

I.E.I NEWS

August 2024

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A CENTURY OF SERVICE TO THE NATION

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

Designing Retaining Wall Structures for Slope Retention



Dr Rajib Saha

The Institution of Engineers (India), in association with Maccaferri Environmental Solutions Pvt. Ltd. (India), hosted a technical webinar on 08 August, 2024, centered on the topic of **Designing Retaining Wall Structures for Slope Retention**. This event marked the inaugural session of the IEI Technical Webinar Series, organized by the Institution supported



Dr Ratnakar R Mahajan

by the Fédération internationale du béton (fib), of which IEI is a National Member Group. The webinar featured panelists, Dr. Rajib Saha, Professor, Civil Engineering Department and Dean of Academic Affairs at NIT Agartala, and Dr. Ratnakar R. Mahajan, Regional Technical Manager for India, South-East Asia, and the Pacific at Maccaferri. Their presentations offered deep insights into the challenges, innovations, and case studies related to the design and implementation of retaining walls, particularly in geotechnically challenging regions.

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All India Seminar under the aegis of Environmental Engineering Division Board

Sources of Planet Energy Environmental & Disaster Science: Climate Justice and Equity

Uttar Pradesh State Centre, IEI, in association with School of Management Studies (SMS), Lucknow and Dr A P J Abdul Kalam Technical University, an All India Seminar on the theme **Sources of Planet Energy, Environmental & Disaster Science: Climate Justice and Equity** during 29-30 June 2024 at Lucknow under the aegis of Environmental Engineering Division Board [ENDB], IEI. The seminar aimed to bring together experts, researchers and students to discuss pressing environmental issues with a focus on climate justice and equity. The primary goal of the Seminar was to address issues related to the environment and climate change. The Seminar aimed to achieve several objectives, including exploring the connections between natural systems and human activities within the field of Environmental and Disaster



Sciences. The primary objective of the seminar was to address issues related to environmental sustainability and climate change with a focus on climate justice and equity. The event emphasized the need for interdisciplinary collaboration to tackle

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From the President's Desk.....

Driving Sustainability with Engineering Solutions Embracing the Latest AI-Driven Technologies



September 15 is celebrated every year in the country since the year 1967 as "Engineers' Day" to commemorate the birthday of the legendary engineer Sir Mokshagundam Visvesvaraya. Sir Visvesvaraya, an eminent Indian engineer and statesman was conferred "Bharat Ratna" in the year 1955. The Institution of Engineers (India) will celebrate the 57th Engineers' Day on September 15, commemorating the 163rd birthday of Bharat Ratna Sir Mokshagundam Visvesvaraya. This day not only honours his pioneering spirit but also serves as a tribute to engineers worldwide, whose innovations and dedication shape our modern world.

In today's fast-paced world, the integration of engineering and Artificial Intelligence (AI) is driving significant advancements in sustainability. As we face pressing environmental challenges, it is essential to harness the power of AI to develop innovative engineering solutions. By incorporating AI technologies, we can optimize processes, improve resource efficiency, and set new standards for environmental stewardship.

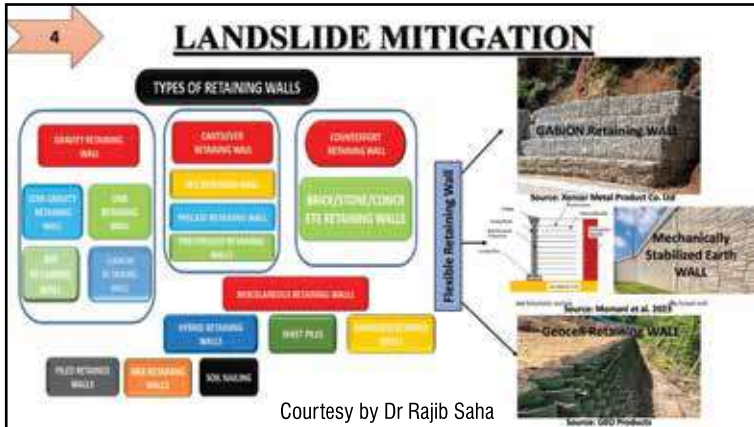
This year's theme, "Driving Sustainability with Engineering Solutions Embracing the Latest AI-Driven Technologies," highlights how AI-driven technologies are transforming the approach to sustainability in engineering. Machine learning and data analytics enable better prediction and mitigation of the environmental impact of engineering projects. For example, AI can optimize energy consumption in real time, reducing carbon footprints, and predictive maintenance powered by AI minimizes waste and extends machinery lifespan, contributing to more sustainable operations.

