi
Madhya Pradesh	:: Rajesh Bisaria
Tripura	:: Dr Subhadeep Bhattacharjee
Punjab & Chandigarh	:: Dr Labh Singh Bhari
Sikkim	:: Dr Narvendra Singh Chauhan

(5) Under provisions of Bye-Law 4(b)(ii) (18)

By virtue of being elected as the Chairmen of the following Local Centres for the Sessions 2023-2025, the following persons shall become ex-officio members of the Council for its Session 2023-2024:

Navi Mumbai	:: Dr Nilajkumar Najukrao Deshmukh
Coimbatore	:: Prof (Dr) Krishnamoorthi J
Durgapur	:: Prof (Dr) Chandan Koner
Ghaziabad	:: Dr Satish Chandra Gupta
Kanchepuram	:: Prof (Dr) S Ramesh
Kochi	:: Velayudhan Nair G
Ludhiana	:: Dr Arvind Dhingra
Madurai	:: Prof (Dr) P Udhaya Kumar
Mysore	:: Prof (Dr) Deepu R
Nagpur	:: Satish Sambhaji Raipure
Neyveli	:: M Venkatachalam
Pune	:: Vasant Dattatraya Pandarkar
South Gujarat	:: Dr Suryawanshi Shivanand Rohidas
Salem	:: Dr Thangaraj K
Tiruchirappalli	:: Prof (Dr) Ravimaran S
Vadodara	:: Dr Satishkumar Kantilal Joshi

By virtue of being the Chairmen of the following Local Centres for the Sessions 2022-2024, the following persons shall continue to be members of the Council for its Session 2023-2024:

Nashik	:: Chopda Mahavir B
Visakhapatnam	:: Venkata Satya G Pakki

(6) Under provisions of Bye-Law 12, 13 and Regulation 17

Corporate Members shall be co-opted in the Council for the Session 2023-2024 under provisions of Bye-Law 12, 13 and Regulation 17.

ITEM 4 To appoint Auditors for the year 2023-2024 and to fix their remuneration

President proposed that Auditors M/s D K Chhajer & Co., Chartered Accountants be appointed as Auditors of The Institution of Engineers (India) for the year 2023-2024 at a remuneration of Rs.3,00,000 + Taxes as applicable.

It was then Resolved that M/s D K Chhajer & Co., Chartered Accountants, be appointed as Auditors of The Institution of Engineers (India) for the year 2023-2024 at a remuneration of Rs.3,00,000 + Taxes as applicable.

The meeting was declared closed at 1500 hrs.

News-in-Brief

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

STATE CENTRES

Delhi

Organized Royal Charter Day 2023 on 09 September 2023 in Delhi. Mr D K Bhalla, Former Director, Bhagwant Institute of Technology, Ghaziabad graced the occasion as Chief Guest and delivered presentation on the topic 'Manufacturing of Electromagnetic/Ceramic Components by Power Metallurgy'. He explained about Electrical Discharge Machining (EDM) for processing hard materials with complex geometrical shapes, which are difficult to machine by conventional machining processes; These materials find applications where lower surface cracks, wear resistance, corrosion resistance, etc are desirable surface properties. He mentioned that in recent years, research has been made to determine the possibility of employing electrodes as feed stock material to produce significant surface alloying and these electrodes are generally produced through Powder Metallurgy (PM) technique in order to achieve necessary combination of operating characteristics. Earlier, Dr Santosh Kumar Singh, Chairman, Delhi State Centre, IEI, explained the history of Royal Charter and the purpose of the day to create public or private corporations (including towns and cities) and to define their privileges and purpose.

Gujarat

Organized World Standards Day 2023 on 16 October 2023 on the theme 'A Shared Vision for a Better World: Incorporating SDG 3' through online mode. Er Pravinkumar Mohanbhai Choudhari, Chairman, Gujarat State Centre, IEI [2021-23], mentioned that this day was established to raise awareness about the need for global standardization of products and its importance to the world economy. Guest of Honour of the event, Er Kanak Oza, Superintending Engineer (Electrical), Roads & Building Department, Government of Gujarat emphasized that the importance of International Standards to offer practical solutions to make the world a better place and focused on SDG3 for ensuring healthy lives, promoting well-being and serving for a more sustainable world. Keynote Speaker of the event, Mr Mitra Sen Verma, Joint Director, Bureau of Indian Standard, Ahmedabad, explained the benefit of nation's economy through standardization, certification and testing and highlighted the role of BIS in achieving the goal. He stressed that world's leading developers of international standards like IEC, ISO, ITU along with IEI, call upon the global community not only to unite together for shaping the world for promoting well-being, good health of every individual but also for the generations to come.

