



IEI NEWS

November 2024

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A CENTURY OF SERVICE TO THE NATION

Volume 31

Number 8

Report on Visit to CAST by Er Ashok Kumar Basa, Executive Vice President, WFEO

Er Ashok Kumar Basa, Executive Vice President of the World Federation of Engineering Organizations (WFEO) and Past President of The Institution of Engineers (India) [IEI], represented WFEO at a significant high-level meeting with the China Association for Science and Technology (CAST), being nominated by Er Mustafa Shehu, President, WFEO. The meeting took place at 14:00 hours on October 23, 2024, in Beijing.



Dr LUO Hui, Executive Secretary and Director General of International Affairs at CAST, led the CAST delegation with five senior officials to discuss mutual areas of interest and potential collaboration with WFEO. Er. Basa was warmly welcomed

with a red-carpet reception by Dr LUO Hui and other CAST dignitaries, underscoring the importance CAST placed on this collaboration.

Dr Hui opened the meeting with an overview of potential areas for collaboration, focusing on global challenges where CAST and WFEO could align efforts for greater impact. In response,

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The Institution of Engineers (India)

8 Gokhale Road, Kolkata 700 020

1 November 2024

To

All Corporate Members of IEI

The 105th Annual General Meeting of The Institution of Engineers (India) will be held at **Novotel Kolkata Hotel & Residences, CF-11, Action Area-I, Newtown, 700156 Kolkata, India** on **22 December 2024** at 1400 hrs.

AGENDA

1. To confirm the Minutes of the 104th Annual General Meeting held on 29 December 2023 at Jabalpur, already circulated in March 2024 issue of IEI News, Vol. 30, No. 12.
2. To receive the Annual Report of the Council and the Audited Accounts of IEI for the year ended on 31 March 2024.
3. To receive the Report of the Council on election of the President and also the composition of the IEI Council for the Session 2024-2025.
4. To appoint the Auditors for the year 2024-2025 and to fix their remuneration.

Maj Gen (Dr) M J S Syali, VSM (Retd)
Secretary and Director General

From the President's Desk.....

Exploring the Frontiers of Space Technology



The rapid advancements in satellite technology are redefining the way we perceive connectivity and access to information. Among the transformative innovations is the deployment of low Earth orbit satellite constellations, which have become game-changers in bridging communication gaps globally. These satellites are equipped to deliver high-speed, low-latency internet, making essential services like remote education, telemedicine, and global business interactions accessible even in the remotest regions.

What makes this technology fascinating is the integration of sophisticated engineering to optimize network performance. Efforts to achieve ultra-low latency and enhance data reliability underscore the critical role of precise engineering in meeting modern connectivity demands. Such innovations exemplify how the fusion of technical expertise and creative problem-solving can address complex global challenges.

Equally commendable is the focus on sustainability within this technological domain. Operating in a highly sensitive orbital environment, satellite operators are adopting measures to ensure responsible usage of space. The design of satellites capable of natural deorbiting within a few years, coupled with proactive end-of-life management, minimizes

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Know-Your-Member (KYM)

Is your mobile number & e-mail are updated with us ? If not, then please forward your Know-Your-Member (KYM) form immediately for participating in IEI Election process.

You are requested to forward your KYM 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 or scan the code:

<https://shorturl.at/8Q5tF>



Report on Visit to CAST by Er Ashok Kumar Basa, Executive Vice President, WFEO

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Er Basa expressed heartfelt gratitude to CAST for extending the invitation to WFEO and acknowledged CAST's substantial contributions to the global engineering community. He highlighted CAST's longstanding support for WFEO initiatives and emphasized the need for enhanced support, particularly in funding WFEO's Engineering Capacity Building programs in Africa and the WFEO Academy.

The discussions between WFEO and CAST were in-depth and constructive,



resulting in finalising to collaborate on key global issues, including climate change and disaster mitigation, with a particular focus on supporting initiatives related to COP29. Both parties committed to exploring solutions for pressing social and societal challenges, aligned with the United Nations Sustainable Development Goals (SDGs) and in line with the Strategic Plan of WFEO. Incidentally Er Basa is also the Chair of the Strategic Planning Committee of WFEO.

An additional point of consensus was the shared commitment to popularizing the newly adopted Code of Ethics of WFEO, which addresses ethical considerations in the expanding role of Artificial Intelligence (AI). This pioneering Global Code of Ethics, recently approved at the WFEO General Assembly in Prague in October 2023, sets forth principles responsible for AI integration across industries, addressing emerging ethical concerns. Notably, Er Basa played a significant role in drafting this updated code, a milestone revision over a decade in the making.

The meeting concluded with a ceremonial exchange of gifts, symbolizing the spirit of cooperation. Er Basa presented CAST with a handcrafted silver filigree of the Sun Temple Wheel from Konark, a UNESCO World Heritage Site of India and an emblem of India's rich cultural heritage. Both sides expressed optimism for a productive partnership moving forward.

Additionally, Er Basa attended the World Science and Technology Development Forum (WSTDF) 2024 held in Beijing from October 22-24, 2024. The forum, attended by global leaders in science and engineering, provided a platform for discussions on innovation, sustainability, and interdisciplinary collaboration in addressing global challenges. During this period Er Basa had also the opportunity to meet Prof Michael Levitt of Stanford University, the Nobel Prize Winner in Chemistry in 2013.

This high-level interaction marks a new chapter in WFEO-CAST relations, fostering collaboration that leverages engineering expertise to address global issues.

IEI Technical Webinar Series supported by Fédération internationale du béton (fib)

Hydraulic Engineering for Sustainable Watercourse Management

On November 14, 2024, The Institution of Engineers (India) (IEI) concluded its Technical Webinar Series with the fifth and final session on **Hydraulic Engineering for Sustainable Watercourse Management**. Organized in collaboration with Maccaferri Environmental Solutions Private Limited and supported by the Fédération Internationale du Béton (fib), the webinar drew significant interest from engineering professionals, researchers, and industry experts, addressing a critical aspect of sustainable infrastructure development.



Mr Stefano Rignanese

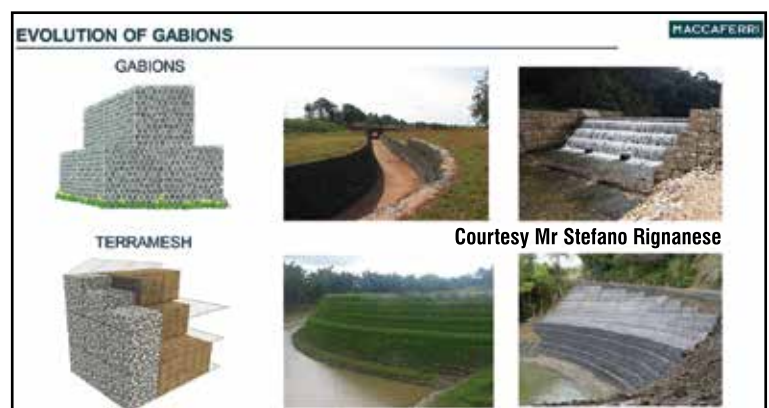
The session featured two distinguished speakers from Maccaferri Environmental Solutions Private Limited. Mr Stefano Rignanese, Business Developer Manager, opened the proceedings with a presentation on innovative strategies for riverbank protection, focusing on the evolution of solutions like gabion systems and Reno Mattress Plus. He emphasized the importance of integrating statistical data and risk assessments in river engineering to achieve

sustainable results while sharing global examples of ecological restoration through engineering.

Dr Ratnakar R Mahajan, Regional Technical Manager - ISEAP (India, South-East Asia, and Pacific), further enriched the discussion by exploring advanced hydraulic solutions, including Reno Mattress Plus, highlighting its material efficiency, cost-effectiveness, and environmental benefits. His insights, supported by global case studies, demonstrated the practical applications of these innovations in enhancing ecosystem resilience and long-term sustainability.



Dr Ratnakar R Mahajan



Courtesy Mr Stefano Rignanese



Courtesy Mr Stefano Rignanese

The session, moderated by Mr Sumit Pathak, Deputy Manager, Technical Marketing, Maccaferri, ensured a seamless flow of discussions and active engagement with the audience. An interactive Q&A session followed,

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Innovations in Mechanical Engineering, Sustainable Manufacturing Technologies, Design, and Energy Systems

Punjab & Chandigarh State Centre, IEI organized the 39th national Convention of Mechanical Engineers at Chandigarh during 08-09 September 2024 under the aegis of Mechanical Engineering Division Board [MCDB], IEI. A National Seminar was organized concurrently with the National Convention on the theme **Innovations in Mechanical Engineering, Sustainable Manufacturing Technologies, Design, and Energy Systems**. Dr G Ranganath, President, IEI graced the inaugural function as the Chief Guest. The event witnessed the gracious presence of Dr Lakhvir Singh, Principal, Baba Banda Singh Bahadur Engineering College [BBSBEC], Fatehgarh, Punjab and Er Sukhvir Singh Mundi, Vice President, IEI. Er Sajjan Singh Yadav, Chairman, Mechanical



Engineering Division Board, IEI presided over the function.

The program started with invocation and lighting of the lamp in the august presence of the dignitaries on the dais. Dr Labh Singh Bhari, Chairman, Punjab & Chandigarh State Centre, IEI welcomed the guests, dignitaries and participants. In his address, Dr Bhari emphasized the significance to implement advanced technologies in the field of mechanical engineering and also to measure the environmental impact of these technologies. Dr Manpreet Kaur, Associate Professor, Mechanical Engineering Department, BBSBEC & Convener of the event briefed about the theme. She focused on the fundamental mechanical engineering breakthrough in the context of sustainability, transformative technologies, energy efficient machining, etc. She further emphasized to explore the vast landscape of mechanical engineering, from additive manufacturing to biomedical engineering, and renewable energy to waste-to-energy systems and encouraged the students and participants from different regions of the country listen to the invited talks and research papers presentation. Er Sajjan Singh Yadav, Chairman, MCDB, IEI in his address, discussed the key innovations in mechanical engineering, focusing on sustainable manufacturing technologies, advanced design practices, and energy systems. He discussed the applications and scope in Additive Manufacturing and said that combined with advanced materials like high-strength composites and recycled or bio-based materials, this advanced manufacturing process is driving significant improvements in sustainability. –He said that digital tools like CAD and FEA streamline the development process, minimize the need for physical prototypes and also reduce waste. He opined that design for manufacturability (DFM) and design for assembly (DFA) improves efficiency, while modular design principles facilitate product reuse and recycling. Chief Guest of the function, Dr G Ranganath, President, IEI explained the significance of attending the technical events organised by IEI and its' outcome. President, IEI encouraged the young engineers and the students to attend the technical activities to enrich the knowledge base.



Prof Vidyashankar S

Er Sukhvir Singh Mundi, Vice President IEI, in his address opined that National Conventions provide platforms for interactive learning and also provide opportunities for collaboration. Dr Lakhvir Singh, in his address mentioned the significance of customized manufacturing process, advancement towards green manufacturing, invention and application of new materials etc. On the occasion,



Dr Harpreet Singh

Director, HMT Machine Tools, A Government of India undertaking, Ex-



Er S Ravichandran



Er S Valai Ganesh



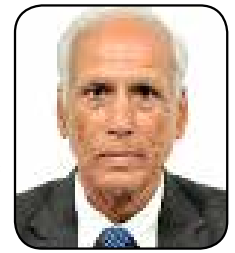
Er Nitinkumar Singh Rajput

Er P Balakrishnan Nair, Chairman, Kerala State Centre, IEI, Former Company Representative, Petroleum Development Oman, Occupational Safety and Health Trainer and Consultant, Kerala delivered Dr S C Bhattacharyya Memorial Lecture on the topic 'Mechanical Engineers: Their Role in Influencing Industry Growth' and spoke on Industry 4.0, transition from Industry 4.0 to Industry 5.0, applications of Smart Manufacturing in Mechanical Engineering, Collaborative Robotics, Human-Machine Interfaces, Customization and Personalization, Sustainable Manufacturing Practices, Cyber Security, Green



Er P Balakrishnan Nair

Manufacturing and so on. Dr Harpreet Singh delivered the Dr S P Luthra Memorial Lecture on the topic 'Smart Manufacturing: A Paradigm Shift in Manufacturing' and explored the evolution, benefits, challenges, and future prospects of Industry 4.0 and smart manufacturing, emphasizing their profound impact on society, productivity, product design, customization, and the legal landscape. He explained the basic disruptive technologies, advanced manufacturing processes, manual skills, cognitive skills, numerical skills, innovations and start-ups etc. A Panel Discussion was organised on the occasion on the topic 'Future of Mechanical Engineering'. The State of Art Lecture was delivered by Dr Harmesh Kansal, Professor, UIET, Chandigarh



Er C J Aneja



Er Navneet Nandan Sharma



Er Chirag Prakashchandra Mistry

Dr S Vidyashankar, Vice Chancellor, Visvesvaraya Technological University, Belagavi, Karnataka (in absentia); Dr Harpreet Singh, Professor, Department of Mechanical Engineering, IIT Ropar; Er C J Aneja, (in absentia), Former Managing Director, HMT Machine Tools, A Government of India undertaking, Ex-Chairman, Production and General Engineering Division Council, Bureau of Indian Standards, Government of India and Er S Ravichandran, Head, L&D, Hosur Units, Ashok Leyland were felicitated as eminent engineering personalities to recognize their eminence and contribution in the field of mechanical engineering. Further, Er Navneet Nandan Sharma, Technical Advisor, R&D, National Engineering Industries Limited, Jaipur conferred with Life Time Achievement Award in recognition of his contributions throughout his career. The IEI Young Engineers Award 2024 in Mechanical Engineering Division were presented to Er S Valai Ganesh, Assistant Professor, Department of Mechanical Engineering, Ramco Institute of Technology, Rajapalayam, Tamil Nadu; Er Chirag Prakashchandra Mistry, Senior Scientist, CSIR-Central Electronics Engineering Research Institute (CEERI), Pilani and Er Nitinkumar Singh Rajput, Lead Engineer-Mechanical, Unique Systems FZE, Sharjah for their contribution in the field of Mechanical Engineering.

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Innovations in Mechanical Engineering, Sustainable Manufacturing Technologies, Design, and Energy Systems

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on the topic 'Digital and Smart Manufacturing'. Mr Vikram Murthy, ISHRAE Society Presidential Member delivered Invited Lecture on the topic 'Heat Transfer Enhancement for HVAC & R'. Er J P Kundra, Cheema Boilers, Mohali, Punjab delivered Invited Lecture on the topic 'Hydrogen as a Renewable Fuel'. Prof Jodh Singh, Dr SSB UICET, Punjab University, Chandigarh delivered lecture on the topic 'Heat Transfer Behaviour of nano Fluids'.