The engineering community's commitment to sustainability is increasingly evident through the use of AI to design smarter, greener solutions. AI is driving innovations such as developing materials with lower environmental impact and optimizing supply chains for reduced emissions. These advancements not only enhance the efficiency of

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Designing Retaining Wall Structures for Slope Retention

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Courtesy by Dr Rajib Saha

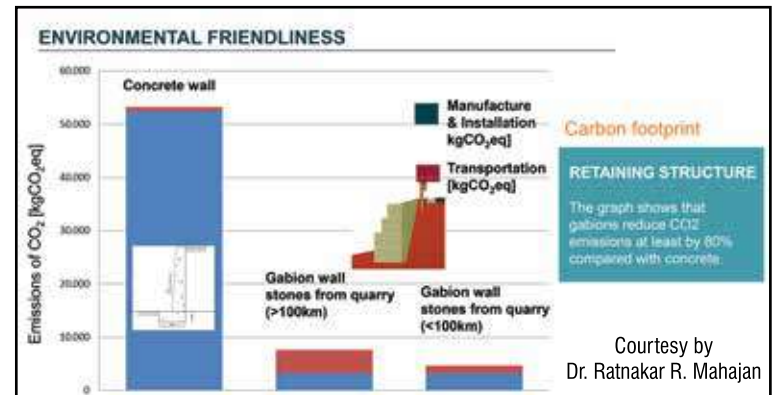


Mr Sumit Pathak

soil walls. He discussed the materials and construction techniques associated with each type, emphasizing the importance of selecting the right wall type based on the specific conditions of a site.

Dr Mahajan’s presentation also delved into the critical design considerations for retaining walls in seismic zones. He emphasized the need for flexibility and ductility in wall design to ensure resilience against lateral pressures and seismic forces. Additionally, Dr Mahajan provided guidelines on addressing key aspects such as drainage and foundation stability, which are vital for the long-term performance of retaining walls.

To illustrate the practical application of these design principles, Dr Mahajan shared case studies from infrastructure projects across India and Southeast



Asia. These examples demonstrated how Maccaferri’s solutions have been successfully implemented in diverse terrains, offering effective slope stabilization and enhancing the durability of retaining structures.

The webinar concluded with a lively Q&A session, where both panelists addressed a range of questions from the audience. The webinar sessions were moderated by Mr Sumit Pathak, Assistant Manager, Technical Marketing, Maccaferri. Key topics of discussion included the challenges posed by seismic activity, soil variability, and environmental considerations in retaining wall design. Both Dr Saha and Dr Mahajan underscored the importance of thorough geotechnical investigations and the use of advanced modeling tools to predict the behavior of retaining walls under various loading conditions. The session also touched on future trends in retaining wall technology, with a focus on the potential for smart materials and monitoring systems to improve safety and performance.

The webinar provided a comprehensive overview of the current practices, challenges, and innovations in the design of retaining wall structures for slope retention. The insights shared by Dr Saha and Dr Mahajan highlighted the critical role of advanced design methodologies and materials in ensuring the safety, stability, and sustainability of retaining walls, particularly in regions with complex geotechnical conditions.

From the President’s Desk.....

Driving Sustainability with Engineering Solutions Embracing the Latest AI-Driven Technologies

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engineering processes but also align with the goal of achieving long-term sustainability.

Embracing AI also facilitates a more comprehensive approach to sustainability. By analyzing vast amounts of data, AI helps the engineering sector understand and address the broader implications of decisions, leading to solutions that are technically advanced, socially responsible,

and environmentally sustainable. The focus remains on developing technologies that meet current needs while ensuring a healthier planet for future generations.

As we move forward, our commitment to sustainability and AI-driven engineering solutions will continue to drive progress and set new benchmarks in the industry. Together, we are not just adapting to the future; we are shaping it.

IEA Meetings, 2024, Gurugram, Haryana, India

The Institution of Engineers (India) [IEI], as a full member of the International Professional Engineers Agreement (IPEA) since 2009, represents India and is authorized to establish and maintain the India section of the International Professional Engineers (IntPE) Register. The IPEA, previously known as the Engineers Mobility Forum (EMF), is a multinational agreement among engineering organizations in member jurisdictions, providing a framework for establishing international standards of professional engineering competence. The International Engineering Alliance (IEA) is a global not-for-profit organization comprising members from 41 jurisdictions across 29 countries, governed by seven international agreements. These agreements, including the Educational Accords (Washington, Sydney, and Dublin) and Competence Agreements (IPEA, APEC, IETA, and AIET), set and enforce internationally benchmarked standards for engineering education and professional competence.