Himachal Pradesh

Organized 56th Engineers' Day 2023, in association with Himachal Pradesh Public Works Department (HPPWD), Shimla on 15 September 2023 in Shimla. Er Vishwa Mohan Joshi, Chairman, Himachal Pradesh State Centre, IEI, highlighted the importance of engineering in shaping the future of state and emphasized the role of engineers in creating a resilient and sustainable future. The event witnessed the presence Chief Guest Er Ajay Gupta, Engineer in Chief, HPPWD, Shimla; Er Pankaj Dadwal, Chairman, National Skill Development Forum (NSDF) [Session 2022-23] and Prof (Dr) Tanmay Gupta, Assistant Professor (SG), Civil Engineering Department, Jaypee University of Information Technology (JUIT), Wagnaghat. Er Gupta highlighted the dedication and innovation rendered by engineers in Himachal Pradesh during the recent disaster and stressed the need for collaboration and innovation to build a stronger, smarter and safer future. Er Dadwal discussed the skill development in the engineering sector and stressed the need for continuous learning to meet the demands of the industry. Prof (Dr) Gupta explained the role of engineering in addressing contemporary challenges and building a future that can witnessed adversely.

Kerala

Organized a Technical Talk in association with IEEE, CSI, INSARM, ASI, SSI, ISTD, SAME, IITArb, PMI, IETE on 'Design Secret of the Universe using Hidden Mathematics as Numbers and Proportions' on 16 August 2023 in Thiruvananthapuram. Speaker of the event was Mr Prof (Dr) V Rajendra Babu, Former Professor & Head (Civil), Dean (PG Studies), College of Engineering, Thiruvananthapuram.

Tripura

Organized a Seminar on 'Industrial Waste and Environmental Pollution' on 22 August 2023 in Agartala. Mr Arif Mohammad, Assistant High Commissioner, Bangladesh Assistant High Commission and Dr Sumanta Chakraborty, Registrar, Maharaja Bir Bikram University, Agartala, graced the occasion as Guest of Honour and Special Guest, respectively. Also Special Guests of the event were Er Suryapal Majumder, Chief Inspector of Factory and Boilers, Government of Tripura and Er Dipradidhiti Roy Barman, Research Scholar, Department of Electrical Engineering, NIT Agartala. The seminar underscored the extensive and enduring effects of industrial pollution on the planet.

Organized a Seminar in association with School of Logistics, Communication and Waterways, State Institute of Public Administration and Rural Development (SIPARD), Agartala, on the topic 'International Connectivity with Tripura and Business Opportunities' on 29 September 2023 in Agartala. Guest of Honour of the event, Er Paramananda Sarkar Banerjee, Former Chief Inspector of Factory & Boilers, Government of Tripura and OSD to the Hon'ble Chief Minister of Tripura, spoke about the international connectivity of Tripura by rail, road and waterways. Special speakers of the event, Dr Subir Kumar Sen, Associate Professor, Department of Commerce, Tripura University (a Central University) explained the economy of Tripura and discussed the historical perspective of connectivity in Tripura before and after partition of India. He underscored the significance of a specific medicinal plant as a promising business venture in Tripura. Additionally, Dr. Partha Pratim Sarkar, Associate Professor at the Department of Civil Engineering, NIT Agartala, delved into the ramifications of rainfall on landslides impacting road connectivity. He particularly emphasized the critical role of the Bangladesh-Bhutan-India-Nepal Corridor in this context. Er Susanta Dutta, Head, School of Logistics, Communication and Waterways, SIPARD, Agartala, spoke about Tripura's diverse opportunities in logistic sector.

Uttar Pradesh

Organized a Lecture on 'Zero Cast Over-Run Projects' on 29 August 2023 in Lucknow. Mr Shankar Pande, renowned senior industrial and environmental expert, graced the occasion as the Chief Guest and said that the main reason for 'cost over run' is time over-run and time over-runs thrive due to indecisiveness or delayed decisions and over the time increases the project cost.

Organized a Technical Workshop on 'Emotional Intelligence' on 08 September 2023 in Lucknow. Chief Guest, Mr M M Khan, Former Chief Engineer, Renuagar Power Project and Director, Pro-Lead explained in detail about Emotional Intelligence and why do we need it.

Organized Royal Charter Day 2023 on 09 September 2023 in Lucknow and a workshop was organised on 'Health Related Stress Management'. Keynote Speaker of the event was Dr Charu Rawat, Professor at Amity University, Corporate Trainer, Personality Development & Skill Trainer. Er V B

Singh, former Vice President, IEI and Convener of the event discussed about Royal Charter and Stress Management.

West Bengal

Organized a Seminar on 'New Technology for Efficient Maritime Management' and Technical Paper Competition in association with Marine Engineers (India), Kolkata on 04 November 2023 in Kolkata. Students from Indian Maritime University (Kolkata Campus) (Erstwhile DMET) and The Neotia University, Kolkata, presented papers on Blockchain Management, Internet on Ships, Alternative Fuels, Automated Stowage Planning, PMS on ships, etc. Chief Guest of the event, Dr Biswajit Ghose, Vice Chancellor, The Neotia University, advised the cadets to familiarize with modern technology but not at the cost of humanity. Rear Admiral Dr Rangachari P J (Retd), Campus Director, Indian Maritime University, Kolkata Campus in his address mentioned the role of IMU (KC) towards delivering quality of Maritime Education & Training. Mr A Srinivasa Prasad, E&SS cum DDG (Technical), MMD Kolkata in his Keynote address highlighted the developments in management of maritime industry and explained Blockchain, the Internet of Things, alternative fuels, etc.