During technical sessions, papers were presented on diversified topics, namely 'Performance Evaluation of Simultaneous Heat and Ultrasonic Vibration-assisted Machining'; Design and Development of Customized 3D Printed Health Care Products'; Customer Centric Manufacturing System; Optimizing Sheet Cavitation Control on Cambered Hydrofoils using Trangular Passive Controller; Navigating the Workforce Challenges of Industry 4.0; Carbon Nanotubes in Energy Storage: Enhancing Performance in Batteries and Super Capacitors; Stubble Reinforced Construction Materials for Improved Performance; Experimental Investigation of Self-cured Concrete using Fly Ash Aggregates for Rigid Pavement; Experimental Investigation of Cutting Parameters for Wood Plastic Composite on CNC Router'; The Human Factor in Industry 4.0: A Review of Employee Perspectives and Concerns'; Applications of Metaheuristic Optimization Algorithms in Mechanical Engineering' etc.

During the valedictory function, Er Baldev Singh Sran, Chairman-cum-Managing Director, Punjab State Power Corporation Limited [PSPCL] graced the function as the Chief Guest. Dr Enti Ranga Reddy, Former Chairman, MCDB, IEI was the Guest of Honour. Dr Labh Singh Bhari, Chairman, Punjab & Chandigarh State Centre presided over the function. Dr Manpreet

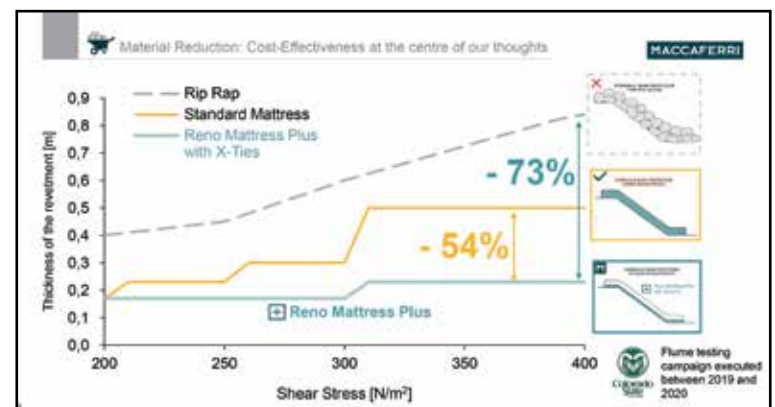
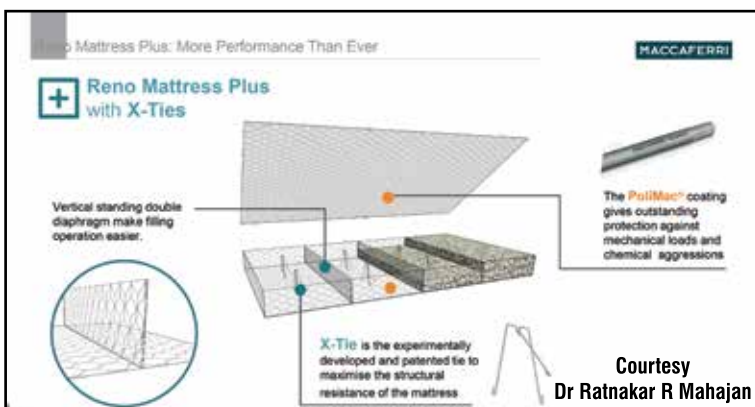
Kaur, Convener, summed up the two-day deliberation obtained during six technical sessions. She mentioned that the technical sessions focussed on advancements in HVAC & R, innovations in Mechanical Engineering, Advanced Manufacturing, Smart manufacturing, Energy Efficient Systems, Sustainable Manufacturing, advanced design approaches etc.

Recommendations obtained over the two-day fruitful deliberation are as follows.

Interdisciplinary learning and alignment need to be explored; Mechanical engineers should apply AI and ML software integrated with hardware technologies in all sectors and be compatible with the recent innovations; Academia and industries need to join hands and enhance proper and useful collaboration; Customer-centric manufacturing systems should be explored more using the applications of mass customisation, mass personalization, intelligent manufacturing systems and human machine interface; The recent trends in particle-reinforced friction stir spot welding should be encouraged for advanced manufacturing of products and components; An approach should be looked into heat transfer applications using the survey of optical sensors and there is a need to explore the potential of thermal spray coating techniques and their effects on hydro turbine applications; The separation of hydrogen and its use as a renewable fuel need to be explored in a large scale manner as hydrogen emerges as a future clean energy fuel; E-waste management is another area for improving sustainability. Formulating and implementing proper regulations on recycling and reusing e-waste is the need of the hour, which has an impact on a sustainable circular economy; Industry 4.0 and its extended use of AI and ML on manufacturing robots have become the order of the day. Various components can be manufactured using this industry 4.0 digitalization aspects. Encouragement should be given to the start-ups and promising entrepreneurs; Sustainable construction practices to enhance the energy efficiency and to reduce the thermal conductivity in the buildings should be promoted; The use of self-curing concrete using fly ash aggregates for rigid pavements on the roads can reduce the breakages happening on these structures and can also prevent faults of personnel who are using them for exercising; Advances in coatings of materials need to be addressed including Laser Ablation. Application of Laser welding of magnesium alloys should also be explored for greater precision and accuracy.

Hydraulic Engineering for Sustainable Watercourse Management

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where participants explored topics such as implementation challenges, ecological impacts, and strategies for advancing sustainable watercourse management. The speakers provided practical insights that resonated well with the attendees.

The event concluded with a vote of thanks by Maj Gen (Dr) MJS Syali, Secretary and Director General, IEI. He expressed gratitude to the speakers,

particularly Dr Mahajan for his steadfast support throughout the series, and to Mr Pathak for moderating all five sessions. Maj Gen Syali also acknowledged the support of Maccaferri Environmental Solutions Private Limited and fib, while highlighting the series' impact, reflected in its large registrations and e-certificates issued and substantial viewership of this webinar series on the IEI YouTube Channel. He commended the IEI team and participants for their efforts and enthusiasm in making the series a success.

Design of Advanced 5G Antenna and Prototype Technologies

Coimbatore Local Centre, IEI, in collaboration with the Department of Electronics and Communication Engineering, Coimbatore Institute of Technology (CIT), Coimbatore organized an All India Seminar on the theme **Design of Advanced 5G Antenna and Prototype Technologies** during 02 - 03 May, 2024, under the aegis of Electronics and Telecommunication Engineering Division Board [ETDB], IEI at Coimbatore. The seminar focused on advancements in 5G technology, particularly antenna design and prototype technologies and brought together experts from academia and industry to share insights and innovations.

The seminar began with a welcome address, delivered by Prof (Dr) Madhan Mohan Gopalsamy, Honorary Secretary, Coimbatore Local Centre who set the tone for the seminar by emphasizing the relevance of 5G technologies in modern communication. Dr A Rajeswari, Principal, CIT, briefed about the theme and highlighted the role of such seminars in fostering innovation and research in cutting-edge technologies. The details about the seminar were presented by Dr M Poongothai, Professor and Head I/c, Department of ECE, CIT. Dr I S Akila, Associate Professor, Department of ECE, CIT introduced the Chief Guest of the event, Dr Koushik Guha, Associate Professor and Head, Department of Electronics and Communication Engineering, National Institute of Technology Silchar, Assam. He delivered an Invited Lecture on the topic 'MEMS Driven Strategies for Advanced 5G Antennas and Beyond'. Dr Guha provided a detailed overview of strategies to enhance the performance of 5G antennas and the use of MEMS technology to push the boundaries of communication systems. Dr S Kanthamani, Associate Professor, Department of Electronics and Communication Engineering, Thiagarajar College of Engineering, Madurai, delivered an Invited Lecture on 'Enhancing Classroom Teaching on Antennae'. The speaker focused on the challenges of teaching antenna theory and offered practical approaches for educators. Mr G Dhanush, HF Application Engineer, Entuple Technologies Private Limited, Bangalore, delivered Invited Lecture on the topic 'Roadmap of 5G Revolution and Beyond with ANSYS HESS', provided a roadmap for the 5G revolution, focusing on sustainable simulation tools for developing



competitive edge technologies. Dr Milind Thomas Themalil, Assistant Professor, Department of Electronics and Communication Engineering, Indian Institute of Information Technology, Kottayam, Kerala, delivered an Invited Lecture on 'Next Generation Antenna Design' focusing on next generation communication, that holds the potential to revolutionize data transfer by enabling the realization of eXtended Reality (XR). Dr S Mathivanan, Assistant Professor, Department of ECE, Government College of Technology, Coimbatore, delivered Invited Lecture on 'Characteristics of Low Power MIMO Antenna and its Design Techniques'. His session highlighted MIMO

antenna design fundamentals and performance parameters. Dr K Duraisamy, Technical Lead, Entuple Technology Solutions, Coimbatore, delivered Invited Lecture on 'Antenna Fabrication and Prototyping', providing an overview of the inkjet fabrication of microstrip antennas. Dr I S Akila, Associate Professor, Department of ECE, CIT, delivered Invited Lecture on 'Antenna Prototyping using PCB MATE 300 Watts Fabrication Machine @ 5G Innovation Center'. She discussed the opportunities for using high-frequency materials in 5G antenna design and

provided an introduction to the PCB prototype-making process.

Further, during the technical session, papers were presented on different topics, namely 'Design of Auto Amending Bandwidth Band Pass Filter for 5G Communication'; 'Single Balanced RF Mixer using 3 dB Coupler and Schottky Diodes for sub 6 GHz Application'; 'Design and Analysis of Pentagonal Antenna with Teflon Substrate for 5G Mm Wave Applications'; 'Tactical Communication Using LoRa Technology'; 'Internet of Brain-Controlled Things'; 'Troop Health Surveillance and Tactical Communication System'; and 'Design and Performance Analysis of Compact Wearable Textile Antennas with Various Substrates'.

The seminar concluded with a valedictory session, where the organizers and participants shared their experiences. The technical discussions, presentations and networking opportunities were highly appreciated by all attendees. The seminar proved to be an enriching experience for all involved, providing a platform to discuss and explore the latest trends and advancements in 5G antenna design and prototype technologies.

From the President's Desk.....

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the risk of space debris. This responsible approach not only safeguards orbital paths but also preserves opportunities for future explorations.

Collaboration between satellite operators and scientific communities has also been pivotal. For example, addressing the impact of satellite brightness on astronomical observations is an excellent case of how technology and science can coexist. Innovative solutions to mitigate such effects have ensured that while we explore the skies for better connectivity, we do not compromise the ability to study the cosmos.

A noteworthy contributor to these advancements is SpaceX, whose Starlink constellation exemplifies these principles of innovation and

sustainability. Their work highlights how the integration of state-of-the-art propulsion systems, advanced satellite designs, and frequent technology updates can set new benchmarks for the industry. However, the broader takeaway lies in how engineers, irrespective of specialization, can apply similar principles of innovation, efficiency, and responsibility to their fields.

As members of The Institution of Engineers (India), let us draw inspiration from these technological milestones to foster our curiosity and creativity. Whether through advancements in communication, energy, transportation, or other domains, the spirit of engineering remains rooted in transforming challenges into opportunities.

Corporate Air Ticketing for IEI Members

Corporate Members may book Corporate Air Ticket through M/s EBIX Travels Private Ltd. For details please visit

<https://www.ieindia.org/webui/IEI-AirTickets.html>

Machine Learning and Soft Computing Applications in Engineering and Science

Durgapur Local Centre, IET, organized an All India Seminar on the theme **Machine Learning and Soft Computing Applications in Engineering and Science** during 06-07 April, 2024, under the aegis of Computer Engineering Division Board [CPDB], IET at Durgapur. The seminar aimed to focus on the growing intersection of machine learning and soft computing applications in engineering and science. Hardly the rapid advancement of computational techniques has revolutionized our approach to problem-solving across various domains, when Machine learning algorithms, in particular, have emerged as powerful tools for extracting insights from complex datasets. Moreover, soft computing techniques offer flexible frameworks for handling uncertainty and imprecision in real-world scenarios. This seminar brings together researchers, practitioners, and experts from academia and industry to exchange ideas, share insights, and explore the latest developments in this exciting field. Dr Naresh Chandra Murmu, Director, CSIR-CMERI graced the function as the Chief Guest. Dr Mou Sen, Joint Director, MSME & T, Government of West Bengal and Mr Ponnann Murugesan, Executive Director [Projects], SAIL-DSP graced the function as the Guests of Honour.



The event began with a welcome address by Prof (Dr) Chandan Koner, Chairman, Durgapur Local Centre. He warmly welcomed the attendees, thanking participants, sponsors and collaborators for their contributions. He set the tone for the seminar by emphasizing the importance of machine learning and soft computing in addressing technological challenges in today's rapidly evolving landscape. Guest of Honour, Dr Mou Sen, in her speech, highlighted the role of artificial intelligence and machine learning in improving rural livelihoods through entrepreneurship, particularly in the micro, small and medium enterprises (MSME) sector. She emphasized the significance of technological developments in supporting sustainable businesses and urged students and entrepreneurs to engage with MSME projects in West Bengal. Guest of Honour, Mr Ponnann Murugesan shared his exposure in steel industry in various capacities and focused on how technological innovation and development can change the face of plant production. He explained implementation of large capital projects for technological upgradation. Chief Guest, Dr Naresh Chandra Murmu, delivered a speech focusing on the transformative power of artificial intelligence and machine learning in industries and society. Dr Murmu explained, how machine learning and soft computing in smart manufacturing, graphene technology, EHD Ink Jet Printing, foil bearing and various technological innovations are contributing to societal benefits.

Prof Jamuna Kanta Sing, Department of Computer Science & Engineering, Jadavpur University, delivered a keynote speech on 'Advances in Fuzzy Clustering Algorithms for Medical Image Segmentation' and explained Fuzzy Clustering Algorithm for Medical Image Segmentation. Dr Rajesh P Barnwal, Principal Scientist at CSIR India and leading the AI & IoT Lab at CSIR-CMERI Durgapur delivered an Invited Lecture on 'Modelling Complex Self-organization Systems through Modern Machine Learning Approach'. Dr Barnwal, in his lecture explained the new paradigm of AI namely Neural Cellular Automata. Prof Sunil Karforma, Professor & Dean, Faculty Council for PG Studies, Department of Computer Science, The University of Burdwan, presented an invited speech on the topic 'Application of Machine Learning Techniques in Agriculture'. Dr Sandip Kumar Lahiri, Associate Professor, Department of Chemical Engineering, NIT Durgapur, delivered an invited speech on 'Transformative Impact of Artificial Intelligence Across Industries' and explained the role of AI as the pivotal force in contemporary technological advancements.