The International Engineering Alliance Meetings 2024, held from 10th to 14th June 2024 at The Leela Ambience Gurugram Hotels and Residences, Gurugram, Haryana, India, were attended by Maj Gen (Dr) M J S Syali, VSM (Retd), Secretary & Director General of The Institution of Engineers (India).

Meeting Details

General Assembly and Workshops

Maj Gen Syali commenced his participation on Monday, 10th June 2024, with the IEA General Assembly which brought together all IEA members to discuss overarching themes and important announcements. Following this, a series of workshops began, focusing on the Accord and Agreement Relationship, led by Em Prof Elizabeth Taylor, Chair of the IEA Governing Group, and Ms Patty Mamola, Deputy Chair of the IEA Governing Group.

In the afternoon, workshops continued with sessions on the IEA Reviewers Issues Emerging Reporting and the IEA Training Model. These sessions, open to guests, were aimed at enhancing the understanding and implementation of best practices across member organizations. The day concluded with a workshop on Virtual Accreditation, led by Prof Mandy Liu, Chair of the Sydney Accord. The revised subscription charges for IEA members were approved by voice voting.

Continued Discussions and Social Events

Tuesday, 11th June 2024, began with Agreement Workshop Sessions focusing on GAPC Implementation and Rule, Guideline, Template & Process Development, led by Ms Katy Turff and Ms Patty Mamola, respectively. The discussions continued through the morning and into the afternoon, addressing



Agreement Working Groups: Best Practice & Mobility and Agreements Review Manual.

The evening featured a cultural program and exhibition of Indian cultural artefacts at IGNC, Janpath. This social event provided further networking opportunities for the delegates.

Accord Workshop Sessions and Networking Opportunities

On Wednesday, 12th June 2024, the Accord Workshop Sessions continued with presentations on GAPC Implementation from various international representatives, including ICACIT, Peru, Acredita CI, Chile, CACEI, Mexico, NBA, India, The Engineering Council of South Africa, CAST_CEEAA, China, ABET, USA, EA, Australia, EC, Canada, and MUDEK, Türkiye. The day concluded with a combined Accord Open Session and a Washington Accord Closed Meeting.

The evening provided another opportunity for delegates to network and celebrate the progress and achievements of the IEA.

Closed Meetings and Final Sessions

Thursday, 13th June 2024, was dedicated to closed meetings for the Washington Accord, Sydney Accord, and Dublin Accord. In the afternoon, the Combined Agreement Open Session and APEC Closed Meeting took place, followed by the IPEA Closed Meeting. These sessions were crucial for discussing confidential matters and making strategic decisions. Observations were raised by IPEA during its review in 2021 regarding admission of candidates from Non-Washington Accord accredited institutions by IEI. The reply given by IEI on those observations was noted in the closed IPEA meeting. Secretary & Director General, IEI was unable to attend the proceedings on the 14th June 2024 due to 726th Council Meeting and associated meetings being held at Kathmandu, Nepal from 14 to 16 June 2024. However, the IPEA Closed Meeting and the IETA & AIET Workshop continued, focusing on the review process and joint discussions. The IEA General Assembly concluded its session by summarizing outcomes and setting the agenda for future initiatives. The day ended with a wrap-up session of the IEA Governing Group.

Conclusion

The IEA Meetings 2024 were a significant event for the global engineering community, fostering collaboration and establishing standards for professional engineering competence. The event played a pivotal role to the advancement of engineering practices and the promotion of international mobility for engineers. The participation of The Institution of Engineers (India) in the IEA Meetings 2024 underscored India's commitment to these global standards and its active engagement in the international engineering community.

Certificate of Practice for Practising Chartered Engineers

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

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

The hard copy of application 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.

Additive Manufacturing and 3D Printing

Agra Local Centre, IEI, in collaboration with the Department of Mechanical Engineering, Eshan College of Engineering, Uttar Pradesh, organized a One Day Seminar on the theme **Additive Manufacturing and 3D Printing** on 20 April, 2024 at Agra under the aegis of Mechanical Engineering Division Board [MCDB], IEI. The Seminar aimed to explore the advancements and applications of additive manufacturing and 3D printing technologies.