LOCAL CENTRES

Agra

Organized 56th Engineers' Day 2023 in association with Institute of Engineering & Technology, Khandari Campus, Agra, on 15 September 2023 in Agra. Chief Guest of the event was Prof Ajay Taneja, Pro Vice Chancellor, Dr Bhimrao Ambedkar University, Agra and Guest of Honour of the event was Prof Manu Pratap Singh, Director, IET, Agra. Er. Rajnesh Kumar Yadav, Honorary Secretary, Agra Local Centre, IEI, delivered a presentation on the remarkable accomplishments of Bharat Ratna Sir M Visvesvaraya. He highlighted Sir Visvesvaraya's pivotal role in the construction of dams and the generation of hydro power, which have significantly contributed to the advancement of our nation and the engineering community. Furthermore, he elaborated on the theme 'Engineering a Resilient Future: Building Stronger, Smarter, and Safer', emphasizing the importance of creating robust, intelligent, and secure infrastructure for the times ahead.

Ahmednagar

Organized technical lectures on 'Role of Engineers in Industry' and 'Personality Development and Soft Skills' on 14 October 2023 at Ahmednagar. Speaker of the session, Mr Dilip Adhav, Plant Head, L & T Electrical and Automation, Ahmednagar, discussed the expectations of industry from the engineers and spoke about the important role of 5 M, namely, man, material, machine, methods and money in the industry. He spoke on seven functions, Planning, Organizing, Staffing, Directing, Coordinating, Reporting and Budgeting (POSDCORB). He further opined that engineering education should be utilized for achieving growth of the organization. He stressed on excellence in 5E, which is Education Exposure, Experience, Excellence and Energy. Dr D B Karanjule, Joint Honorary Secretary, Ahmednagar Local Centre, IEI delivered on 'Personality Development and Soft Skills' and highlighted the importance of leadership and teamwork in achieving success in any organisation.

Organized technical lecture on 'Indian Automobile - Car Segment' on 19 October 2023 in Ahmednagar. Er Abhay Krishnarao Raje, Honorary Secretary, Ahmednagar Local Centre, IEI, presented a case study on car usage, advantages and disadvantages of diesel and petrol car, type of transmissions, safety features, fuel economy etc.

Bhilai

Organized a technical webinar on 'India's Preparedness for Next Generation Technologies' on 27 August 2023. Panellist of the event Dr R P S Chauhan, Professor & Head (CSE-AI & ML), SSIPMT, Raipur, Chhattisgarh, spoke on 'AI and ML Technology'. Dr Naveen Jain, Professor & Head (Mechanical), SSIPMOT, Raipur, Chhattisgarh, discussed on 'Industry 4.0 Technology' and provided an overview of the use of RPA, IoT and AI-ML in heavy industries

with a focus on sustainability. Dr Pragyan Chakravorty, Director, CLIQUE (Applied Research in Electronic Technology), Bhilai, Chhattisgarh, delivered lecture on 'Beyond 5-G Technology'.

Bhimavaram

Organized four-day Workshop in association with AICTE Idea Lab, S R K R Engineering College, Bhimavaram, on 'Design Thinking Fundamentals' from 26-29 September 2023 in Bhimavaram. Speaker of event was Mr V V Durga Kiran, Associate, Cognizant Technology Solutions.

Coimbatore

Organized a technical lecture in association with the Department of Computer Science and Engineering (Cyber Security), Karpagam College of Engineering, Coimbatore, on 'Defend, Detect and Defeat: A Cyber Security Awareness' on 14 October 2023 at Coimbatore. Speakers of the session were Mr D Suresh, Additional Superintendent of Police, Cyber Crime Wing, Coimbatore District and Mr Anand, Sub-Inspector of Police (Technical), Cyber Crime Wing, Coimbatore District.

Ghaziabad

Organized Special Lecture on 'India's Moon Missions' at Ghaziabad to pay tribute to Dr Vikram Sarabhai on his 104th birthday and to celebrate the ISRO's Foundation Day and National Remote Sensing Day on 17 August 2023 at Ghaziabad. Dr Alope Kumar Mathur, Senior Scientist G, ISRO (Retd) graced the occasion as Chief Guest & Keynote speaker. Er (Dr) Arindam Basu, Director General, NITRA, graced the occasion as Guest of Honour. Dr Mathur discussed the journey in orbits around the earth and moon, separation of lander and landing on South Pole of the moon including the vast data of moon surface and its environment including blue green house gases. Dr Basu shared his experiences with Dr Vikram Sarabhai and discussed the Indian space journey.

Kadapa

Organized Seminar on 'Artificial Intelligence Impact on Enhanced Project Management' on 02 October 2023 in Kadapa. Speaker of the event was Dr T Naresh Kumar, Associate Professor, Department of Civil Engineering, AITS, Rajampet. The lecture provided valuable insights and knowledge for all. As AI continues to advance, its integration into project management processes holds immense potential for enhancing efficiency and effectiveness in civil engineering domain, the speaker said. Dr Kumar further shed light on how AI technologies can be leveraged to optimize project planning, monitoring and execution. AI promised to equip civil engineers with the tools and knowledge to elevate their skills and adapt to the changing demands of the industry; AI can assist project managers with the creation of details schedules and comprehensive risk logs, predict outcomes, optimize resource allocation and enhance communication, he mentioned.