The seminar featured multiple technical sessions spread over two days, allowing participants to present research papers on various topics related to machine

learning and soft computing. Papers were presented on diversified topics, which include; GMORF: A GAN-Based Multi-Occlusion Removal Framework for Biometric Verification; An Efficient Face Image Quality Assessment Technique; Optimization of crop production in the regions of India: A Hybrid Technique Using Simulated Annealing and XGBoost for Crop Profit Maximization; AI enabled stress monitoring using PPG and GSR; Telecom Churn Stacking-Classifer Ensemble Model with Higher AUROC; Early Detection of Knee Osteoarthritis: A Simple and Effective Approach using Local Directional Octa Pattern (LDOP); Machine Learning and its Revolution in Healthcare Services; A Hybrid GAN-UNet for Lung Segmentation from Interstitial Lung Disease (ILD) affected High-resolution CT Images; A CNN-Transformer Approach for Bengali Handwritten Text Recognition; Relevance of Artificial Intelligence in Marketing: A Narrative Review and Future Research Directives; Covid -19 Detection from Chest X-ray using Deep Learning; Solar Prognostication: Machine Learning based PV Power Generation in Kolkata; Birch Clustering Approach for Detection

of Random Valued Impulse Noise; Natural Language Processing in Healthcare; Density Based Clustering Approach Combined with Fuzzy Logic for Elimination of Random Valued Impulse Noise; Enhanced Deep Learning Based Fingerprint Image Quality Assessment; An Improved Methodology for Analyzing Resumes and Sorting Candidates Using Statistical Approaches; Online Text Sentiment Analysis using a Hybrid Model Based on BERT and Fuzzy Logic; Symptom-Based Disease Prediction: A Comparative Exploration of Decision Trees, Support Vector Machines, and KNN in Predictive Healthcare; Classification of Indian Snakes using an Attention-based Deep Neural Network; Machine Learning about Electrical Engineering Self-Healing Grid and Smart Power Grid; Revolutionizing Greenhouse Farming: Harnessing Advanced Machine Learning for Fully Automated Crop Cultivation; Beyond the Visual: Leveraging Multimodal Data for Enhanced Flight Classification; Machine Learning based QSAR Approach to Predict Corrosion Inhibition Performance of Benzothiazole Derivatives for Mild Steel in Aqueous HCl Medium; Enhancing Distillation Column Performance: Soft Sensor Development Using Artificial Neural Networks and Multi-gene genetic programming Models; Enhancing Bioreactor Efficiency: Machine Learning Strategies for Gluconic Acid Yield Optimization; Auto – PCOS Classification on the Use of the PCOS Gen Dataset: An Approach of Moderated Deep Convolutional Neural Network; Energy efficient Routing for Improving Lifetime in MWSN: A Clustering Approach; Advances of Machine Learning for diagnosis, monitoring and treatment of different Neuro-degenerative Diseases; Quantifying the Influence of Random Variables on Structural Failure Probabilities: Global Sensitivity Analysis Using Kriging-Based Active Learning Approach; Machine Learning Approaches for Predicting Soil Liquefaction Potential in Non-Plastic Soil; Optimizing Steelmaking Slag Chemistry Using Machine Learning and Genetic Algorithm Integration

The seminar concluded with a valedictory session chaired by Dr Monish Chatterjee, Professor, Computer Science, Asansol Engineering College. In his address, Dr Chatterjee emphasized how artificial intelligence is revolutionizing technological innovation across various fields of engineering and science. He congratulated the organizing committee for the successful event and expressed his optimism for future seminars on similar topics. The session also included the distribution of certificates and awards for the best paper presentations.

The seminar successfully brought together experts from various domains to share knowledge and discuss innovative applications of machine learning and soft computing. The seminar highlighted the growing importance of these technologies in addressing real-world problems and participants left with a renewed commitment to continue exploring the potential of artificial intelligence in their respective fields.

Green Technology for Sustainable Development

Pune Local Centre, IEI organised an All India Seminar on the theme **Green Technology for Sustainable Development** during 30-31 March 2024 at Pune under the aegis of Interdisciplinary Coordination Committee [ICC], IEI. Prof (Dr) Dinesh Singh G Thakur, Director, (Planning, Policy & NEP), Defence Institute of Advanced Technology (Deemed University), DRDO, Ministry of Defence Pune graced the inaugural function as the Chief Guest. The event was started with the welcome address, delivered by Prof K K Ghosh, Past Chairman of Pune Local Centre and Convener. Prof Ghosh further briefed about the theme of the Seminar. Chief Guest, Dr Thakur, in his Keynote address stressed upon the need of mitigating the climate change using the green technology and advised the budding Engineers to follow concept of 'Green' in day to day life to serve the mankind and society in a big way and thus conserving the environment. Dr Uttam R Awari, Honorary Secretary, Pune Local Centre proposed the vote of thanks at the end of the inaugural session.

On the first day, twenty technical papers based on improving performance of systems to achieve Green environment were presented related to Civil Engineering, Mechanical Engineering, Chemical and Agriculture Engineering in three technical sessions. On the second day, Nineteen technical papers related to Electrical Engineering, Electronics engineering and computer engineering were presented by research scholars of Engineering colleges in three technical sessions. Papers were presented on relevant topics, which include; Exploring Urban Heat Islands: Causes, Impacts and Mitigation Strategies; Harnessing AI for Green Construction & Human Comfort: Challenges and India's Prospects for Viksit Bharat 2047; Strengthening of R.C. Column using Sustainable Material GFRP; An Analysis of The Evolution of Green Technologies for Sustainable



Construction; Strengthening of R.C. Beams with Sustainable Material Glass Fiber Reinforced Polymer; Concrete Using Waste Material – Plastic Straw; Automated Clash Detection In REVIT; River Basin Magnet with RS GIS; Air Purifier & Humidifier Using Water as a Filter; Optimization of Milling Process Parameter by Using Robust Design Methodology Approach; Simulation-Based Energy and Power Analysis of the Reference Model of the Toyota Prius Hybrid Electrical Vehicle; Experimental Investigation of Thermoelectric Refrigeration (TER) System; Development of Engine Decarboniser System; Design And Implementation Of Automated cleaning Of Ceiling Fan; LED Powered Moisture Control System; Solar-Powered Dehydration Device; Tribological Evaluation of Sunflower Oil as an Environment Friendly Lubricant; Green Technology in Environment Management, by Reed Bed System;

Grid Integrated Renewable Energy Systems

Kanchepuram Local Centre, IEI, in collaboration with the Department of Electrical and Electronics Engineering, Jerusalem College of Engineering, Chennai organized an All India Seminar on the theme **Grid Integrated Renewable Energy Systems** during 05-06 March, 2024, under the aegis of Electrical Engineering Division Board [ELDB], IEI at Kanchepuram. The Seminar aimed at providing insights into the integration of renewable energy systems with the electrical grid and served as a platform for young engineers and professionals to discuss advancements in the field of renewable energy and grid integration. Mr S Singaravelan, Former Scientific Officer [H], Kudankulam Power Plant graced the function as the Chief Guest. Prof (Dr) S Ramesh, Chairman, Kanchepuram Local Centre, IEI presided over the function. The inaugural function was graced by Dr V Karthikeyan, Chairman, Tamilnadu State Centre, IEI and Dr J Arivudai Nambi, Chairman, Aerospace Engineering Division Board, IEI.

Chief Guest, Mr S Singaravelan delivered a Keynote address on the topic 'Power Plant Operation and Control', where he provided insights into how power plants operate in the context of grid-integrated renewable energy systems. His experience in handling complex energy systems at Kudankulam added immense value to the discussion. The seminar was divided into several technical sessions featuring Invited Lectures from experts in the field of renewable energy. Dr V Jamuna, Professor of Electrical



and Electronics Engineering [EEE] Department and Dean of Student Affairs at Jerusalem College of Engineering, delivered an Invited Lecture on the topic 'Overview of Renewable Energy Systems towards Grid Integration'. Ms Y Rekha, Research Scholar at Jerusalem College of Engineering, delivered an Invited Lecture on 'Introduction to MATLAB Simulation'. Ms S Rudhra, Assistant Professor, EEE, delivered an Invited Lecture on the topic 'Simulation of Power Converters for Renewable Energy Systems'. Mr T Siva, Managing Director, OMR BEST E Bikes, Chennai, delivered Invited Lecture on 'Simulation of Grid-Connected Solar Systems'. Mr J Arul Prakash, Assistant Professor, EEE, presented Invited Lecture on the topic 'Simulation of Grid-Connected Wind Systems'. Dr S Vinod, Associate Professor and Head, EEE, delivered a lecture on 'Electric Vehicles to Grid Integration' and explained V2G powered STATCOM. Dr V S Sriraja Balaguru, Assistant Executive Engineer (IT), TNEB Headquarters, Chennai, delivered Invited Lecture on 'Renewable Energy and its Integration', providing in-depth knowledge on integrating renewable energy into the existing grid infrastructure. Er D Gokul, Honorary Secretary, Tamilnadu State Centre and Dr S Karthikeyan, Honorary Secretary, Kanchepuram Local Centre, IEI were present on the occasion. Throughout the seminar, participants gained valuable knowledge on various aspects of grid integration of renewable energy systems. The sessions covered the technical challenges and opportunities of incorporating solar, wind and other renewable energy sources into the national grid. The use of simulations and MATLAB was demonstrated in several lectures to provide participants with practical skills.

Automation in Foundries

Coimbatore Local Centre, IEI, in collaboration with Department of Foundry Technology, PSG Polytechnic College (PSG PTC), Coimbatore, organized a One Day Seminar on the theme **Automation in Foundries** on 03 April, 2024 under the aegis of Metallurgical and Materials Engineering Divisional Board [MMDB] at PSG Polytechnic College, Coimbatore. This seminar aimed to



explore advancements in automation technology within the foundry industry, providing insights into digital quality control, high-pressure molding, robotic applications and additive manufacturing. The event started with the welcome address delivered by Dr J Krishnamoorthi, Chairman, Coimbatore Local Centre, IEI. In his address, Dr Krishnamoorthi underscored the relevance of automation in enhancing efficiency and productivity in foundries. Mr J Ganesh Kumar, Managing Director, Indo Shell Cast Private Ltd, Coimbatore, served as the Chief Guest. He addressed the significance of modernization and automation in foundries, especially in fettling processes, highlighting their potential to reduce costs and improve quality. Dr B Giriraj, Principal,

PSG PTC, and Dr M Arasu, Head, Department of Foundry Technology, PSG PTC, addressed the audience, emphasizing the importance of adapting to technological advancements.

Following the inaugural addresses, technical sessions were conducted, featuring distinguished speakers from the industry. Mr P Sureshkumar, Chief Executive Officer, Agna Inc, Coimbatore delivered lecture on the topic 'Digitization of Quality Control Equipment and Possibilities of Big Data Analytics in Foundry Operations'. He explained about the software used in foundries to control, minimize and analyze the casting defects. Mr S Elango, Founder & CEO, F Care, Coimbatore deliberated on the topic 'Latest Developments in Automatic High Pressure Moulding Machines'. He explained the developments, advantages and return on investment for automatic high pressure molding machines. Mr Suresh Kumar, Manager, Foundry Applications, DISA India Limited, Bangalore explained automatic core making and assembly processes and robotic finishing processes. Mr E Priyarag, Manager of Sales, DiFACTO Robotics and Automation Private Limited, Bangalore discussed the advantages of implementing robots in fettling operations. He further explained robotic fettling operations in die and sand casting processes. Further, Mr E Sreedhar Kumar, Senior Manager, PSG TIFAC CORE in Product Design, PSG Industrial Institute, Coimbatore delivered his presentation on the topic 'Additive Manufacturing in Foundry Applications'. The participants visited PSG TIFAC CORE and observed and observed various additive manufacturing processes. The insights shared by industry experts provided valuable knowledge about current trends and future directions in foundry automation. This one-day seminar provided a comprehensive overview of technological advancements and their impact on the foundry industry, leaving attendees well-informed and inspired.

Discount at the Samsung e-store for IEI Corporate Members

Exclusive access to the Samsung e-store for IEI Corporate Members. This shall enable the Corporate Members to procure the Samsung Products in a discounted rate. The Samsung e-store can be accessed at www.samsung.com/in/multistore/iei using your Membership No. and email id/Mobile.

Empanelment as Advocate/ Attorneys & Chartered Accountant who are also Engineers

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

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

Certificate of Practice for Practicing 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 **Practicing Chartered Engineers Certification**. The Institution will issue **Practicing Registration No.** for practicing 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 form duly filled in alongwith supporting documents 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.

Challenges in International Maritime Operations

Maharashtra State Centre, IEI, in collaboration with Navi Mumbai Local Centre, IEI organized a One Day Seminar on the theme **Challenges in International Maritime Operations** on 04 February, 2024 under the aegis of Marine Engineering Divisional Board [MRDB], IEI at Mumbai. The event brought together experts from various sectors of the maritime industry to discuss and address challenges faced in international maritime operations.

Vice Admiral Kishore O Thakare, AVSM, NM (Retd), Indian Navy and Past President, IEI graced the function as the Chief Guest and delivered the Keynote address. In his speech, he emphasized the growing challenges



in international maritime operations, especially in light of global trade expansion and evolving geopolitical landscapes. He also touched on the technological advancements needed to improve maritime security and operational efficiency. Er Surendra M Rai, Ex-General Manager, Shipping Corporation of India (SCI) and Ex-Director (Technical), Indian National Ship Owners' Association (INSA), graced the function as the Guest of Honour. He delivered lecture on the theme and focused on the key challenges faced in maritime operations. He highlighted issues related to logistics, environmental regulations and the importance of innovation in maritime practices. The event witnessed the gracious presence of Er H O Thakare, Past President, IEI; Prof (Dr) Girish Sriksen Mundada, Chairman, CATE, IEI; Capt SK Patnaik, VSM (Retd), Advisor and Mentor, School of Innovation & Entrepreneurship, IIT Bombay; Er Amit Bhatnagar, Senior Principal Surveyor & Vice President, Head IRCLASS Academy; Er Vijay Arora, Managing Director, Indian Register of Shipping, Mumbai; Prof (Dr) R P Gokarn, Former Professor, IIT Kharapur; Er P Lakshman, Senior Vice President, Rochem

Systems Limited, Cmde Bhupesh Tater, Former CQAE(WPS); Mr Jawahar Lal Chaudhari, Former CEO, KVFC and others. Dr Nilajkumar Najukrao Deshmukh, Chairman, Navi Mumbai Local Centre, IEI introduced the Guest of Honour. Er Ganesh Uttamrao Barabde, Chairman, Amravati Local Centre, IEI introduced the Chief Guest of the event. Capt S C Patnaik delivered lecture on the topic 'Challenges in the International Maritime Operations – A Marine Engineer's Perspective'. Er Amit Bhatnagar delivered lecture on the theme. Er P Lakshman delivered lecture on the topic 'Maritime Perils, Threats, Breach and Experiences'. Cmde Bhupesh tater delivered lecture on 'Atmanirbhar Bharat: Opportunities in Maritime Domain'. Mr Jawahar Lal Chaudhari delivered lecture on 'Entrepreneurship Opportunities for MSME in Maritime Domain'. Er P Laxman delivered lecture on 'Challenges in Piracy and Hijacking'. Er Amit Bhatnagar deliberated on 'Advancement of Technology in Marine Operations'.