In the inaugural session, Er Anil Kumar Goyal, Chairman, Agra Local Centre, welcomed the dignitaries and conveyed the audience the role, functions and contributions of IEI in society and academia. Prof (Dr) Pankaj Sharma, Director, Eshan College of Engineering welcomed and introduced



the speakers and briefly gave an idea of day's proceedings. The Keynote address was delivered by Prof Rahul Swarup Sharma from Dayalbagh Educational Institute, Agra. He provided an in-depth understanding of the fundamentals of 3D printing, explaining how it is revolutionizing traditional manufacturing processes by building objects layer by layer from digital designs. Prof Sharma discussed the advantages of additive manufacturing,

such as reduced waste, customization and the ability to create intricate shapes that are difficult to achieve with traditional methods.

The seminar featured presentations from speakers, each contributing their expertise on various aspects of additive manufacturing and 3D printing. Their lectures covered a wide range of topics, from the basic principles of 3D printing to its practical applications in modern manufacturing. Er Rajiv Kumar Vishwakarma, Dean and Head of the Department of Mechanical Engineering, Eshan College of Engineering and Organizing Secretary of the event, discussed the advantages of 3D Printing, including design freedom, the ability to produce complex geometries and the creation of customized components. He emphasized how these capabilities are transforming the field of manufacturing. Dr Ravindra Singh from Dayalbagh Educational Institute, Agra, elaborated on how Additive Manufacturing and 3D Printing are transformative technologies that have the potential to disrupt traditional manufacturing paradigms with unparalleled design freedom. He highlighted the benefits of rapid prototyping, cost-effective production, and on-demand manufacturing capabilities. Prof (Dr) Pankaj Sharma also addressed the audience, emphasizing the economic viability of additive manufacturing for low volume customized production, particularly in reducing material waste and tooling costs.

The One Day Seminar on Additive Manufacturing and 3D Printing was a significant success, providing participants with valuable insights into the latest developments in the field. The seminar not only enhanced the knowledge of the attendees but also inspired them to explore further research and practical applications of 3D printing technologies, marking an important step forward in the dissemination of knowledge on additive manufacturing.

Sources of Planet Energy Environmental & Disaster Science: Climate Justice and Equity

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these global challenges effectively. The key focus was on climate justice and equity, examining how climate change disproportionately impacts marginalized communities and highlighting the need for equitable climate policies. Additionally, the Seminar underscored the importance of interdisciplinary collaboration in tackling these complex issues, stressing the value of integrating diverse perspectives and expertise.

The Seminar commenced with a welcome address delivered by Er Satya Prakash, Chairman of Uttar Pradesh State Centre, who emphasized on the importance of preserving nature and highlighted the critical role of water, climate and soil preservation in maintaining environmental balance. Prof Sanjay Singh, Vice-Chancellor, Dr Shakuntala Mishra National Rehabilitation University, Lucknow, graced the inaugural session as the Chief Guest and spoke on the significance of understanding climate change and emphasized the principles of Equality of Opportunity. Dr C M Nautiyal, Former Consultant, Science Communication, Indian National Science Academy, New Delhi and Former Scientist-in-charge of the Radio Carbon Lab at Birbal Sahni Institution of Palaeosciences (BSIP), Lucknow graced the function as the Guest of Honour.

Convener of the event, Prof (Dr) Pramod Kumar Singh, School of Management Sciences (SMS), Lucknow in his address, provided insights into the relationship between human beings and nature.

Dr Ashish Bhatnagar, Director, SMS, Lucknow, welcomed the Chief Guest and spoke on interdisciplinary research and collaborative work. Dr Alok Kumar, Ex-Dean and Director, GNS University, Rohtas, introduced the Plenary Session and delivered presentation on the topic 'Seeing Blue with REDD+'. The seminar was coordinated by Prof (Dr) Dharmendra Singh, Dr M P Singh, Executive Secretary and Shri Sharad Singh Secretary and CEO, SMS, Lucknow.

Dr Balraj Singh, Associate Professor, Department of Electronics and Communication Engineering, Babasaheb Bhimrao Ambedkar University (BBAU), Lucknow, and Dr Pooja Srivastava, Department of Physics, Amity University, Lucknow, were the Guest Speakers.