Organized Seminar on 'Role of Renewable Energy on Agriculture' on 15 October 2023 at Kadapa. Dr V V Krishna Reddy, Assistant Professor, Department of EEE, Dr JNTUA College of Engineering, Pulivendula, delivered lecture on the topic and discussed about energy for establishing growth and progress of the country.

Kancheipuram

In association with Department of Electrical and Electronics Engineering, Jerusalem College of Engineering, Chennai, organized World Habitat Day 2023 On 05 October 2023 in Chennai. Chief Guest of the event, Dr Mahalakshmi Ganapathee, Head (R&D) Evnexus Private Limited, Nanganallur, Chennai, explained the importance of resilient urban economics-cities as drivers of growth and economy and also the EV technology and its real time impacts.

Kanpur

Organized a technical lecture on 'Genetic Algorithm for Solving Engineering Optimization Problems' on 29 August 2023 in Kanpur. Guest Speaker, Dr Afroz Alam, Assistant Professor, Department of Electrical Engineering, HBTU, Kanpur, delivered a very informative lecture about Genetic Algorithm and explained the scope and functioning of GA as an adaptive heuristic search algorithm.

Organized a technical visit to Uttar Pradesh Metro Rail Corporation to explore the potential of academia-industry mutually beneficial relationship on 27 September 2023 in Kanpur. Er Prithish Prakash, General Manager (Safety), Uttar Pradesh Metro Rail Corporation, Kanpur, Uttar Pradesh discussed about safety measures taken by Uttar Pradesh Metro Rail Corporation, Kanpur, for constructing this project.

Kanyakumari

Organized an International Industry Academia Conference in association with Riyasaa Labs Nagercoil on 08 September 2023 in Nagercoil. Keynote Address were delivered by Dr Alan Linn, Associate Professor, SVSS Singapore; Prof Bashiru Aremu, Vice Chancellor, Crown University International, Argentina USA delivered lecture through online presence and Er Robin Thomas, CEO, Olive IoT Innovations Private Limited, Chennai graced the occasion and addressed the august presence. Professor Linn elaborated on the evolution of the Singapore University of Social Sciences and the hurdles encountered in its journey towards becoming a world-class institution. Sir Bashiru Aremu, Vice Chancellor, Crown University, Argentina USA elucidated on Information Communication Technology during his Keynote Address. He expounded on the implementation of online classes, even in the absence of a physical teacher, through e-learning platforms. He highlighted the essential computer applications and services necessary to facilitate effective communication in this context. Er Robin Thomas in his Keynote address told about his organization Olive IoT and their target and achievement. He explained about the development of ideas under the concept of Industry Academia Collaboration and discussed about 'Non Intrusive Energy Monitoring System for Industrial Sustainability in India'.

Kochi

Organized World Students Day 2023 on 15 October 2023 through online mode. Er Devendra Gill, Executive Director, DMRC, New Delhi and Council Member, IET, shared his memories with Dr A P J Abdul Kalam while working in DRDO with him and witnessed Dr Kalam's dedication and commitment. He presented Dr Kalam's career working with fire safety as specialization and shared his expertise during his tenure with DMRC.

Organized a technical visit to Mattupetty Indo-Swiss Farm, Munnar on 07 November 2023.

Kolar

Organized a webinar on 'Application of IoT in Aerospace Industry – A Smart Way to Manufacturing' on 05 September 2023. The event featured Dr Anand S N, Professor & Head, MITE, Mangaluru, as the Keynote Speaker. Dr Anand spoke about the application of IoT in Aerospace Industry and explained the importance of global smart manufacturing industry 4.0., product deployment, new tools & services, technology skills, artificial intelligence, automation robotics, etc. He also provided a case study on IoT based weather drone airship for live weather monitoring.

Madurai

Organized National Regional Language Week on 28 August 2023 in Madurai. Mr V Arumugam, Former Assistant Water Analyst, TWAD Board, Madurai, delivered lecture on the topic 'Water Pollution and Portable Drinking Water in Hilly Regions'; Mr AR Ramamoorthy, Director, Sri Vignesh Institute, Madurai, delivered lecture on the topic 'Cyber Crime and Safety and Mrs M Kavitha, Head and Assistant Professor, Department of Physics, NMS Sermathai Vasan College for Women, Madurai, delivered lecture on the topic 'Development of Renewable Energy i.e., Wind, Solar and Hydro Power'.

Nashik

Organized Royal Charter Day on 09 September 2023 through online mode. Er Sumit Kantilal Khinvasara, Past Chairman, Nashik Local Centre, IET, graced the occasion as Guest Speaker.

North Bengal

Organized a Lecture Meeting on 'Phytoremediation: An Effective and Economic Approach towards Removal of Nutrients and Heavy Metals from Waste Water' on 28 August 2023 in Jalpaiguri. Theme Speaker of the function, Er Prithwish Roy, Assistant Professor, Department of Civil Engineering, Jalpaiguri Government Engineering College, Jalpaiguri, explained Phytoremediation as an environment friendly alternative, which utilizes different types of hyperaccumulator plants known as macrophytes for removal of heavy metal pollutants from water through different mechanisms including phytoextraction, rhizofiltration, phytovolatilization and phytostabilization. He opined that Phytoremediation holds promise as a technology for remedying polluted sites. This method involves utilizing plants to extract heavy metals from contaminated soil, subsequently accumulating them in their roots, stems, and branches.