Several invited papers and technical presentations were also delivered throughout the seminar by Er Amit Bhatnagar, Senior Principal Surveyor & Vice President, IRCLASS Academy, Er P Lakshman, Senior VP, Rochem Systems Ltd delivered lecture on 'Piracy and Hijacking'. Capt Vijay Rajan, delivered lecture on 'Impact of Piracy on Shipping'. Earlier, Er Anand Wamanrao Jawanjali, Chairman, Maharashtra State Centre, IEI welcomed all the dignitaries and participants to the seminar, setting the stage for an insightful day of discussions. Er Milind Lakshmikanth Patil, Honorary Secretary, Maharashtra State Centre, IEI delivered the vote of thanks.

The Seminar concluded with a valedictory session, where Er AK Gupta, Former Chairman and Managing Director, SCI, delivered the valedictory address. He summarized the discussions of the day and emphasized the importance of collaboration between industries, governments and educational institutions to overcome the current challenges in maritime operations. The one-day seminar successfully highlighted the numerous challenges that international maritime operations face in today's dynamic environment. Through the sharing of knowledge and experiences by industry experts, the event provided valuable insights and proposed actionable strategies for tackling these challenges. The event was attended by number of delegates, who contributed to the vibrant exchange of ideas and solutions.

Unveiling Agricultural Drought Dynamics: Insights from Remote Sensing Data Products

Kanchepuram Local Centre, IEI, in association with Department of Agricultural Engineering, Saveetha Engineering College, Chennai, organized a One Day Seminar on the theme **Unveiling Agricultural Drought Dynamics: Insights from Remote Sensing Data Products** on 02 April, 2024 under the aegis of Agricultural Engineering Division Board [AGDB], IEI at Chennai. The Seminar aimed at providing insights into the use of remote sensing technology to monitor and understand agricultural drought. Dr S Karthikeyan, Honorary Secretary, Kanchepuram Local Centre, IEI welcomed the audience. Dr A Tajuddin, Professor & Head, Department of Agricultural Engineering, Saveetha Engineering College Chennai briefed about the theme. Dr R Senthil Kumar, Vice Principal, Saveetha Engineering College, Chennai, in his address highlighted the importance of addressing drought through innovative technologies. The Chief Guest, Dr K Sangeetha, Senior Project Officer, Department of Civil Engineering, IIT Madras, delivered the Keynote address. Dr Sangeetha in her address, emphasized the significant role of remote sensing in agriculture, particularly in identifying and managing drought conditions. Dr P Shoba, Assistant Professor, Institute of Remote Sensing, Anna University, Chennai explained the basics of Remote Sensing, electromagnetic spectrum, importance of Microwave Remote Sensing etc. Dr P Bakkiyalakshmi, Associate Professor, Department of Agricultural



Engineering, Saveetha Engineering College, Chennai discussed, how to measure soil moisture to validate satellite estimated soil moisture. Dr M Suganthi, Assistant Professor (Agronomy), Tamil Nadu Veterinary and Animal Sciences University, [TANUVAS], Chennai delivered lecture on the topic 'Crop Phenological Responses to Drought Stress' and focused on the changes in plant characteristics during its varying growth stages in response to water stress. Dr K Sangeetha delivered lecture on the topic 'Remote Sensing Indices for Agricultural Drought Monitoring' and focused on various indices available to identify agricultural drought.

Sustainable Solution to the Industrial Water Management

Madhya Pradesh State Centre, IEI, in collaboration with Roserve Enviro Private Limited, Mumbai, organized a One Day Seminar on the theme **Sustainable Solution to the Industrial Water Management** on 06 February, 2024 under the aegis of Marine Engineering Divisional Board [MRDB], IEI at Bhopal. The Seminar addressed the critical issue of obtaining fresh water for industrial applications amidst challenges such as global warming, desertification, and water pollution. Desalination emerged as a prominent solution, with a focus on the energy-intensive process of reverse osmosis. This technology, although widely adopted, demands further innovation to mitigate its energy consumption. The objective of the seminar was to raise awareness about modern innovative technologies in Industrial Water Management. Lectures covered topics including Photocatalysts and Degradation, Central Effluent Treatment Plant, and challenges in providing clean drinking water to communities and marine engineers. Overall, the seminar provided a platform for knowledge exchange and discussions on sustainable solutions for addressing the pressing issue of industrial water management. The event attracted large number of participants, including corporate members, practicing engineers, faculty members, research scholars and students. Er Mohan Shrivastava, Chief Engineer (Redt) UDC Bhopal, Er Udit Garg, Chief Engineer, Bhopal Municipal Corporation, Bhopal, Er R K Jain, Chief Engineer, Industrial Development Corporation (IDC) Bhopal and Er Ashish Shrivastava, APD, M P Jal Nigam, Bhopal graced the occasion as the Guests of Honour.

The welcome address was delivered by Er Rajesh Bisaria, Chairman, Madhya Pradesh State Centre, IEI, who warmly greeted the participants and introduced the seminar's objectives. Following this, Dr Mukesh Kumar Mishra, Honorary Secretary, Madhya Pradesh State Centre, IEI, provided an overview of the seminar's theme, setting the stage for a day of insightful discussions on sustainable water management. Cdr (Dr) Bhaskar M Bhandarkar, Immediate Past Chairman, Marine Engineering Division Board, IEI addressed the august audience, that focused on the complexities and challenges in marine engineering water systems, emphasizing the need

for innovative solutions. The inaugural session marked the beginning of an enriching discourse on sustainable solutions to industrial water management, setting the stage for fruitful exchanges and collaborations throughout the day.

The Seminar featured a series of expert lectures from industry leaders and academics, providing a well-rounded perspective on water management solutions by Mr Lakshman Pattabhiraman, Global Head Maintenance, ROCHEM Separation Systems India Private Limited delivered an Invited Lecture on the challenges faced in providing clean drinking water to the communities and shedding light on the industrial services in this domain.



Mr Turbaashu Bhattacharya, Business Unit Head, Roserve Enviro Private Limited, Mumbai, delivered Invited Lecture on the topic 'Cutting Edge Solutions for Wastewater

Management using Innovative Pay Per Use Model: Sea Water Desalination using Rochem PT RO Modules'. Prof Suresh S from MANIT, Bhopal delivered an Invited Lecture on the topic 'Photocatalysts and Degradation: Central Effluent Treatment Plant'. Mr Devashish Jadhav, Area Sales Manager, Roserve Enviro Private Limited, Mumbai delivered on Invited Lecture on the topic 'Sea Water Desalination using Rochem PT RO Modules'. Cdr (Dr) Bhaskar M Bhandarkar delivered an Invited Lecture on the topic 'Challenges in Water Supply system in Marine Engineering'.

The Seminar provided a platform for knowledge exchange through expert-led sessions. The technical discussions revolved around industrial water management, focusing on desalination technologies, wastewater treatment and the use of innovative technologies like photocatalysis. The attendees gained valuable insights from both industry and academic perspectives on tackling water scarcity and managing industrial water resources sustainably.

The Seminar concluded with a valedictory session presided over by Er Rajesh Bisaria, Chairman, Madhya Pradesh State Centre, IEI. A vote of thanks was delivered by the organizing secretary, expressing gratitude to all participants, speakers and collaborators for their contributions to the success of the seminar.

Advancement in Electric Vehicles

The ongoing technological development in the automotive industry has since prompted the growth in environmental and energy efficiency awareness. Electric vehicles (EVs) are seen to be the potential alternatives for conventional internal combustion engine vehicles. The point of having electric vehicles is simply to save money, save the environment, and save fossil fuels from running out prematurely. There is the possibility that EVs will ever completely overshadow conventional vehicles.

Madurai Local Centre has organised an All India Seminar on the theme **Advancement in Electric Vehicles** during 29-30 May 2024 at Madurai under the aegis of Mechanical Engineering Division Board, IEI. The Seminar highlighted a number of areas in terms of batteries and charging infrastructures, electricity distribution and accounting for the environmental characteristics and different aspects of vehicle-to-grid and smart grid technologies. The aim of the Seminar

is to equip graduate students and engineers for knowing the importance, challenges, opportunities and methodologies in adopting Electric vehicles to overcome the depletion of conventional fuels and pollution.



The event was inaugurated with Invocation followed by Lighting of the Lamp. Pro (Dr) P Udhaya Kumar, Chairman, Madurai Local Centre, IEI delivered the welcome address. Mr P Mohan Raj, CEO, Tucker Motors Private Limited, Madurai graced the function as the Chief Guest and delivered the inaugural address. Dr A V Ramprasad, Principal, K L N College of Engineering addressed the audience on the occasion. Er A T Baskar, Honorary Secretary, proposed the vote of thanks at the end of the inaugural session.

Mr P Mohanraj delivered a Keynote Address on the topic 'Challenges and Opportunities of EV in Indian Automobile Market' and said that the Indian

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Autonomous Autopilot Control System Design for Small-Scale UAVs

Coimbatore Local Centre, IEI, in collaboration with Department of Aeronautical Engineering, Kumaraguru College of Technology, Coimbatore, organized a One Day Seminar on the theme **Autonomous Autopilot Control System Design for Small-Scale UAVs** on 29 April, 2024 under the aegis of Aerospace Engineering Divisional Board [ASDB] at Kumaraguru College of Technology, Coimbatore. This seminar provided a platform for professionals, students and researchers to explore the latest technological advancements and design considerations in unmanned aerial vehicles (UAVs). Former Group Captain, Desikan Srinivasan, Senior UAV Engineer, De Drone World Solutions, Coimbatore graced the function as the Chief Guest. He shared his valuable insights into the challenges and innovations within the field of unmanned systems, emphasizing the importance of autonomous control systems in advancing UAV technologies.

The seminar began with a warm welcome from Prof (Dr) Madhan Mohan Gopalasamy, Honorary Secretary, Coimbatore Local Centre, IEI. He extended his greetings to the participants and dignitaries, followed by the address by Dr S Raghupathy, Director, Strategic Planning and Review, Kumaraguru College of Technology. Dr M Senthil Kumar, Head, Department of Aeronautical Engineering, Kumaraguru College of Technology introduced the theme and objectives of the seminar. Mr S Muthukumar, Assistant Professor, Department of Aeronautical engineering, Kumaraguru College of Technology, Coimbatore delivered the concluding remark at the end of the inaugural session.

Chief Guest, Former Group Captain Desikan Srinivasan delivered an Invited Lecture on the topic 'Autonomous Control Systems in UAVs. With his wealth of experience and expertise, he delved into the intricacies of autonomous control systems, emphasizing their crucial role in the realm of unmanned aerial vehicles.

Mr K R Venkatesh, Senior Ground Instructor, Haps Aviation Academy and Jeyam Aviation Private Limited, Coimbatore delivered a captivating presentation on 'Autonomous Autopilot Control System Design for Small



Scale UAVs'. With his expertise in aviation, he provided valuable insights into the intricacies of designing autonomous autopilot control systems tailored specifically for UAVs. His expertise shed light on the crucial role of autopilot technology in enhancing the autonomy and operational capabilities of small UAVs.

Mr Hari Janarathanan, Director, Technology & Solutions and Co-Founder of Birdscale Technology, Coimbatore delivered an insightful presentation on the topic 'AI Trends in UAV-Building Fortune using Drones' and provided an in-depth exploration of the evolving landscape of AI within the realm of UAVs.

Mr Pranav Rathod, Drone Engineer, Jet Aerospace Aviation Research Centre, Kerala delivered his presentation on the topic 'Drone Intelligent Systems'. Leveraging his experience in Drone technology, Mr Rathod provided an insightful overview of intelligent systems integrated into drones.

The technical sessions covered several key topics related to the autonomy of small-scale UAVs. The Invited Lectures provided a detailed analysis of cutting-edge technologies, including AI integration, autonomous control systems and autopilot design, as well as their practical applications in UAV systems.

Upgradation of Membership

- ❖ Existing Associate Members are requested to upgrade their Membership to the grade of MIE and FIE as per the eligibility criteria
- ❖ Existing Members are requested to upgrade their Membership to the grade of Fellow as per the eligibility criteria

For details, please contact

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

✉ dd.membership@ieindia.org

Chartered Engineer Certification

The Members who have not availed the Chartered Engineer Certificate [CEng(I)], are requested to apply through online:

<https://www.ieindia.org/WebUI/iei-Memb.aspx#chartered-engineering>

Advancement in Electric Vehicles

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automobile market is in a pivotal moment, facing significant challenges and promising opportunities with the advent of electric vehicles (EVs).

During Technical Sessions, Invited Lectures were presented by the professionals and experts in the field. Dr S Parthasarathy, Professor, Department of Electrical and Electronics Engineering [EEE], Director, K L N Innovation & Research Park (KLNIRP), Chief Coordinator, Industry Institute Partnership Cell (IIPC) KLN College OF Engineering, Pottapalayam, Tamil Nadu, India delivered Invited Lecture on the topic 'Technological Challenges of EV'. Dr G Sivasankar, Associate Professor, EEE, Thiagarajar College of Engineering, Madurai delivered Invited Lecture on 'Automobile Industry:

Changeover and its Implications'. Mr R Thangasankaran, Assistant Professor, EEE, KLN IRP & Coordinator, KLNCE delivered Invited Lecture on the topic 'Technical Aspects of EV: Battery Health Management System, Role of Advanced Power Converters in Chargers & Controllers and Grid Stability'. Er R Manikandan, Sales Manager, RMK Motors, Gaura Electric, Madurai delivered Invited Lecture on the topic 'Opportunities in getting Government Subsidiaries for EVs'. Further, papers were presented on relevant topics, namely Advancement and Importance of EV Technology; Economic Impact of Electric Vehicles; Introduction to Electric Vehicle Battery; Electric Hypercars; Revolutionizing Transportation: Exploring Advanced Features of Future E-Vehicles; AN Introduction to Hybrid Vehicles etc.

57th Engineers' Day 2024

Theme : Driving Sustainability with Engineering Solutions Embracing the Latest AI Driven Technologies

The 57th Engineers' Day was celebrated by the Institution all over the country on September 15, 2024 to commemorate the 163rd birth anniversary of legendary Engineer-Statesman Bharat Ratna Sir M Visvesvaraya. Brief accounts of the celebration as received from various Centres are highlighted hereunder.

STATE CENTRE

Punjab & Chandigarh



Punjab & Chandigarh State Centre, IEI, celebrated the 57th Engineers' Day on 15 September 2024 at Chandigarh. Prof (Dr) Rajesh Bhatia, Director, PEC Chandigarh, graced the occasion as the Chief Guest,

while Prof (Dr) T S Kamal, Former Vice President, IEI and Er Paveljeet Singh Ruppall, Managing Director, P&R Infra Projects Private Limited, were the Guests of Honour. The Keynote address was delivered by Dr Manpreet Kaur, Associate Professor, Mechanical Engineering Department, BBSBEC, Fatehgarh Sahib.

Engineering, SRKR Engineering College, Bhimavaram, at Bhimavaram. The event commemorated the contributions of engineers and was graced by speaker of the day, Prof (Dr) K Brahma Raju, Professor, Department of Mechanical Engineering, SRKR Engineering College, and



Council Member, IEI.