The Seminar featured multiple technical sessions spread across the two days, where invited papers were presented on various topics namely "Environmental Entrepreneurship: How Climate Capitalism Can Give a Lasting and Life Giving Impact", "Harnessing Green Chemistry for Environmental Sustainability: A Comprehensive Analysis", "Design and Characterize Biocher: LDH Nano-Composite for Waste Water Treatment", "Understanding the Environmental Impact of Mechanical Industries: Challengers, Strategies and Solutions", "Noble Control of DC Microgrid Having Multiple Renewable for Fast Charging of Electrics Vehicles", "Assessing Environmental Pollution from Construction Activities: Impacts and Mitigation Strategies", "Environmental Sustainability and Animal Farming: Analyzing the Impact and Mitigation Strategies", "Environmental Impact of Lithium-Ion Battery Disposal: Challenges, Risks and Sustainable Solutions", "Review of Research Papers Based on Impact of Climate Change on Employee Productivity", "The Role of Low Frequency Vibrations 50-120 Hz in Enhancing Plant Growth and Health: A review" and Biodiesel Production : An Agricultural and Environmental Aspect in India".

The Seminar concluded with the valedictory session, beginning with a speech by Prof (Dr) Ashish Bhatnagar, Director, SMS Lucknow, followed by a valedictory address by Prof (Dr) Bharat Raj Singh, Director General, SMS Lucknow and Past Chairman, Uttar Pradesh State Centre. The Chief Guest of the session was Dr Jagbir Singh, Director, Amity University, Lucknow, and the Guest of Honour was Dr Usha Bajpai, Department of Physics, University of Lucknow, The Semina rended with the concluding remarks delivered by Prof (Dr) Hemant Kumar Singh, Dean of Engineering, SMS Lucknow.

Machine Learning and Internet of Things (IoT)

Bareilly Local Centre, IEI, in collaboration with the Future Group of Institutions, Bareilly, organized an All India Seminar on **Machine Learning and Internet of Things (IoT)** during 18-19 October 2023 at Bareilly, under the aegis of Computer Engineering Division Board [CPDB], IEI. The seminar explored the convergence of Machine Learning (ML) and IoT technologies. It commenced with the welcome address by Er Raj Goel, Chairman, Bareilly Local Centre who presided over the seminar. He welcomed all and highlighted the relevance of the seminar's theme setting the tone for the discussions and. Prof S S Bedi, Department of Computer Science and Information Technology & Director, Directorate of International Relations, MJP Rohilkhand University, Bareilly, graced the function as the Chief Guest and Keynote Speaker. In his lecture, Prof Bedi explained the transformative synergy within Machine Learning and IoT, where intelligent algorithms analyze vast streams of data from interconnected devices, enabling predictive insights, automation and enhanced decision-making. Through his speech he enlightened how this convergence is reshaping industries from healthcare and manufacturing to smart cities, by harnessing the power of data to create more efficient, secure and responsive systems that drive innovation and improve our daily lives.

Guest Speaker, Dr Abhishek Saxena, Head, Department of Computer Science, Future Institute of Engineering & Technology, Bareilly, delivered lecture on 'Anomaly Detection using Machine Learning in IoT Devices'.



He explained that the Internet of Things (IoT) has unleashed an era of unprecedented data generation, with a myriad of interconnected devices continuously relaying information. He stressed that ensuring the security and integrity of IoT systems is extremely necessary amidst this data avalanche. He also explained that Anomaly detection, powered by Machine Learning (ML), has emerged as a critical safeguard, allowing IoT networks to identify irregularities and potential threats.

Guest Speaker, Ms Pooja Yadav, Assistant Professor, Department of Computer Science and Information Technology (CSIT), MJP Rohilkhand University, Bareilly, delivered lecture on 'Machine Learning at the Edge: Challenges and Solutions'. She explained that the integration of Machine Learning (ML) is at the edge, where data is processed on decentralized devices rather than in centralized servers which presents a transformative shift in the landscape of artificial intelligence. In her presentation, she delved into the challenges and innovative solutions associated with deploying ML at the edge.

Guest Speaker, Er Sudhir Kumar Gupta, Immediate Past Chairman, Bareilly Local Centre, IEI presented on the topic 'Real-time Tracking and Monitoring in the Supply Chain with IoT'. He explained that the modern supply chain has evolved into a complex and interconnected web of global logistics, where efficiency, accuracy and timeliness are of paramount importance. In this context, the convergence of the Internet of Things (IoT) technology with real-time tracking and monitoring capabilities has revolutionized the way goods are transported and managed.