Palghat

Organized a Technical Session on 'Applications of IoT in Plug-in Hybrid Electric Vehicles' on 27 July 2023 in Palakkad. Guest Speaker of the session, Dr Ajay Babu, Assistant Professor, EEE Department, NSS College of Engineering, Palakkad, explained the application of IoT in improving fuel efficiency and safety and reduce vehicle maintenance in electric vehicles and hybrid vehicles. The session highlighted the importance of various levels of automation in vehicles and the concept of Vehicle-to-everything (V2X).

Organized a Technical Session on 'Fireside Chat on the Current Technology & Leadership Trends' on 07 August 2023 at Palakkad. Er Ajay Chankramath, Vice President, Thought Works (Platforms & Cloud), North America, graced the occasion as Guest Speaker. Er Chankramath elaborated the changes that are taking place in the field of management and leadership and spoke about the use of artificial intelligence like ChatGPT for increasing of employee productivity, narrowing the gap between private and public sector organizations which can be seen in today's industrial and commercial arenas.

Rourkela

Observed International Day against Nuclear Test on 29 August 2023 at Rourkela. A seminar was organised on 'Engineering for Peace and Sustainability'. Speaker of the event, Smt Pragati Das, Principal, Utkalmani Gopabandhu Institute of Engineering, Rourkela, delivered that International Day against Nuclear Tests guiding us towards a future by collaboration, sustainability, common good, etc and we can harness our collective engineering to shape a world where the spectre of nuclear tests is relegated to history. She stressed a call to channel our technical expertise towards engineering a safer and more harmonious world.

Organized a technical paper meeting on 'Aditya-L1: India's First Space Mission to see the Sun' on 01 September 2023 at Rourkela. Speaker of the event was Prof Ananta Charan Pradhan, Associate Professor, Department of Physics & Astronomy, National Institute of Technology Rourkela.

Tiruchirappalli

Organized a lecture in association with Computer Society of India, Tiruchirappalli Chapter; Safety Quality Forum – IET, New Delhi; 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 'Heat Transfer Analysis of Supercritical Water Flowing in a Vertical Tube' on 01 August 2023 through hybrid mode. Speaker of the event was Dr S Anand, Engineer, Product Engineering, High Pressure Boiler Plant, Bharat Heavy Electricals Limited, Tiruchirappalli.

Organized lecture in association with G20 India, Meity, Government of India; Computer Society of India, Tiruchirappalli Chapter; Safety Quality Forum – IET, New Delhi; Indian Institute of Welding Tiruchirappalli Branch; Indian

Welding Society, Southern Zone; Indian Institute of Metals, Tiruchirappalli Chapter; Indian Institution of Industrial Engineering, Tiruchirappalli; Kumari Arival Peravai, Kanyakumari and Indian Society for Non-destructive Testing, Trichy Chapter on the topic 'Best Practices for Responding & Recovering from Cyber Incidents' on 08 August 2023 through online mode. Speaker of the event was Dr Geetha S, Professor and Associate Dean (Research), Vellore Institute of Technology, VIT, Chennai.

In association with Computer Society of India, Tiruchirappalli Chapter; Safety Quality Forum – IEI, New Delhi; Indian Institute of Welding Tiruchirappalli Branch Indian Welding Society, Southern Zone; Indian Institute of Metals, Tiruchirappalli Chapter; Indian Institution of Industrial Engineering, Tiruchirappalli; Kumari Arival Peravai, Kanyakumari and Indian Society for Non-destructive Testing, Trichy Chapter organised lecture

On the topic 'Welded Marvels – Waste to Wealth' on 22 August 2023 through online mode. Speaker of the event was Mr Sachin Kaluskar, Designated Partner, M/s Infine Art Ventures LLP, Vadodara, Gujarat.

On the topic 'Additive Workflow in Industries and Benefits from its Adaptation' on 29 August 2023 through virtual mode. Speaker of the event was Er Suman Gowda N C, Manager – Application (Additive Manufacturing), M/s Phillips Tools India Private Limited, Bangalore.

Trichur

Organized a technical session on 'Solid Waste Disposal – Challenges and Way Forward' on 25 August 2023 in Trichur. Panellists of the event, Er Cyriac M G, Executive Engineer (Retd), KWA and Associate Professor, Jyothi Engineering College, Cheruthuruthy, Thrissur, discussed the environmental issues like solid concentration in urban areas, river pollution, contaminated water wells, spread of communicable diseases and limited

facilities for treatment of liquid waste. He suggested the need for solid waste management plan to be developed with provision for materials recovery centre and biodegradable treatment system at house hold, institutional and community level.