Bokaro Steel City

Bokaro Steel City Local Centre, IEI, celebrated the 57th Engineers' Day on 15 September, 2024 at Bokaro. Chief Guest, Shri Ranjan Prasad, Executive Director (HR) and Additional Charge of ED (Works), SAIL, Bokaro inaugurated the function. Guest of Honour, Shri N P Srivastava, GM (ECS) mentioned about the administrative and managerial quality of Sir M Visvesvaraya and his effective management. Two papers were presented on the occasion by Er Chandra Shekhar, DGM (CRM3), SAIL, Bokaro Steel Plant and Er S K Dubey, AGM (CRM 3), SAIL, Bokaro Steel Plant.

LOCAL CENTRES

Ahmednagar



Ahmednagar Local Centre, IEI, celebrated the 57th Engineers' Day on 22 September, 2024 at Ahmednagar. Er Sandeep Munot, Chief Operating Manager, Exide Industries Limited, Ahmednagar,

graced the function as the Chief Guest. Er Arvind Pargaonkar, Business Vice President, Schneider Electric India Private Limited graced the event as Guest of Honour, Dr R S Deshpande, Principal & Dean, Imperial College of Engineering and Dean, JSPM University Pune, delivered the keynote address on the theme 'Driving Sustainability with Engineering Solutions embracing the Latest AI driven Technology'.

Chandrapur



Chandrapur Local Centre, IEI, celebrated the 57th Engineers' Day on 19 September, 2024 at Chandrapur. Dr A Z Chitade, Principal, Rajiv Gandhi College of Engineering,

Research and Technology, Chandrapur graced the function as the Chief Guest. Er Pandurang Londhe, Assistant Professor, Government College of Engineering Chandrapur, was the Keynote speaker.

Coimbatore



Coimbatore Local Centre, IEI, celebrated the 57th Engineers' Day on 18 September, 2024 at Coimbatore. Chief Guest and theme speaker of the event was Dr K Venu Madhav, Director, Product

Excellence & Innovation, Elgi Equipments Limited, Coimbatore.

Dhanbad

Dhanbad Local Centre, IEI, celebrated the 57th Engineers' Day in association with IIT ISM Dhanbad on 15 September, 2024, at the Management Studies & Industrial Engineering Department, IIT ISM Dhanbad. The event was organized in association with IIT ISM Dhanbad, Bharat Coking Coal Ltd

Bareilly



Bareilly Local Centre, IEI, celebrated the 57th Engineers' Day on 15 September, 2024, at Bareilly. Chief Guest of the function was Mr Rakesh Puri, Senior Executive Director (Unit

Head), IFFCO Aonla Plant, Bareilly. Er Sovan Mohanty, Assistant Professor, SRMSCET, Bareilly and Er Sudhir Kumar Gupta, Immediate Past Chairman, Bareilly Local Centre delivered presentation on the theme of the day.

Bhimavaram

Bhimavaram Local Centre, IEI, celebrated the 57th Engineers' Day on 15 September, 2024, in collaboration with the Department of Mechanical

(BCCL) and Steel Authority of India Ltd (SAIL). Prof Biswajit Paul, Honorary Secretary, Dhanbad Local Centre, IEI and Professor, Environmental Science and Engineering, IIT ISM, presented a life sketch of Bharat Ratna Sir M Visvesvaraya. Prof Sukumar Mishra, Director IIT ISM Dhanbad was the Chief Guest & Md Sohail Iqbal, General Manager (WS), BCCL, Dhanbad was the Guest of Honour. Prof Ajit Kumar, Department of Mechanical Engineering, IIT ISM Dhanbad delivered a lecture on the topic 'Driving Sustainability with Engineering Solutions embracing the Latest AI Driven Technologies'.

Kalaburagi

Kalaburagi Local Centre, IEI, celebrated the 57th Engineers' Day on 15 September, 2024 at Kalaburagi. Chief Guest of the event, Shri Sharanabasappa Darshanapur, Minister for Small Scale Industries & Public Enterprises, Government of Karnataka emphasized the crucial role of engineers for the development of the nation. Sir Dharmendra Arenahalli, Civil engineer and historian graced the function as the Guest of Honour.

Kanyakumari

Kanyakumari Local Centre, IEI, celebrated the 57th Engineers' Day on 19 September, 2024 at Manavilai, Tamilnadu. Dr S Joseph Jawhar, Principal, Arunachala College of Engineering for Women, Manavilai, Tamilnadu, introduced the Keynote speakers, Dr S Arumuga Perumal, Immediate Past Honorary Secretary and Prof (Dr) M Marsaline Beno, Honorary Secretary, Kanyakumari Local Centre, IEI and Dean of Research, St Xavier's Catholic College of Engineering, Nagercoil.

Kozhikode

Kozhikode Local Centre, IEI, in collaboration with the Institute of Electrical and Electronics Engineers (IEEE), Malabar Subsection, celebrated 57th Engineers' Day on 23 September, 2024 at Kozhikode. Dr Munavar Fairouz C, Assistant Professor, Department of Civil Engineering, NIT Calicut made a detailed presentation on the theme.

Madurai

Madurai Local Centre, IEI, celebrated the 57th Engineers' Day on 18 September, 2024, at the Madurai. The event was graced by Mr D Rajini Kanth, Program Head and Client Partner, Relevant Z, Virudhunagar, as the Chief Guest. The emphasis was given to the contribution of AI – driven solutions towards advancement in telecommunications, agriculture, combating climate change, optimizing resources etc.

Muzaffarpur

Muzaffarpur Local Centre, IEI, celebrated the 57th Engineers' Day on 15 September, 2024. Chief Guest of the session was Prof S K Mehta, Joint Secretary, SBTE Bihar and Keynote Speaker was Prof Nikhil Kumar, Lecturer, Government Polytechnic, Muzaffarpur.

North Bengal



North Bengal Local Centre, IEI, celebrated the 57th Engineers' Day on 18 September, 2024 at Jalpaiguri Government Engineering College, Jalpaiguri. Theme Speaker of the day was Er Devyani Subba, Assistant Professor, Department of Civil Engineering, Jalpaiguri Government Engineering College.

Tirunelveli

Tirunelveli Local Centre, IEI, celebrated the 57th Engineers' Day on 18 September, 2024 at Tirunelveli. The event commenced with a welcome address by Dr S Avudaiappan, Chairman, Tirunelveli Local Centre, IEI and inaugurated the session. The celebration concluded with a vote of thanks by Er E Siva Ganesh, Honorary Secretary, Tirunelveli Local Centre.

Tuticorin

Tuticorin Local Centre, IEI, celebrated the 57th Engineers' Day on 13 September, 2024 at Tuticorin. Dr S Richard, Principal, Grace College of Engineering, introduced the Chief Guest and theme speaker of the session, Er Justin Jagadeep Kumar, former Chief Engineer, Tuticorin Thermal Power Station.

Udaipur

Udaipur Local Centre, IEI, celebrated the 57th Engineers' Day 2024 on 15 September 2024 at Udaipur. Shri A Rajarajan, Director, Satish Dhawan Space Centre (SDSC SHAR), Sriharikota graced the function as the Chief Guest and Er B H Bapna, Chairman, Mewar Polytex Group of Industries, Udaipur graced the function as the Guest of Honour. Speaker of the day was Dr Mayank Patel, Associate Professor, Department of Computer Science & Engineering, Geetanjali Institute of Technical Studies, Udaipur.

Varanasi

Varanasi Local Centre, IEI, celebrated the 57th Engineers' Day on 15 September, 2024 at IIT BHU Varanasi. Chief Guest of the event was Er Jitendra Nalwaya, Director (Technical), PuVVNL, Varanasi and the Guest of Honour was Er Sarvesh Khare, Chief Engineer, UPPCL.

Visakhapatnam

Visakhapatnam Local Centre, IEI, celebrated the 57th Engineers' Day on 15 September, 2024. The event featured Shri S Jithender Reddy, Executive Director, BHEL (HPVP), as the Chief Guest. Guest speakers of the event were Shri Debasish Chakraborty, Outstanding Scientist & Former Director, ADRDE, DRDO and Shri U Narayana Raju, Former Chief Engineer, AP Irrigation Department.



IEI Celebrates Royal Charter Day

The Institution of Engineers (India) was incorporated by Royal Charter on September 9, 1935 by King and Emperor George V at the Court at Buckingham Palace, London and remains the only professional body in India to be accorded this Honour. This endowed the Corporate Members of the Institution with the right to use the title 'Chartered Engineer' after their names, implying that they are qualified engineers deemed worthy to hold a Charter. The 'Royal Charter Day' was celebrated by IEI all over the country on September 9, 2024. A brief accounts of celebration, as received from various Centres, are reported hereunder.

STATE CENTRES

Assam



Assam State Centre, IEI, celebrated Royal Charter Day 2024 on 09 September, 2024 at Guwahati. Er Mahesh Barkataki, Chairman of Assam State Centre presided over. Er Monojit Misra, Honorary Secretary,

Assam State Centre, IEI explained the significance of the historic day. Er G N Khound, Past Chairman, Assam State Centre, IEI, provided an insightful talk on the incorporation of IEI by Royal Charter.

Maharashtra

Maharashtra State Centre, IEI, celebrated Royal Charter Day 2024 on 12 September, 2024 through online mode. Er V C Kamble, Past Honorary Secretary, Maharashtra State Centre, IEI delivered the opening remarks, while Er Anand Womanrao Jawanjaj, Chairman, Maharashtra State Centre, IEI welcomed the attendees. Prof (Dr) Girish Shrikisan Mundada, Chairman, CATE, IEI explained the purpose of the celebration and briefly covered the history of The Institution of Engineers (India). Er V V Munot, Joint Honorary Secretary, Maharashtra State Centre, IEI introduced the Speaker while Er Milind Lakshmikant Patil, Honorary Secretary, Maharashtra State Centre, IEI & Director, Maharashtra State Financial Corporation, concluded the event with a vote of thanks.

Mizoram

Mizoram State Centre, IEI, celebrated Royal Charter Day 2024 on 09 September, 2024, in collaboration with the Department of Civil Engineering, Mizoram University. Dr Rahul Amin Mozumder, Head, Civil Engineering Department, Mizoram University delivered the inaugural address. Keynote speaker, Er David Sapzova,



Chief Engineer (Planning), Public Works Department, Government of Mizoram, delivered lecture on 'Problems and issues on World Bank aided Road Projects in Mizoram'.

Tamilnadu

Tamilnadu State Centre, IEI, celebrated the Royal Charter Day 2024 on 17 September, 2024 through online mode. Chief Guest, Er M Nagaraj, Chairman, Karnataka State Centre, IEI, delivered a detailed presentation highlighting the historical significance of the Royal Charter.

Telangana

Telangana State Centre, IEI, celebrated Royal Charter Day 2024 on 09 September 09, 2024 via a virtual meeting on Zoom. The Chief Guest of the session was Dr I Satyanarayana Raju, Council Member IEI.

West Bengal



West Bengal State Centre, IEI, celebrated Royal Charter Day on 09 September 2024, at Sir R N Mookerjee Hall, West Bengal State Centre, IEI, Kolkata. Theme Speaker

of the session, Prof (Dr) N R Bandyopadhyay, Former Chairman, CATE, IEI delivered presentation on the theme 'Royal Charter: A Legacy of Excellence Beyond the Centenary Milestone' and mentioned that with the euphoria of success in serving the engineering fraternity for a decade and a half by addressing the national needs, international obligations and society, IEI has reckoned the importance of the engineering profession and accelerates the incorporation of the time tested medieval instrument, the Royal Charter.

LOCAL CENTRES

Ahmednagar



Ahmednagar Local Centre, IEI, celebrated Royal Charter Day 2024 on 09 September 2024 at Ahmednagar. Er Abhay Krishnarao Raje, Honorary Secretary of Ahmednagar Local Centre

delivered an insightful presentation on the topic 'Indian Automobile-Car Segment'.

Aurangabad



Aurangabad Local Centre, IEI, in collaboration with CSMSS Chh Shahu College of Engineering, Chh Sambhajinagar, celebrated Royal Charter Day 2024 through online mode on 09 September, 2024. Chief

Guest, Mr Samuel Patole, Regional Head, Hope Foundation, emphasized the importance of the Royal Charter. Prof Sandeepkumar Abhang, Head, Department of Computer Science & Engineering, CSMSS College of Engineering, introduced the Chief Guest and detailed the program's significance.

Belagavi



Belagavi Local Centre, IEI, celebrated the Royal Charter Day 2024 on 09 September, 2024 at Belagavi. Er C B Hiremath, former Superintending Engineer, Public Works Department, Government of Karnataka, served as the Keynote

speaker.

Bhimavaram



Bhimavaram Local Centre, IEI, in collaboration with the Department of Computer Science and Design & Information Technology, SRKR Engineering College, Bhimavaram, celebrated Royal Charter Day on 12

September, 2024, at Bhimavaram. Chief Guest of the event, Shri V V Durga Kiran, Senior Associate, Cognizant Technology Solutions delivered lecture on 'Current trends and Future Prospects in Information Technology'. Prof (Dr) K Brahma Raju, Council Member, IEI delivered the Keynote speech.

Bokaro Steel City



Bokaro Steel City Local Centre, IEI, celebrated Royal Charter Day 2024 on 09 September 2024 at Bokaro Steel City. Sri Kundan Kumar, CGM (Town Administration), SAIL, Bokaro Steel Plant, graced the occasion as the

Chief Guest, and Shri Y N Singh, Past Chairman, Bokaro Steel City Local Centre, was the Guest of Honour.

Faridabad

Faridabad Local Centre, IEI, observed Royal Charter Day on 07 September 2024 through online mode. Er Inderdeep Singh Oberoi, Honorary Secretary, Faridabad Local Centre, IEI and Managing Director, A D Global Synergies Pvt Ltd, Delhi served as the expert speaker. He mentioned that this day is celebrated to relect upon the enduring legacy of engineering excellence that has shaped our country, region and our profession.

Kalaburagi

Kalaburagi Local Centre, IEI, in association with Information Science & Engineering Department, PDA College of Engineering (PDACEG), Kalaburagi celebrated Royal Charter Day 2024 on 28 September, 2024, at Kalaburagi. Er Anil Kalaskat, an Entrepreneur of Kalaburagi, served as the

Chief Guest and the invited speaker was Er Ravi Kumar Pareet, Software Engineer, Azul Systems, Bengaluru.

Kanpur

Kanpur Local Centre, IEI, in collaboration with Panki Thermal Power Station (PTPS), celebrated Royal Charter Day 2024 on 14 September, 2024. Er



Govind Kumar Mishra, Chief General Manager, Panki Thermal Power Station, Panki, Kanpur, served as the Chief Guest. The invited speaker of the session, Er Krishna Kant Sameley, Executive Engineer, Panki Thermal Power Station delivered lecture on 'Power Generation at Panki-Kanpur'.

Kochi



Kochi Local Centre, IEI, celebrated Royal Charter Day 2024 on 08 September 2024 at Kochi. Chief Guest and Keynote speaker, Dr Anil Joseph, Chairman, Civil Engineering Division Board, IEI & President, Indian Geotechnical Society and

Managing Director, Geostructurals Private Limited shared a presentation on the importance of the Royal Charter, highlighting the significance of it.