Guest Speaker, Dr Hemant Yadav, Group Director, Future Group of Institutions, Bareilly, gave his presentation on 'Machine Learning for Optimizing Energy Consumption in IoT Devices'. He explained that Machine learning algorithms offer the potential to significantly extend the battery life of IoT devices by predicting and managing power-hungry operations. He asserted that the key components of this approach are data acquisition, feature extraction and predictive modelling. He discussed the utilization of Machine Learning Algorithms, such as Regression, Classification and Reinforcement Learning to optimize the energy usage in IoT devices.

Guest Speaker, Dr Sovan Mohanty, Department of Electronics and Communication Engineering, SRMSCET, Bareilly, gave presentation on 'The Internet of Things: The Science of Networking Networks'. He explained that the Internet of Things is a remarkable synergy of technology and intelligence that weaved the fabric of a more interconnected world. In this intricate web of data and devices, the power to transform industries, enhance efficiency and improve lives can be witnessed. He opined that it is a testament to human innovation, forging a path towards a future where everything is linked and knowledge flows seamlessly. He stressed that IoT is not just a concept but a testament of human ability for creating a smarter, more connected and empowered world.

Mr Shubham Saxena, Assistant Professor, Future Institute of Engineering & Technology, Bareilly, delivered his presentation on the topic 'Predicting Climate Trends and Natural Disaster Early Warning Systems with IoT', where he explained that IoT is instrumental in the development of early warning systems for natural disasters. By integrating data from seismic sensors, weather stations and remote sensing technologies, these systems can provide timely alerts for events like earthquakes, floods and wildfires. He explained the potential impact of such early warnings on human lives and infrastructure protection.

Mr Ashish Agrawal, Assistant Professor, Department of Computer Science and Engineering, Shri Ram Murti Smarak College of Engineering & Technology, Bareilly, presented on the topic 'Bridging the Digital Divide with IoT for Underserved Communities', wherein he explained that IoT technology extends beyond the confines of urban centers, reaching into remote and underserved areas. He mentioned that, by providing cost-effective and scalable solutions, IoT enabled these communities to access the digital world, delving into the deployment of IoT-enabled devices for telemedicine, agriculture and education, highlighting their ability to bring essential services closer to people who were previously isolated.

Mr Khemendra Kr Gangwar, Assistant Professor, Future Institute of Engineering & Technology, Bareilly, spoke on 'Personalized Shopping Experiences with IoT and Machine Learning'. He said that IoT devices, including smart sensors and beacons, provide real-time data on customer behaviour, preferences and in-store movements which when coupled with advanced machine learning algorithms can be leveraged to create highly personalized shopping journeys. He also discussed how IoT and Machine Learning enabled businesses to understand customer preferences on a granular level, optimizing product recommendations, targeted marketing and inventory management. Further, papers were also presented by the students of different engineering institutions on the theme. Er P K Madhwar, Honorary Secretary, Bareilly Local Centre presented the vote of thanks to all guests, participants, session chairs and committee members and ended the Valedictory session, expressing his gratitude to all for successful completion of the seminar. The proceedings of the seminar were conducted by Er Nazia Parveen, Assistant Professor, Shri Ram Murti Smarak College of Engineering & Technology (SRMCET) Bareilly.

Deep Learning in the Medical Field: Opportunities and Challenges for Advancement

Coimbatore Local Centre, IEI, in association with Department of Electronics and Communication Engineering (ECE), Sri Krishna College of Technology (SKCT), Coimbatore, organized an All India Seminar on the theme **Deep Learning in the Medical Field: Opportunities and Challenges for Advancement** during 02- 03 November 2023 at Coimbatore, under the aegis of Computer Engineering Division Board [CPDB], IEI. The event aimed to explore the applications and implications of Deep Learning in healthcare. The inaugural function commenced with the welcome address delivered by Dr J Krishnamoorthi, presently Chairman, Coimbatore Local Centre, IEI, who greeted the gathering and provided an overview of the activities of IEI. He emphasized the significance of the Seminar in equipping participants with knowledge of innovative trends in AI and Deep Learning, particularly in the medical field.