FORA

Water Management Forum

Organized Technical Talk, in association with Gujarat State Centre, IEI, on 'Dam Safety Act 2021 at a Glance & Case Study of Machchu-2 Dam-Morbi-Flood Disaster 1979' on the occasion to celebrate the 64th Foundation Day of the Forum on 01 September 2023 through hybrid mode. Er Hiro Udhavdas Kalyani, Chairman – BoG, Water Management Forum, IEI [Session 2022-23] & Additional Secretary, Saurashtra, Water Resources Department, Government of Gujarat, Gandinagar, explained the objectives & various activities of the Water Management Forum, IEI. Guest of Honour of the event, Er Sandeep B Vasava, Council Member, IEI & Secretary, Roads & Building Department, Government of Gujarat, expressed his best wishes to Gujarat State Centre, IEI, on the occasion of observation of Foundation Day. Chief Guest of the event, Er S K Patel, Superintending Engineer, Mechanical Circle No. 2, NWRWS & Kalpsar Department, Government of Gujarat, explained about Dam Safety Act 2021 as implemented by Government of Gujarat and its implementation procedure for safety of dams in Gujarat. He told that Gujarat Government has constituted two committees namely, Gujarat Dam Safety Organization and Committee on Dam Safety for suitable action towards Dam Safety Act 2021. Keynote Speaker of the event, Er K B Trivedi, Former D E E (Mechanical), NWRWS & K Department, Government of Gujarat, presented a detailed case study of Machchu-2 Dam, Morbi-Flood Disaster 1979.

One Day Workshop under the aegis of National Languages Promotional Committee

E-Waste Management in India In Regional Language Hindi



Agra Local Centre, IEI, organized One Day Workshop in association with Department of Civil Engineering, Shri C V Raman Auditorium, BSA College of Engineering & Technology, Mathura (UP), on **E-Waste Management in India in Regional Language Hindi** on 18 August 2023 in Mathura, Uttar Pradesh under the aegis of National Languages Promotional Committee

[NLPC], IEI. The event started with lightning of the lamp by Er Rajneesh Kumar Yadav, Honorary Secretary, Agra Local Centre, Er Ashok Kumar Sahu, HoD, Civil Engineering Department, BSACET and Organizing Secretary, speakers, guests and dignitaries. Er Rajneesh Kumar Yadav welcomed guests, speakers and audience and gave brief introduction of IEI activities. He also narrated about sources of e-Wastage. Keynote speaker Mrs Mukta Yadav, Assistant Professor at RBS Engineering Technical Campus in Bichpuri, Agra, highlighted the significance of e-waste recycling, stressing the extraction of maximum value from salvageable components to reclaim metals and prevent resource loss. Mr Mukul Raghav, Trainer and Councilor, delivered the importance of civil engineering software, billing & estimation techniques, demand of Building Information Modelling (BIM) in construction industry. Er Ashok Kumar Sahu expressed his sincere thanks to the speakers, audience and members involved in making the program successful.

National Maritime Day 2024

Theme

Sustainable Shipping : Opportunities and Challenges

05 April, 2024



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.

Like every year, the Institution invites applications for the session 2024-2025 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	Quantum of Grant (INR)
1. Diploma	Exempted [Membership of Student Chapter is desirable]	AMIE/MIE/FIE	Not Mandatory	Not exceeding ₹20,000/- for a single project
2. UG (BE/BTech/AMIE/Equivalent)	SMIE	AMIE/MIE/FIE	Applicant's Institute should preferably be an Institutional Member with NBA / NAAC Accreditation or valid NIRF Rank	Not exceeding ₹50,000/- for a single project
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	Not exceeding ₹1,00,000/- for a single project
4. PhD	AMIE/MIE/FIE	MIE/FIE	Applicant's Institute should preferably be an Institutional Member with NBA / NAAC Accreditation or valid NIRF Rank	Not exceeding ₹1,50,000/- for a single project

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

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

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

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

FORM IV

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

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

1. Place of Publication	8 Gokhale Road, Kolkata 700 020
2. Periodicity of its Publication	Monthly (April to March)
3. Printer's Name	M/s Florence Offset Process Pvt. Ltd.
Nationality	Indian
Address	6A, S N Banerjee Road, Kolkata 700 013
4. Publisher's Name	Maj Gen (Dr) MJS Syali, VSM (Retd)
Nationality	Indian
Address	8 Gokhale Road, Kolkata 700 020
5. Editor's Name	Maj Gen (Dr) MJS Syali, VSM (Retd)
Nationality	Indian
Address	8 Gokhale Road, Kolkata 700 020
6. Names and addresses of individuals who own the newspaper and partners or shareholders holding more than one percent of capital	The Institution of Engineers (India) 8 Gokhale Road, Kolkata 700 020

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

Sd/-
Maj Gen (Dr) MJS Syali, VSM (Retd)
Signature of Publisher

Dated : March 01, 2024

IEI DIARY



One Day Seminar on **"Green Manufacturing of Steel"**
Durgapur, June 23, 2024

The Honorary Secretary, IEI, Durgapur Local Centre, Nehru Avenue, B Zone, Durgapur 713 205 [Fax: 0343-2564770, Email: durgapurlc@ieindia.org, Website: http://www.ieidurgapurlc.org]

Thirty-ninth National Convention of Mechanical Engineers on **"Innovations in Mechanical Engineering, Sustainable Manufacturing Technologies, Design and Energy Systems"**