Kollam

Kollam Local Centre, IEI, in collaboration with the Department of Civil Engineering, College of Engineering, Pathanapuram, organized the 'Royal Charter Day Celebration 2024 along with the inauguration of IEI Students Chapter' on 10 September, 2024 at Kollam. Dr Madhusoodanan Pillai K, Chairman, Kollam Local Centre, IEI, delivered the Royal Charter Day message.

Prof (Dr) Ms Sudhi Mary Kurian, Honorary Secretary, Kollam Local Centre, IEI was present on the occasion.

Meerut

Meerut Local Centre, IEI, celebrated Royal Charter Day 2024 on 09 September, 2024 through online mode. Guest speaker of the session, Dr Pragati Sharma, Associate Professor, Phonics Group of Institutions, Roorkee delivered lecture on the topic 'Mitigating Health Risks of Cellular Networks'.

Udaipur



Udaipur Local Centre, IEI, celebrated Royal Charter Day 2024 on 15 September, 2024. The Keynote address was delivered by Er Chandra Prakash Jain, Chairman, Udaipur Local Centre, IEI.

Varanasi

Varanasi Local Centre, IEI, celebrated Royal Charter Day 2024 on 9 September 2024 through virtual mode. A webinar was organised on 'Development of Society through Infrastructure Projects'. Speaker of the session was Er Vinod Kumar Shukla, IRSE, Principal Chief Engineer, BLW, Varanasi.

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
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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) Chandrashekhara 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 Shanthi
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 Jawanjali
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
Kancheपुरam	:: 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.

The reports on the technical activities held under the auspices of various State/Local Centres of the Institution during the year 2023-2024 have been circulated through these pages from time to time. The abridged versions of the Institution's Balance Sheet as at 31st March, 2024 along with the Auditor's Report to the Corporate Members of IEI are given hereunder. The detailed text of the above and also the Annual Report of the Council are available on demand at all State/Local Centres/Fora of IEI including the Overseas Chapters and IEI Headquarters.

ABRIDGED BALANCE SHEET AS AT 31st MARCH 2024

[Figures in Rs.]

31.03.2023			31.03.2024
	SOURCES OF FUND		
11637,55,879	Permanent Reserve	11994,71,180	
3944,40,635	Capital Reserve	4024,76,468	
232,67,976	Revenue Reserve	232,67,976	
	Surplus from Income and		
14116,48,351	Expenditure Account	13210,06,782	
2205,65,711	Earmarked Fund	2088,32,269	
32136,78,552			31550,54,675
	APPLICATION OF FUND		
	<u>Fixed Assets</u>		
9791,81,051	Gross Block	9979,41,646	
4202,93,499	Less : Depreciation	4470,75,108	
5588,87,552	Net Block		5508,66,538
11637,55,879	Investment of P R Fund	11994,71,180	
12579,91,125	Other Investments	12907,34,808	
24217,47,004			24902,05,988
3835,28,642	Current & non Current Assets, Loans and Advances	4274,77,976	
1504,84,646	Less : Current & non Current Liabilities	3134,95,827	
2330,43,996	Net Current & non Current Assets/Liabilities		1139,82,149
32136,78,552			31550,54,675

ABRIDGED INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st MARCH 2024

[Figures in Rs.]

31.03.2023			31.03.2024		
R&D	Education	INCOME	R&D	Education	Total
553,34,031	138,33,508	Registration Fees	522,55,147	130,63,787	653,18,934
-	633,15,851	Examination Fees	-	437,94,001	437,94,001
-	102,54,632	Advertisement	-	49,80,984	49,80,984
1344,03,648	304,25,177	Income from Investments	1411,60,585	300,95,345	1712,55,930
1,12,732	23,495	E-Learning solution etc.	-	-	-
309,48,114	-	National Conventions/ Seminars, Technical Activities etc.	510,64,944	-	510,64,944
478,88,604	119,72,150	Hall/Retiring Room Rent etc.	-	-	-
306,21,753	51,36,229	Other Income	771,41,069	192,85,268	964,26,337
2993,08,882	1349,61,042		3216,21,745	1112,19,385	
	4342,69,924	Sub-Total			4328,41,130
	4342,69,924	Total Income			4328,41,130
		EXPENDITURE			
1091,58,489	689,38,964	Salaries and Staff Expenses	1057,41,064	702,43,309	1759,84,373
32,89,967	8,22,492	Printing and Stationery	36,24,730	9,06,183	45,30,913
7,53,791	204,18,185	Direct Expenses for Exam. Technical Publications	5,02,107		5,02,107
280,76,998		Expenses on National Conventions, Seminars, Technical Activities etc.	440,80,752		440,80,752
22,86,986		Prize Awarded & Lectures	16,41,769		16,41,769
28,34,424	7,08,606	Postage, Telephone & Telex	25,84,369	6,46,091	32,30,460
104,81,272	26,20,318	Electricity	102,35,752	25,58,938	127,94,690
93,68,204	23,42,050	Rent, Rates & Taxes	167,87,684	41,96,922	209,84,606
37,29,613	9,32,404	Legal Expenses	25,80,368	6,45,092	32,25,460
77,261		Election Expenses	3,31,350		3,31,350
32,40,176	8,10,044	Audit Fee	21,49,918	5,37,480	26,87,398
3,74,958	93,740	Internal Audit Fee	4,51,128	1,12,782	5,63,910
210,07,675	52,51,919	Repairs and Maintenance	245,27,640	61,31,910	306,59,550
184,99,661	47,077	Meeting Expenses	165,80,595	87,817	166,68,412
		<u>Travelling Expenses</u>			
72,56,598	21,82,887	i) Council Members	69,33,363	23,98,325	93,31,688
31,85,584	7,96,396	ii) Others	45,63,695	11,40,924	57,04,619
5,81,410	1,45,352	Subscription to Other Institutions	9,32,672	2,33,168	11,65,840
22,90,553	5,72,639	Computer Expenses	23,03,378	5,75,844	28,79,222
139,85,549	34,96,385	Miscellaneous Expenses	142,65,942	35,66,483	178,32,425
54,349	89,055	Expenses for Libraries	66,326	1,65,983	2,32,309
21,54,401	-	Grant to Peripheral Bodies	13,85,350	-	13,85,350
297,83,911	-	Depreciation	296,90,411	-	296,90,411
91,36,665	-	Bad Debts written off	89,81,390	-	89,81,390
2816,08,495	1102,68,513	Sub-Total	3009,41,753	1105,11,255	4114,53,008
		Prior Period Expenses , Appropriation to Capital			
	(503,51,181)	Expenditure Fund & exceptional items			1120,29,691
	3415,25,827	Total Expenditure			5234,82,699
	4342,69,924	Total Income			4328,41,130
	3415,25,827	Total Expenditure			5234,82,699
	927,44,097	Surplus (+)/ Deficit (-)			(906,41,569)
	13189,04,254	Balance brought forward from previous year			14116,48,351
	14116,48,351	Balance carried to Balance Sheet			13210,06,782

INDEPENDENT AUDITOR'S REPORT

To
The Members
The Institution of Engineers (India)
Report on the Financial Statements

Opinion

We have audited the accompanying financial statements of **The Institution of Engineers (India)** ("the Institution"), which comprise the Balance Sheet as at 31st March, 2024 signed by us under reference to this report and the related Income and Expenditure Account and the Cash Flow Statement for the year then ended, including a summary of the significant accounting policies and other explanatory information (hereinafter referred to as 'financial statements'), in which have been incorporated the returns /accounts received from the various State Centres and Local Centres (also collectively referred to as Centres) of the Institution for the year ended 31st March, 2024 as audited by other auditors and which have been relied upon by us, as mentioned in paragraph 6 of the Notes to Accounts (Schedule 13).

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid financial statements of the Institution give the information in accordance with the generally accepted accounting principles and the applicable Accounting Standards issued by the Institute of Chartered Accountants of India and read with the Other Matters paragraph below, give a true and fair view of the state of affairs of the Institution as at March 31, 2024, its surplus and its cash flows for the year ended on that date.

Basis for Opinion

We conducted our audit of the financial statements in accordance with the Standards on Auditing (SA) issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Institution in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India (ICAI) together with the independence requirements that are relevant to our audit of the financial statements and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ICAI's Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the financial statements.

Management's Responsibility for the Financial Statements

The Management is responsible for the preparation of these financial statements that give a true and fair view of the state of affairs and result of operation of the Institution in accordance with the accounting principles generally accepted in India, including the applicable Accounting Standards. This responsibility also includes maintenance of adequate accounting records for safeguarding the assets of the Institution and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statement that give a true and fair view and are free from material misstatement, whether due to fraud or error.

The management of the Institution is responsible for overseeing the Institution's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could

reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal financial controls relevant to the audit in order to design audit procedures that are appropriate in the circumstances.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Institution's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report read with management assertion in Note no.11 of Schedule-13.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the Institution to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the audit of the financial statements of the Institution of which we are the independent auditors. For the financial statements of the branches incorporated in these financial statements which has been audited by other auditors, such other auditors remain responsible for the direction, supervision and performance of the audit carried out by them. We remain solely responsible for our audit opinion.

Materiality is the magnitude of misstatements in the financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the result of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

Other Matters

- a) We did not audit the financial statements of 124 centres that are included in the financial statements of the Institution, whose financial statements reflect total assets of Rs.122,78,57,953/- as at 31st March, 2024 and total revenues of Rs 16,99,89,608/- for the year ended on that date.

The financial statements / information/ reports of these centres have been audited by the other auditors whose reports / accounts have been furnished to us and have been properly dealt with by us in preparing this report and our opinion, in so far as it relates to the amounts and disclosures included in respect of these centres, is based solely on the report of such centre auditors. Attention is also drawn to the following matters;

- b) Nagaland State Centre has been abolished as referred to in Note no 6 (B) of schedule 13. However, the effect of abolishment is not material enough to impact the true and fairness of accounts of the Institution.
- c) Note 1.10 in Schedule 13 regarding accounting of certain income on cash basis, Note 1.11 in Schedule 13 regarding accounting of certain expense on cash basis, Note 1.13 in Schedule 13 regarding coverage of certain funds by investments, Note 9 (C) in Schedule 13 regarding provisions of provident fund and note no.12 of the aforesaid schedule related to past fraud.
- d) Report of other auditors of the various Centres who have reported, inter-alia, on certain matters as mentioned in Schedule 12.
- e) Attention is invited to Note No. 11 in Schedule – 13 asserting no fresh admission w.e.f 11.02.2020, pending pronouncement of judgment by Delhi High Court. It may be pointed out herein that adverse pronouncement by Hon'ble Court may prejudicially impact the revenues of the Institution. However the management has taken the necessary steps to reduce its expenditures to match the revenues.
- f) The Financial Statements of the Institution for the year ended March 31st, 2023, were audited by another auditor who expressed unmodified opinion on those statements on August 16, 2023.

Our opinion is not modified in respect of these matters.

We further report that:

- a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of the audit;
- b. In our opinion proper books of accounts as required by law have been kept by the Institution so far as appears from our examination of those books;
- c. The Balance Sheet, the Statement of Income and Expenditure and the Cash Flow Statement dealt with in this Report are in agreement with the books of account and with the returns received from the Centres not visited by us.
- d. The reports on the accounts of the Centres audited by the various centre auditors have been sent to us and have been properly dealt with by us in preparing this report.
- e. We further report that according to the information and explanation given to us:
- i. The Institution has disclosed the impact of pending litigations on its financial position in its financial statements – Refer Note 2 of Schedule 13 to the Financial Statements.
- ii. The Institution did not have any long-term contracts including derivative contracts for which there may be any material foreseeable losses.

For D K CHHAJER & CO.

Chartered Accountants

Firm Registration No.304138E

Sd/-

Tapan Kumar Mukhopadhyay

Partner

Membership No. 017483

UDIN: 24017483BKDHU8907

Place: Kolkata

Date: 12th August, 2024

THE INSTITUTION OF ENGINEERS (INDIA)

SCHEDULE – 12

ANNEXURE TO AUDITOR'S REPORT REFERRED TO IN PARAGRAPH (d) OF OTHER MATTERS OF OUR REPORT TO THE MEMBERS OF THE INSTITUTION OF ENGINEERS (INDIA) ON THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31-03-2024 (BASED ON THE REPORT OF OTHER AUDITORS)

1. ALWAR LOCAL CENTRE:

Lease deed of Land/Building is not free from encumbrances.

2. ALLAHABAD LOCAL CENTRE:

- Fixed Asset Register has not been maintained by the branch.
- The Centre has not taken registration under the GST Act.

3. ASANSOL LOCAL CENTRE:

External Confirmation with bank has not been obtained by the Branch Auditor.

4. BHILAI LOCAL CENTRE:

- Title deed of leasehold land has expired on 18th February 2003 and the same has not been renewed till date.
- The cash balance has not been physically verified by the Branch Auditor.
- No report on physical verification of Fixed Assets of the Centre was provided to the Branch Auditor.
- TDS has been deducted by the branch from contractors but however not deposited to the department on timely basis.
- GST registration is surrendered w.e.f 01.01.2021 but the centre has received income which is taxable under the provision of GST and on which liability accrues Rs. 5,55,655/- which is shown as GST Payable as on 31.03.2024 and the same is to be paid to the department by taking new registration under GST Act along with interest.

5. CHHATTISHGARH STATE CENTRE

GSTIN was cancelled w.e.f. 01.01.2021.

6. DHANBAD LOCAL CENTRE

- Building has been sealed by ZilaParishad by the order of J.H.C.
- Title deed of land was not seen by the Branch Auditor
- Lease Deed of Land/Building are not free from encumbrances

7. JABALPUR LOCAL CENTRE

- Fixed Assets of the centre were not physically verified by the Management.
- Contingent Liability towards 50% of back wages of ex-temporary workers, Mr. Ram Kailash Sen, is not yet ascertained. The centre is paying Rs. 4000 per month w.e.f 08.09.2020 (charged to income and expenditure A/C under the head "Salaries & Allowance to Temporary Staff")
- Balance in advance schedule lying unadjusted for quite sometime to be scrutinized and Duly passed resolutions for write off/ adjustment are required for a material amount of Rs.93,784.

8. KANPUR LOCAL CENTRE

Rs. 245000.00 is shown in Schedule-6 in Other Assets as 'Recoverable Amount from Mr. V. K. Chaudhary', represents and relates to embezzlement of Rs. 321527.20 by way of the fraudulent Encashment of Some FDRs with C.B.I and withdrawal of cash from Saving Bank during the Year 2000-01 and 2001-2002 by Ex-Accountant, Mr. V. K. Chaudhary, of the Institution. Out of this, Rs. 11000/- has been recovered from him. Further, Rs. 65527.20 has

been written-off during the year 2010-11 vide management decision in their meeting dated 20.02.2011. Said Amount has been shown under this Head as per decision of the committee.