Dr K Muthulakshmi, Professor, Department of Electronics and Communication Engineering, SKCT, introduced the Chief Guest of the session, Mr A Arun Prakash, Deep Learning Instructor, Indian Institute of Technology Madras, Chennai. Mr Prakash encouraged participants to gain in-depth knowledge about the opportunities and challenges of Deep Learning in the medical field and highlighted the importance of using Artificial Intelligence (AI) in healthcare to address complex challenges and improve patient outcomes. Mr Prakash delivered a lecture on 'Challenges in Training Deep Learning Models' and explained the important features of challenges in training with Deep Learning in healthcare sectors and enlightened the participants on how to select the input data like text, audio, video for applying the Deep Learning Algorithm. Dr M Gowri Shankar, Assistant Professor, Department of Electrical and Electronics Engineering, Bannari Amman Institute of Technology, Sathyamangalam, spoke on 'ECG Signals through Bio Inspired Classifiers with Hyper Parameter Tuning'. With his vast expertise on various Machine Learning based Classification Algorithms, he explained about various Bio-inspired classifiers with real-time examples. Dr Gowri Shankar exposed the participants to various public datasets available for analysis of ECG signals and presented many research results, which grabbed their attention.

Mr Kaviti Ramesh, Scientific Officer, Cosmic Ray Laboratory, Tata Institute of Fundamental Research, Udhagamandalam spoke on the topic 'Instrumentation for Advanced Applications and Devices in Medical Field', where he shared his thoughts on various advanced sensors available in the present day for measuring the vitals of humans. He explained how a biomedical instrumentation system works and how AI is integrated into every module of the devices developed. Dr D Saraswathi, Associate Professor, Department of Electronics and Communication Engineering, Vellore Institute

of Technology, Chennai, deliberated on 'Deep Learning for Medical Image Classification using Tensor Flow', where the speaker elaborated on various libraries required for analysing medical images. Dr Saraswathi also presented a hands-on session on how to classify various diseases through image classification techniques using Deep Learning. Participants were immensely benefitted from his vast expertise on MATLAB and Python. Dr C Senthil Kumar, Associate Professor, Department of Electronics and Communication Engineering, Sri Krishna College of Technology, Coimbatore, delivered his presentation on the topic 'Recent Advancements in Smart Healthcare Solutions'. His deliverables included recent researches happening in the healthcare domain, especially to those pertaining to smart and intelligent healthcare systems. He focused more on patient monitoring system,

especially for people at remote areas and few non-invasive devices and its importance. Ms B Vidhya, Assistant Professor, Department of Electronics and Communication Engineering, Sri Krishna College of Technology, Coimbatore, delivered lecture on 'AI in Healthcare Applications, Ethical and Societal Impact'. She focussed on various ethical concerns that must be met before any clinical trials and highlighted the need for having a clinical trial before deploying the advanced system into practice. She highlighted the areas where AI played a dominant role and its impact on society.

Over the two days, technical sessions were organised, comprising technical papers relevant to the theme and subtheme, namely, 'Advances in Image Processing: From Basics to Deep Learning'; 'Health Tracking System for Elderly People Using Lora Communication'; 'Review on Recent Developments on Detection of Diabetic Retinopathy through Deep Learning'; 'Healthcare Monitoring for Physically Challenged People in Wheelchair using IoT'; 'Deep Learning for Detecting Cervical Cancer'; 'Segmentation of Multiple Artefacts in Endoscopic Images using a Deep Neural Network'; 'Machine Learning Based Disease Detection System Using Tongue Images'; and 'A Python-Based Parkinson's Disease Identification and Physiotherapy Assistance System with Microcontroller Integration'.

The outcomes from the deliberations of the two-day seminar are as follows:

The importance of the application of Deep Learning Technologies in Health Care be understood and explored further; Ethical Issues of Artificial Intelligence in Medicine and Healthcare field need to be focused; The impact of Deep Learning approaches, in terms of data integration, interpretability, security and temporal modeling need to be addressed and be effectively applied to the clinical domain; Different approaches for Deep Learning in recent advancement in Smart Healthcare Solution need to be explored further.



Know-Your- Member (KYM)

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

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

Deputy Director (Membership)

The Institution of Engineers (India)

8 Gokhale Road, Kolkata 700020

Email: datamemb@ieindia.org

The form is available on IEI Website:

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

Sustainability through Green Vehicles: Powered by Hydrogen Fuel Cell, CNG, and Flex Fuel

Coimbatore Local Centre, IEI, in association with the Department of Automobile Engineering, Hindusthan College of Engineering and Technology (HICET), Coimbatore, organized an All India Seminar on the theme **Sustainability through Green Vehicles: Powered by Hydrogen Fuel Cell, CNG and Flex Fuel** during 15-16 May 2024 at Coimbatore, under the aegis of Mechanical Engineering Division Board [MCDB], IEI. The event focused on exploring sustainable vehicle technologies and the role of green energy in reducing environmental impacts in the automotive sector. The seminar commenced with the welcome address delivered by Dr J Krishnamoorthi, Chairman, Coimbatore Local Centre, who highlighted the significance of the theme of the seminar regarding sustainability in the automotive industry. Mr P K Sivakumar, Manager, Volvo Eicher Commercial Vehicles Limited, Coimbatore graced the inaugural function as the Chief Guest and explained the importance of sustainability through green vehicles.