Chandigarh, September 13-14, 2024
The Honorary Secretary, IEI, Punjab and Chandigarh State Centre, Sector 19A Madhya Marg, Chandigarh 160 019 [📞: 0172-2775418, Fax: 0172-2540133, Email: pcsc@ieindia.org]

Fortieth National Convention of Mechanical Engineers on **"Recent Advances in Mechanical Engineering"**
Durgapur, August 23-24, 2025

The Honorary Secretary, IEI, Durgapur Local Centre, Nehru Avenue, B Zone, Durgapur 713 205 [Fax: 0343-2564770, Email: durgapurlc@ieindia.org, Website: http://www.ieidurgapurlc.org]

Metallurgical & Materials Engg. Division

Thirty-seventh National Convention of Metallurgical & Materials Engineers on **"Modern Steel Manufacturing Process"**

Chennai, December 06-07, 2024
The Honorary Secretary, IEI, Tamil Nadu State Centre, No. 19, Swami Sivananda Salai, Chepauk, Chennai 600005 [📞: 044-25360614 /9962950333, E-mail : tncs@ieindia.org, Website : www.ieitnsc.org]

Production Engineering Division

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

Bareilly, May 02-03, 2024
The Honorary Secretary, IEI, Bareilly Local Centre, 44, Camphor Estate Colony, Near Champhor Hospital, Rampur Road, C B Ganj, Bareilly 243502, Uttar Pradesh [Mobile: 9634953691, Email: bareillylc@ieindia.org]

Interdisciplinary Co-ordination Committee

All India Seminar on **"Sustainable Developments and Technologies"**

Gorakhpur, May 24-25, 2024
The Honorary Secretary, IEI, Gorakhpur Local Centre, 176, Siddharthnagar Colony (Opposite GDA Office), Bharwaliya Buzurg, Taramandal, Gorakhpur 273017, [Mobile : 8707269768, Email: gorakhpurc@ieindia.org, Website: www.ieigorakhpur.org]

All India Seminar on **"Artificial Intelligence and Machine Learning in Materials Engineering for Environment"**

Rourkela, May 18-19, 2024
The Honorary Secretary, IEI, Rourkela Local Centre, National Institute of Technology Campus, Roukela 769008, Odisha [📞: 0661-2472709, E-mail: rourkelalc@ieindia.org]

Aerospace Engineering Division

All India Seminar on **"Trends in Indian Aviation Civil and Defense"**

Chennai, May 17-18 2024
The Honorary Secretary, IEI, Tamil Nadu State Centre, No. 19, Swami Sivananda Salai, Chepauk, Chennai 600005 [📞: 044-25360614 /9962950333, E-mail : tncs@ieindia.org, Website : www.ieitnsc.org]

Thirty-seventh National Convention of Aerospace Engineers on **"Innovation in Aerospace Engineering"**
Ranchi, November 23-24, 2024

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]

Agricultural Engineering Division

Thirty-sixth National Convention of Agricultural Engineers on **"Conservation and Management of Engineering inputs Farm Mechanization Agro Processing"**

Raipur, August 29-30, 2024
The Honorary Secretary, IEI, Chhattisgarh State Centre, National Institute of Technology Campus, G E Road, Raipur 492010 [📞: 0771-2254625, E-mail: chhattisgarhsc@ieindia.org, Website : www.ieicg.org]

Chemical Engineering Division

Thirty-ninth National Convention of Chemical Engineers on **"R&D Activities in Minerals and Metallurgical Industries for Today's Society"**

Bhubaneswar, October 19-20, 2024
The Honorary Secretary, IEI, Odisha State Centre, Engineers Bhawan, Institution of Engineers Square, Sachivalaya Marg, Unit-4, Bhubaneswar 751001, [📞: 0674-2390291, E-mail: odishasc@ieindia.org, Website: www.ieiorissa.org]

Civil Engineering Division

Thirty-ninth National Convention of Civil Engineers on **"Exploring Emerging Trends in Civil Engineering"**

Kochi, October 25-26, 2024
The Honorary Secretary, IEI, Kochi Local Centre, IEI Bhavan, Government Homeo Hospital Road, Pullepady, PO: Kaloor, Kochi 682017 [📞: 0484-2403838 / 2403993, E-mail : kochilc@ieindia.org; Website : www.ieikochi.org]

Electrical Engineering Division

All India Seminar on **"A Transition Towards Clean Energy Its Impact on Indian Economy"**

Salem, May 25-26, 2024
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.ieisl.com]

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

Chennai, October 25-26, 2024
The Honorary Secretary, IEI, Tamil Nadu State Centre, No. 19, Swami Sivananda Salai, Chepauk, Chennai 600005 [📞: 044-25360614 /9962950333, E-mail : tncs@ieindia.org, Website : www.ieitnsc.org]

Environmental Engineering Division

Thirty-eighth National Convention of Environmental Engineers on **"Change Yourself Not the Nature"**

Kochi, August 23-24, 2024
The Honorary Secretary, IEI, Kochi Local Centre, IEI Bhavan, Government Homeo Hospital Road, Pullepady, PO: Kaloor, Kochi 682017 [📞: 0484-2403838 / 2403993, E-mail : kochilc@ieindia.org; Website : www.ieikochi.org]