9. KARNATAKA STATE CENTRE

- Lease deed dated 14.07.1997 entered between Government of Karnataka and the Institution for lease of land relating to property No. 4(3), Dr. B.R Ambedkar Veedhi, Bangalore 560001, was renewed upto 31.08.2020 after expiry of the lease, Government of Karnataka has taken over the possession of the property. A writ petition filed by the Institution before the Hon'ble High Court of Karnataka. The Hon'ble High Court of Karnataka has allowed the said writ with an interim direction dt. 01.07.2021 permitting the Institution to enter upon the premises. After an appeal filed by Karnataka State Government the Hon'ble High Court has dismissed Writ Appeal dt. 09.08.2021. Hon'ble High Court of Karnataka has Directed the Centre to appear before the Competent Authority dated 01.07.2022 and the Executive Engineer, Building Division issued notice to appear on 28.07.2022; the issue is still pending.
- There are certain cases where there is delay in remittance of TDS.
- Amount due from Indian Engineering Congress of Rs.57,06,551 is long outstanding from the year 2011. Further TDS shown under the head sundry advances amounting to Rs. 18,16,292 is related to Headquarter(including opening balance of Rs. 16,59,927).

10. KERALA STATE CENTRE

- A case has been filed by IEI Kerala state centre for an amount of Rs.3,22,38,652 has been issued by Kerala High Court Vide Order No. WP(C) No. 18931/2016 (N) dated 29.08.2016.
- New Lease Deed for 55 cents of land was executed after 45 cents of land was taken back by the Govt of Kerala. The new Lease Deed was executed with effect from 14.10.2009. A demand notice was issued to Centre on revised rate on 14.10.2012 onwards. However High Court of Kerala has stayed the revision and the case is still pending.

11. LUDHIANA LOCAL CENTRE

No record was produced for physical verification of Fixed Assets to the branch auditor

12. MANIPUR STATE CENTRE

- Fixed Asset Register has not been maintained by the branch
- No physical verification report has been provided by the management to the branch auditor

13. NAVI MUMBAI LOCAL CENTRE

- The physical verification has been carried out by the management but no report has been produced to the branch auditor.
- No accrual method of accounting was followed and hence to rectify the same entry is being routed through capital/Building fund account, however there is no under/over statement of income and expenditure.
- The Balance of sundry debtor namely M/s B G Shirke Rs.143979.30 (Dr), M/s Larsen & Toubro Ltd (Infrastructure Vertical) Rs 155972.80 (Dr.) and Shapoorji & Pallonji and Co Pvt Ltd (Rs) 71622.60 (Dr) Balance are subject to confirmation as the ledger/confirmation of above client related to material testing has not been provided.
- There is a difference of Rs. 2,97,858.16 in the account of M/s Shivanad Engineering due to opening balance appearing in centre's account as Nil while as per accounts M/s Shivanad Engineering the balance is Rs. 2,97,858.16.
- The Local Centre has incurred expenditure of more than Rs 10000/- on repair and Maintenance of Building, which mainly includes AMC etc

and hence no Tender/quotation has been called for as the same is from regular vendor.

- f) PTEC and PTRC registration is mandatory and the same has not been obtained. Therefore, Provision for the Liability has been made at the time of finalisation of account. Managing Committee had tried to get the necessary registration but due to technical issue in P Tax Portal they are unable get the necessary registration are sincerely working for same.
- g) It has been Observed that there are some sundry debtors related to Material Testing Activity, that has credit balance amounting to Rs. 1,96,999.74.
- h) Expenses incurred on general meeting/council/AGM has not been properly bifurcated.

14. TIRUNELVELI LOCAL CENTRE

Centre has not adhered to the Royal Charter, Bye laws, regulations and code of ethics and financial norms and rules.

15. UTTAR PRADESH STATE CENTRE:

As per explanation given by the honorary secretary the following cases are still pending against the institution:-

- a) M/s D.N. Brothers for labour charges since 1976.
- b) M/s D.N. Brothers for labour charges since 1976. It has been explained that no information has been received from Honourable Court or concerned persons. No information on the above case is available with the centre. It is recommended that necessary action must be taken to find the current status of these cases.
- c) Institution V/s Mahapalika for review of assessment since 1992.
- d) No information on the first three cases is available with the centre. It is Recommended that necessary action. Accordingly no contingent liabilities have been ascertained as per Accounting Standard 29 issued by ICAI for these cases.

- e) No external confirmation have been taken and balances have been taken as per books of account

16. UTTARAKHAND STATE CENTRE

- a) The Management, vide Office Order No. 5329IE(1)UKSC/B/2024 dated 28 March, 2024 has written back certain outstanding balances in the financial statements which were not traceable.
- b) The Institute has Receivables outstanding in respect of TDS Deducted in past year which was received in Head Office Account. The Management, Vide Office Order No. 5331IE(1)UKSC/B/2024 dated 31/03/2024 has decided to write off TDS Receivable from General Fund of the Institute as this Amount has been treated as Contribution from Branches by the Head office.
- c) During the Year, the Institute has taken an Interest Free Unsecured Loan of Rs. 2,00,000/- from Mrs.Mansi Aggarwal for Research and Development Expenditure.
- d) During the Year the Institute has deducted TDS of Certain entities which has not been deposited to the government.

17. VADODARA LOCAL CENTRE

- a) Balances of TDS Receivables from F.Y. 2018-19 to F.Y. 2021-22 are lying unadjusted, thus should be scrutinized and adjusted, if required.
- b) No completion certificate of the building has been provided to the branch auditor for the verification.

18. FOLLOWING CENTRES HAVE NOT ATTACHED ANNEXURE- III to their Audit Reports

Andaman & Nicobar State Centre, Andhra Pradesh State Centre, Silchar Local Centre, Kolar Local Centre, Davangere Local Centre, Pantnagar Local Centre



IEI - Springer Journal





ISSN Print: 2250-2149
ISSN Online: 2250-2157

SCOPUS Indexed

Series A
CiteScore 2022
2.1
Google Scholar h5 Index 2022
19



ISSN Print: 2250-2106
ISSN Online: 2250-2114

SCOPUS Indexed

Series B
CiteScore 2022
2.2
Google Scholar h5 Index 2022
19



ISSN Print: 2250-0545
ISSN Online: 2250-0553

SCOPUS Indexed

Series C
CiteScore 2022
2.2
Google Scholar h5 Index 2022
22



ISSN Print: 2250-2122
ISSN Online: 2250-2130

SCOPUS Indexed

Series D
CiteScore 2022
2.2
Google Scholar h5 Index 2022
15



ISSN Print: 2250-2483
ISSN Online: 2250-2491

SCOPUS Indexed

Series E
CiteScore 2022
1.8
Google Scholar h5 Index 2022
10



News-in-Brief

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

STATE CENTRES

Goa

Under the aegis of Student Chapter of Don Bosco College of Engineering (DBCE), Department of Mechanical Engineering, in collaboration with DBCE, Fatorda, organized a one-week Short Term Training Program on 'Six Sigma for Improved Quality Management' during 13-17 May, 2024. The program, approved by ISTE and sponsored by the Department of Science, Technology & Waste Management, Government of Goa, was supported by Turbocam India Pvt Ltd. Coordinated by Dr Suraj Marathe and Sanjeel Naik, Assistant Professor, DBCE, the event saw the participation of around 20 industry professionals from companies like Turbocam India Private Limited, Paradeep Phosphates Limited and Netzsch Pumps, as well as faculty members from PCCE, SRIEIT Shiroda, Agnel Polytechnic and DBCE. Prof (Dr) Suraj Rane, Goa College of Engineering introduced Six Sigma and Dr Sunilkumar Honnugar, Associate Professor, SDM College of Engineering, Dharwad explained problem-solving with Six Sigma. Subsequent days focused on Quality Control tools, Total Quality Management, Excel software training by Mr Vasant Pattar, Founder of Yashaswani Consultants, Belagavi and Statistical Process Control by Mr Ameya Shirodkar, Quality Control Manager, Turbocam. Prof Swapnil Ramani and Dr Suraj Marathe led sessions on DMAIC methodologies, while Dr Ganesh Chate, Associate Professor, KLS Gogte Institute of Technology conducted a hands-on session on Design of Experiments (DOE) using Minitab software. The program concluded with a field visit to Turbocam India Private Limited, where participants observed real-time CNC machine operations and process control techniques for quality improvement. The five-day program was a grand success, offering a blend of technical seminars, hands-on workshops, field visits and collaboration between educational institutes and industry experts.

Under the aegis of Student Chapter of Don Bosco College of Engineering (DBCE) and collaboration with DBCE, Fatorda, organized an intensive one-day hands-on workshop on 'Internet of Things' (IoT) for Mechanical Engineering students on 03 February, 2024. The educational event was spearheaded by Mr Ketan Naik, Project Head, Asier Solutions, FiiRE, DBCE Fatorda and provided practical training on IoT concepts and applications. It began with an introduction to microcontroller boards and Arduino programming, followed by sessions on voice-controlled automation using Google Assistant and the Adafruit cloud server. Students also learned to collect environmental data using DHT sensors and the Blynk cloud application, gaining hands-on experience with data monitoring and analysis. A key segment focused on controlling output devices through the Adafruit platform, providing students with comprehensive knowledge of IoT systems from data collection to remote device control. The workshop offered real-time practical applications, enhancing students' understanding of IoT's practical uses. Meticulously coordinated by Prof Ajit Salunke, Students Coordinator, the event was attended by 15 students and successfully equipped them with valuable IoT skills, benefiting their future academic and professional pursuits.

Karnataka

Organized the Eighth Er B R Manickam Memorial Lecture on 11 June, 2024, on the topic 'The Decision of Judicial Authorities in Resolving the Cauvery Water Dispute—Is it Fair to Karnataka'. Er B R Manickam, an esteemed architect of Vidhana Soudha and former Chief Engineer, Chief Town Planner and Chief Architect of the Government of Mysore, played a pivotal role in the development of IEI Karnataka. In his honor, the annual lecture was initiated at the request of his son, Er B M Srinivas and family. This year's event featured Capt S Rajarao, former Secretary, Minor Irrigation & Environment

Department, Government of Karnataka, who delivered an insightful talk on the Cauvery Water Dispute, highlighting key judicial decisions and their implications for Karnataka. The event was graced by Hon'ble Sri M T Krishnappa, MLA, Turuvekere and Hon'ble Sri Sogadu Shivanna, Ex-MLA.

Telangana

Organized the Er Atluri Venkateswara Rao 16th Endowment Lecture on 10 November, 2023 at Hyderabad. Prof P Laxminarayana, Director, Research and Training Unit for Navigational Electronics, Osmania University, delivered the Keynote address on the topic 'GNSS Timing for Power Grid Applications', highlighting the importance of Global Navigation Satellite Systems in enhancing power grid synchronization and efficiency.

Celebrated the 7th Telangana Irrigation Day on 14 November, 2023 at Hyderabad, commemorating the 84th Birthday of Late Er R Vidyasagar Rao, Former Advisor to the Government of Telangana (Irrigation). Dr P G Sastry, Director, Re-sustainability Limited & Director Ramky Infrastructure Limited, Former Chairman, Clearance of Irrigation & Hydropower Projects, Gol and Former Director, NIT Warangal graced the occasion as Chief Guest, highlighting the significance of irrigation in Telangana's development. Er M Nagaraj, presently Chairman, Karnataka State Centre, IEI graced the occasion as the Guest of Honour.

Organized the 7th Er V Subba Rao Endowment Lecture on 26 January, 2024, at Hyderabad. Keynote speaker, Er D Sridhar Babu, Director (Projects), HMWSSB, delivered lecture on 'Sewerage Treatment in Hyderabad City', highlighting the challenges and advancements in managing the city's sewerage systems.

Organized the 9th Er I Basavaraju Endowment Lecture on 27 January, 2024, at Visvesvaraya Bhavan, Khairatabad, Hyderabad. Keynote speaker of the event was Prof E Vidyasagar, Head of the Department, Electrical Engineering, University College of Engineering, Osmania University, Hyderabad.

Tripura

Celebrated its 105th Foundation Day on 13 September, 2024. On the occasion, a technical talk on 'Sustainable Waste to Energy Technologies' was delivered by Dr Sagarika Panigrahi, Assistant Professor, Civil Engineering Department, NIT Agartala. The event emphasized the role of engineers in sustainable development and the importance of innovative waste-to-energy technologies in addressing environmental challenges.

LOCAL CENTRES

Gwalior

Organized a Seminar on 'Nano Materials for Buildings' on 04 August, 2024, at Gwalior. Keynote speaker of the session was Er Prabhat Bhargava, CEO, Bhargava Ateliers Private Limited, who discussed various approaches to produce nanomaterials and their applications in construction. The seminar highlighted the benefits of nanomaterials, such as titanium dioxide and carbon nanotubes in enhancing construction durability, self-cleaning properties and energy efficiency. enriched the participants.

Kanpur

In collaboration with the Textile Association (India), UP Unit, organized a lecture on 'Nanotechnology in Textiles' on 18 January, 2024, through online platform. Mrs Priyanka Katiyar, Scientist E, Defence Materials Stores Research and Development Establishment (DMSRDE), DRDO, Kanpur, was the guest speaker. Mrs Katiyar delivered an insightful lecture on the applications of nanotechnology in textiles, emphasizing how nanotechnology

enhances materials' properties, making them stronger, lighter and more durable. She highlighted innovations such as nanoscale additives for fabrics that offer resistance to wrinkling, bacterial growth and staining, as well as the development of smart fabrics equipped with nanoscale sensors. Other applications discussed included light weighting in vehicles, nanostructured ceramic coatings, and advancements in nanotechnology-enabled electronics and personal care products.

Kanyakumari

In collaboration with IETE Trivandrum, Nagercoil PAC organized a Webinar on 'Optical Camera Communication- A Subset of LiFi' on 04 December, 2023. Keynote speaker, Er Chakaravarthi Narasimman Srivathsan, Nanyang Technological University, Singapore introduced the participants to the principles of LiFi and Optical Camera Communication, explaining its technical aspects and practical applications. His presentation was enhanced with examples, making the complex subject accessible to the audience.

Kochi

Hosted a technical presentation on 'Milk Processing at a Glance', through online platform, offering valuable insights into the engineering aspects of milk production on 09 April, 2024. Resource person of the session, Er Vijayakumaran K M, an Energy Consultant and Lead Auditor ISO 50001:2018, in his presentation covered a wide array of engineering techniques and innovations in milk processing. Er Vijayakumaran detailed the latest advancements aimed at enhancing efficiency and quality, providing a comprehensive overview of the industry's intricate processes. The presentation served as a valuable platform for engineers to broaden their understanding and explore advancements in milk processing technologies.

Hosted a technical presentation on 'Infrastructure Development & Underground Drainage Pipework' on 09 May, 2024, through online mode. Resource person of the session, Er Sankar N Menon, Chartered Engineer and Member, Indian Plumbing Association. discussed the critical aspects of infrastructure development, before delving into the typical cross-section of an infrastructure network, covering the components of manholes, the excavation process and the installation of underground drainage pipeworks. The webinar served as a valuable platform for professional development, providing attendees with key insights into infrastructure development and underground drainage systems.