All India Seminar on **"Sources of Planet Energy Environment and Disaster Science SPEEDS24 Climate Justice and Equity"**

Lucknow, June 22-23, 2024
The Honorary Secretary, IEI, Uttar Pradesh State Centre, Engineers Bhawan, River Bank Colony, Lucknow 226 018 [📞: 0522-2625322, Fax: 0522-2625322, Email: upsc@ieindia.org, Website: http://www.ieiup.org.in]

Electronics & Telecommunication Engg Division

All India Seminar on **"Design of Advanced 5G Antenna and Prototype Technologies"**

Coimbatore, May 02-03, 2024
The Honorary Secretary, IEI, Coimbatore Local Centre, PSG College of Technology Campus, Peelamedu, Coimbatore 641 004 [📞: 0422-2580733; Email: coimbatorelc@ieindia.org; Website: https://www.ieicoimbatore.org]

Mechanical Engineering Division

All India Seminar on **"Sustainability through Green Vehicles: Powered by Hydrogen, Fuel Cell, CNG and Flexi Fuel Vehicles"**

Coimbatore, May 15-16 2024
The Honorary Secretary, IEI, Coimbatore Local Centre, PSG College of Technology Campus, Peelamedu, Coimbatore 641 004 [📞: 0422-2580733; Email: coimbatorelc@ieindia.org; Website: https://www.ieicoimbatore.org]

One Day Seminar on **"Additive Manufacturing and 3D Printing"**

Agra, 20 June 2024
The Honorary Secretary, IEI, Agra Local Centre, Room No-G3, Faculty of Engineering & Technology Agra College, Agra 282002 [📞: 812689221; E-mail: agralc@ieindia.org]



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 April 2024

Sl. No.	Name of the Course	Scheduled Dates
1.	3D Printing in Manufacturing	02 - 05 Apr 24
2.	Bio Medical Waste Management – Handling & Safe Disposal Options with New Rules 2016	03 - 05 Apr 24
3.	Advancements in Casting, Forging and Sheet Metal Forming	15 - 19 Apr 24
4.	Efficient Drilling & Blasting Operations in Opencast Mines	15 - 17 Apr 24
5.	Distribution Transformers - O&M achieving Zero Breakdown	16 - 19 Apr 24
6.	Advanced Construction Materials in Concrete Technology and its Applications	22 - 26 Apr 24
7.	Advanced Manufacturing Processes For Sustainable Polymer-Based Materials	22 - 24 Apr 24
8.	Cyber Security Best Practices for Managers & Executives	22 - 24 Apr 24
9.	Latest trends in Welding Technology and NDT Techniques (Theory and Practical exposure)	22 - 26 Apr 24
10.	General Safety in Mining - Risk Assessment, Accident Prevention, Formulation of Safety Management Plan, Safety Audit, Legislation, ISO- 31000	22 - 26 Apr 24
11.	Dam Break Analysis using Latest Software	22 - 26 Apr 24
12.	Renewable Energy Systems - Wind & Solar - Grid Integration	23 - 26 Apr 24
13.	Advanced technologies based Water and Waste Water Treatment for Zero Discharge Compliance	24 - 26 Apr 24
14.	Mastering High-Performance Teams: Competency Building for Collaborative Excellence	24 - 26 Apr 24
15.	Project Management using MS Project 2021	24 - 26 Apr 24
16.	Impact of Climate Change on Water Resources: Monitoring and Management	25 - 26 Apr 24

For detail information please contact:

Engineering Staff College of India

Old Bombay Road, Gachibowli, Hyderabad – 500 032

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

Superannuation from IEI

Mr Bulbul Samaddar, an employee of the Institution HQ superannuated from the services of IEI on March 31, 2024. He joined the Institution on February 01, 1993 and rendered his services to the Institution over a period of 31 years.

IEI wishes Bulbul Samaddar and his family a happy and healthy life in the future.



I.E.I NEWS

ISSN 0971-3352

Owner : The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700 020
Printer : Maj Gen (Dr) MJS Syali, VSM (Retd), Secretary & Director General
Publisher : Maj Gen (Dr) MJS Syali, VSM (Retd), Secretary & Director General
Published from : 8 Gokhale Road, Kolkata 700 020
Printed from : M/s Florence Offset Process Pvt. Ltd.
6A S N Banerjee Road, Kolkata 700013
Editor : Maj Gen (Dr) MJS Syali, VSM (Retd), Secretary & Director General

President : Dr G Ranganath

Editor : Maj Gen (Dr) MJS Syali, VSM (Retd)

Special Contributors: Mr S Chakraverty, Dr K Sen
Mr D Nath, Mr A Deb, Mr A Das, Ms H Roy,
Mr S Bagchi, Ms N Sikdar

The Institution of Engineers (India) as a body accepts no responsibility for the statements made by individuals. Reprints of any portion of the publication may be made provided reference thereto is quoted.

Telephones: 91-33-40106299/248/228/215; Web: <http://www.ieindia.org>; E-mail: iei.technical@gmail.com