Pune

In collaboration with the Indian Society of Earthquake Technology, Pune Local Chapter, organized a workshop on 'Research Topics for PG Students' on 27 April, 2024 at Pune. The event was inaugurated by Dr Sunil Thakare, Chairman, Board of Studies, Civil Engineering Department, Savitribai Phule Pune University (SPPU), who updated attendees on the latest developments and challenges in structural engineering. Key resource persons included Mr Usuf Inamdar, Business and Technical Head, Jaikumar Infra Project RMC Division, who highlighted the future challenge for engineers to create concrete without cement and aggregate. The workshop featured Invited Lectures such as Dr Shreenivas Londhe, Professor, Civil Engineering, VIIT Pune, who spoke on the application of Artificial Neural Networks (ANN) in civil engineering, and Mr Inamdar's lecture on sustainable concrete solutions. Er Kantish Chourpagar, Head, Steelsoft Consulting Services India, spoke on the advantages of cold-formed light gauge sections for steel structure design. Dr Jyoti Bhusari, along with her colleagues Dr Suhasini Madhekar and Dr Manjunath Bhogone from Sinhgad College of Engineering, provided insights on research in structural engineering for PG dissertations. The workshop offered valuable knowledge and insights to budding engineers and PG students, equipping them with the latest trends and research opportunities in civil and structural engineering.

FORA

Water Management Forum

The Water Management Forum, The Institution of Engineers (India), in collaboration with the Gujarat State Centre (GSC), IEI, L D College of Engineering, Ahmedabad, Computer Society of India (CSI), Ahmedabad Chapter, MSME & Start-up Forum – Bharat (MSFB) and ACM Ahmedabad, organized a seminar titled 'Green Solutions for Hills and Rivers: Navigating Nature's Challenges with Eco-Friendly Techniques' on 22 December, 2023 at Ahmedabad. The event was inaugurated by Dr Jaymin Vasa, Chairman & MD, Vasa Pharmachem Private Limited. Dignitaries include Shri Jigar Raval, Chairman, CSI AC, Shri Amit Parikh, National President, MSFB, Shri Bhawna Singh, SSIP Coordinator, IAR, Shri Jay Mehta, Vice Chairman, ACM AC, Mr H U Kalyani, Chairman, Water Management Forum and Er Niraj Anilbhai Shah, Honorary Secretary, Gujarat State Centre, IEI. The Keynote address was delivered by Prof (Dr) Anup Kumar Sarma, Civil Engineering Department, IIT Guwahati, on the topic 'Green Solutions for Hills and Rivers: Navigating nature's Challenges with Eco-Friendly Techniques'.

The Institution of Engineers (India)

IEI Industry Excellence Award

IEI Engineering Education Excellence Award

For further details: <https://tinyurl.com/y74b2c27>

For further details: <https://tinyurl.com/ywrse4n2>

Ceremony

19 December 2024

Novotel Kolkata Hotel & Residences



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 December 2024

Sl. No.	Name of the Course	Scheduled Dates
1.	Road Safety Audit	01 - 30 Dec 24
2.	Heat Treatment - Furnaces, Processes and Innovations	02 - 04 Dec 24
3.	Procurement Rules for Goods & Services incldg Gem Portal & GFR 2017 Guideline	02 - 06 Dec 24
4.	Six Sigma Green Belt	02 - 06 Dec 24
5.	Latest techniques in Control & Instrumentation in Power Plants and process industries applications	03 - 06 Dec 24
6.	Environmental Damage Assessment and Remediation Plan	04 - 06 Dec 24
7.	Fundamentals of Mining for Personnel & IT Managers – Basics of Geology, Exploration, Surveying, Mineral Extraction, Rehabilitation, Team Building, HR Practices	04 - 06 Dec 24
8.	Software Testing & Quality Assurance	09 - 12 Dec 24
9.	Laboratory Management System Awareness & Internal Auditing (As per ISO / IEC 17025 : 2017 & NABL Requirements)	09 - 12 Dec 24
10.	Residential Training on Artificial Intelligence and its Applications.	10 - 12 Dec 24
11.	NDT Level II Certification in Visual Inspection/Visual Testing (in Accordance with ASNT Document No. SNT-TC-1A 2011)	09 - 13 Dec 24
12.	Hydraulic Gates and Hoists - Design, Erection and Operation & Maintenance including Dismantling	09 - 13 Dec 24
13.	Water Use Efficiency in the Face of Climate Change	11 - 13 Dec 24
14.	General Network Access (GNA) and Power Trading - ABT Scenario	11 - 13 Dec 24
15.	Quality & Reliability Management	16 - 18 Dec 24
16.	Metal Additive Manufacturing and its Applications	16 -19 Dec 24
17.	Water Audit & Software – Urban Water Management	17 - 19 Dec 24
18.	Residential Training on Technology Management, Commercialization and Transfer.	17 - 19 Dec 24
19.	Rehabilitation of Buildings using latest Techniques & Risk Criteria	16 - 20 Dec 24
20.	Firewall & VPN Security Administration	16 - 20 Dec 24
21.	SAP S/4 HANA FIORI	16 - 20 Dec 24
22.	Advanced Project Management with MS Project	17 - 20 Dec 24
23.	Principles & Practices of Sustainable Mining: Corporate Social Responsibility, Social Impact Assessment, Dump Management, Controlled Blasting Techniques, Sewage Treatment, Bio-Medical Waste Management, Conservation and Recycling of Resources, Conversion of Wastes to Resources, Water-Body in Mined out Areas	18 - 20 Dec 24
24.	Innovative Practices in DISCOMs	18 - 20 Dec 24
25.	Water Conservation, Augmentation and Preservation	18 - 20 Dec 24
26.	Risk Management	23-Dec-24
27.	Mind and Health Management for Scientists, Engineers and Technical Officers	26 - 28 Dec 24
28.	Planning, Design of Water Resources Structures using Finite Element Method	26 - 28 Dec 24

For detail information please contact:

Engineering Staff College of India

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

IEI DIARY



Aerospace Engineering Division

Thirty-seventh National Convention of Aerospace Engineers on "**Advances in Innovation in Aerospace Engineers**"

Ranchi, January 18-19, 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

One Day Seminar on "**Potential and Effectiveness of Micro irrigation System for raising Productivity**"

Bhubaneswar, December 08, 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]

Architectural Engineering Division

All India Seminar on "**Bio Mimicry in Architectural Engineering**"

Chennai, December 27-28, 2024

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

All India Seminar on "**Trends In Advanced Building Construction And Innovative Building Materials**"

Rourkela, March 01-02, 2025

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

Chemical Engineering Division

One Day Workshop on "**Innovative Small Scale Startup on Petroleum Processing and Petro Chemicals**"

Bhubaneswar, January 12, 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

One Day Workshop on "**Sustainable Water Harvesting and Waste Water Treatment**"

Rourkela, December 21, 2024

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

One Day Workshop on "**Utilisation of Construction Demolition and Industrial Waste in Construction Industry**"

Neyveli, February 15, 2025

The Honorary Secretary, IEI, Neyveli Local Centre, Block 17, Neyveli 607801, Dist Cuddalore, Tamilnadu [Ph: 04142-210510; E-mail: neyvelilc@ieindia.org; Website: www.ieineyveli.org]

Computer Engineering Division

One Day Seminar on "**Data Privacy & Security concern in Generative AI**"

Erode, December 13, 2024

The Honorary Secretary, IEI, Erode Local Centre, Sri Ramakrishna Seva Samithi Religious Library, Thindal Murugan Temple Premises, Thindal, Erode 638012, Tamilnadu [E-mail: erodelc@ieindia.org; Web: www.ieierode.org]

All India Workshop on "**Skill Development in Complex Project Management using Jira & Confluence CPMJC2024**"

Rourkela, January 04-05, 2024

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

All India Seminar on "**Innovations and Research in Artificial Intelligence & Machine Learning**"

Ranchi, January 11-12, 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]

Two Day International Conference in "**Application of AI & Machine Learning ICAML2025**"

Chandigarh, February 22-23, 2024

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

Electrical Engineering Division

All India Seminar on "**Advancement in Renewable Energy and Sustainable Development**"

Bhubaneswar, December 14 - 15, 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]

One Day Seminar on "**Harnessing Solar Energy for Sustainable Marine Development Aligning with SDG 14**"

Chennai, January 24, 2025

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

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

Tuticorin, February 07, 2025

The Honorary Secretary, IEI, Tuticorin Local Centre, Plot No.13&14, Daniel Nagar, Korampallam, Tuticorin 628101 [Mobile: 9443471599, Email: tuticorinlc@ieindia.org]

Electronics & Telecomm. Engineering Division

One Day Seminar on "**AI & Cyber Security**"

Hyderabad, Dec-15, 2024

The Honorary Secretary, IEI, Telangana State Centre, 6-2-910, Visvesvaraya Bhavan, Khairatabad, Hyderabad 500004, Telangana [☎: 040-23314969, E-mail: telanganasc@ieindia.org]

Environmental Engineering Division

All India Seminar on "**The Global and Local Dimensions of Climate Change Mitigation and Adaptation in Practice**"

Coimbatore, January 23-24, 2025

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>]

All India Seminar on "**EEHVACR**"

Ranchi, February 08-09, 2025

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]

Marine Engineering Division

One Day Seminar on "**Materials Challenges in Marine Application**"

Rourkela, Dec 28, 2024

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

One Day Seminar on "**Empowering Maritime Workforce Through Enhanced Training and Effective Regulation**"

Bhubaneswar, January 04, 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]

Mechanical Engineering Division

All India Seminar on 'AI Driven Digital Twins in Mechanical and Thermal Engineering Systems'

Hyderabad, January 06-07, 2025
6-2-910, Visvesvaraya Bhavan, Khairatabad, Hyderabad 500004, Telangana, [☎: 040-23314969, E-mail: telanganasc@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>]

Forty-first National Convention of Mechanical Engineers on "Emerging Domains in Robotics and AI"

Thiruvananthapuram, September 23-24, 2026
The Honorary Secretary, IEI, Kerala State Centre, Visvesvaraya Bhavan, Opposite Kanakakunnu Palace, Thiruvananthapuram 605033 [☎: 0471-2322991, 8078027563; E-mail: keralasc@ieindia.org; Website: www.ieitvm.org]

Forty-second National Convention of Mechanical Engineers on "AI and ML: Bridging Innovation & Shaping Tomorrow's Industries"

Belapur, September 17-18, 2027
The Honorary Secretary, IEI, Navi Mumbai Local Centre, Plot No.106, Sector 15, C.B.D Belapur, Navi Mumbai 400614 [☎: 022-49706724, E-mail: navimumbailc@ieindia.org, Website: www.ieinmlc.org]

Metallurgical & Materials Engg. Division

All India Seminar on "Iron and Steel Industry Enhancing Efficiency Sustainability"

Ranchi, December 15-16, 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]

Mining Engineering Division

One Day Seminar on "Stop Stability of Particulate Dump Yard and Industrial Focus of Interest"

Rourkela, January 11, 2025
The Honorary Secretary, IEI, Rourkela Local Centre, National Institute of Technology Campus, Rourkela 769008, Odisha [☎: 0661-2472709, E-mail: rourkelalc@ieindia.org]

Production Engineering Division

All India Seminar on "Digital Manufacturing"

Chennai, February 21-22, 2025
The Honorary Secretary, IEI, Tamil Nadu State Centre, No. 19, Swami Sivananda Salai, Chepauk, Chennai 600005 [☎: 044-25360614 /9962950333, E-mail : tnscc@ieindia.org, Website : www.ieitnsc.org]

Thirty-ninth National Convention of Production Engineers on "Recent Advancement and Challenges on the Fabrication of Semiconductor Chips in India"

Madurai, May 23-24, 2025
The Honorary Secretary, IEI, Madurai Local Centre, Er TM Jambulingam Bhavan, No. 1, Vivekananda Nagar, 120 Feet Road, Surveyor Colony, K Pudur, Madurai 625007 [☎: 0452-4373067, E-mail: madurailc@ieindia.org, Website: www.ieimadurailc.org]

Textile Engineering Division

One Day Seminar on "The Role of Textiles in Future Space Travel"

Chennai, December 13, 2025
The Honorary Secretary, IEI, Tamil Nadu State Centre, No. 19, Swami Sivananda Salai, Chepauk, Chennai 600005 [☎: 044-25360614 /9962950333, E-mail : tnscc@ieindia.org, Website : www.ieitnsc.org]

One Day Seminar on "Textile Machinery and Equipment Design"

Rourkela, December 15, 2024
The Honorary Secretary, IEI, Rourkela Local Centre, National Institute of Technology Campus, Rourkela 769008, Odisha [☎: 0661-2472709, E-mail: rourkelalc@ieindia.org]

Interdisciplinary Coordination Committee

All India Seminar on "Transforming Industry and Infrastructure: The Role of Automation and AI"

Coimbatore, December 19-20, 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>]

National Languages Promotional Committee

One Day Seminar on "Opportunities and Applications of Artificial Intelligence in Electronics Sector"

Coimbatore, December 12, 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>]

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ELIGIBILITY REQUIREMENT

To attain the Professional Engineers (PE) certification through the Institution of Engineers (IEI), you must meet the following eligibility criteria:

1. Hold a BE/BTech or equivalent degree recognized by a Statutory Authority or the Government of India.
2. Have accumulated five years or more of professional experience.
3. Be a member of a recognized professional engineering institution or association.
4. Maintain a satisfactory level of Continued Professional Development (CPD).

For more information and details, please visit the following link :

https://www.ieindia.org/webui/IEI_PE_Certification.aspx

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ELIGIBILITY REQUIREMENT

To be eligible for IntPE Certification by IEI, candidates must meet the following criteria:

1. Hold a BE/BTech or equivalent degree recognized by the Statutory Authority or the Government of India.
2. Possess seven years or more of professional experience.
3. Have a minimum of two years of professional experience in a significant engineering activity.
4. Be a member of a recognized professional engineering institution or association.
5. Maintain a satisfactory level of Continued Professional Development (CPD).

For more information and details, please visit the following link :

https://www.ieindia.org/webui/IEI_IntPE_Certification.aspx

The eligible candidate can submit application in the prescribed format to:
Deputy Director (Technical), The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700020
For any query and assistance please send email to: pe@ieindia.org

Felicitation of President [Elect], IEI

Gorakhpur Local Centre of the Institution organised a Felicitation Ceremony on 08 November 2024 to honour Er V B Singh, President [Elect], IEI at Gorakhpur. The event brought together esteemed dignitaries to celebrate Er Singh's achievements and contributions. The event witnessed the gracious presence of Er J B Rai, President of the Malaviya Alumni Association, Shri Anuj Agrawal, Dr N K Singh, Director of ITM, Joint Secretary of ITM Gorakhpur, and Er Ashutosh Chandra, Chairman of the Association of Professional Graduate Civil Engineers. Er Pawan Kumar Mishra, Chairman, Gorakhpur Local Centre, IEI was present on the occasion.



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.



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39TH INDIAN ENGINEERING CONGRESS
 DECEMBER 20-22, 2024 | NOVOTEL, KOLKATA

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