Dr J Jaya, Principal, HICET emphasized the importance of organizing such Seminars in fostering knowledge exchange and innovation in the field of green energy and sustainable automotive solutions. Dr C Sabarinathan, Professor and Head, Department of Automobile Engineering, HICET provided an overview of the seminar.



Chief Guest, Mr Sivakumar, delivered an Invited Lecture on the topic 'CNG Revolution: Transforming Transportation with Clean Energy', where he shared his experiences in applications of clean and green fuel. He elaborated on Compressed Natural Gas (CNG), which is a cleaner alternative to traditional fossil fuels like gasoline and diesel that produce fewer emissions compared to conventional fuels, leading to reduced air pollution and greenhouse gas emissions. He further explained that existing vehicles can often be converted to run on CNG, offering a way to transition to cleaner fuels without procure a new vehicle. He mentioned that the CNG transition phase faces challenges like infrastructure cost, limited vehicle availability and concern about methane emissions during natural gas production.

Dr V Mahesh Kannan, Assistant Professor, PSG College of Technology, Coimbatore delivered Invited Lecture on 'Energizing Innovation: Exploring Hydrogen and Fuel Cell Application'. He detailed about the applications of fuel cells in automotive sectors. He explained that fuel cells are electrochemical devices that convert the chemical energy of hydrogen or other fuels directly into electricity, with higher efficiency and lower emissions compared to traditional combustion-based power generation. Moreover, he mentioned that the hydrogen fuel cells produce only water vapour and emit thermal energy, thus making them a clean energy option with the potential to significantly reduce greenhouse gas emissions, especially in transportation and stationary power applications. Finally, he discussed about the applications of fuel cell vehicles (FCVs) using hydrogen as a fuel to power electric motors, offering zero-emission transportation with longer range and shorter refueling times compared to battery electric vehicles.

Dr D Senthilkumar, Assistant Professor, Amritha Vishwa Vidyapeetham, Coimbatore, delivered an Invited Lecture and shared his expertise on 'Beyond Gasoline: Exploring the Potential of Flex-Fuel Vehicles'. He detailed about ethanol and methanol, commonly used in flex-fuel vehicles (FFV), which can be derived from renewable sources such as corn, sugarcane, or cellulosic biomass. He said that bio-fuels have the potential to significantly lower greenhouse gas emissions when produced and combusted, thereby contributing to the efforts to combat climate change. He focussed on local agricultural resources for fuel production and opined that the nations can booster their energy independence and insulate themselves from fluctuations in global oil markets. Finally, he added the advancement in engine design, fuel injection systems, and onboard diagnostics can enhance the reliability and drivability of FFVs, that ensure a seamless transition to alternative fuels without compromising vehicle performance or durability.

Mr P Prasanthkumar, Chief Technical Consultant, Haritha Mobility Solutions, Coimbatore, delivered Invited Lecture on 'Climate Change & Greenhouse Gases – An Overview.' The speaker shared his experiences in E-mobility, which encompasses electric and hybrid vehicles, represents a transformative shift towards more sustainable and environmentally friendly transportation solutions. He interacted with students about the market trend of electrical vehicle in India. Moreover, he discussed about harnessing the power of EV vehicles, that offers numerous benefits, ranging from reducing greenhouse gas emissions and dependence on fossil fuels to promote energy efficiency and innovation in the automotive industry. Finally he focused on the advantages of EV vehicles such as zero tailpipe emissions, offering significant environmental benefits and reducing reliance on petroleum-based fuels.

Mr V Manikandan, Trainer and Process Coordinator (Sales), Anaamalais Toyota, Coimbatore, conducted a hands-on session on 'Toyota Hybrid Electric Vehicles' and provided practical insights into the operation and benefits of hybrid electric vehicles. He gave an overview of hybrid electric vehicles, explained the basic principles of hybrid technology, including how HEVs combine an internal combustion engine (ICE) with an electric motor and battery. He elaborates about different types of hybrid systems, such as parallel hybrids,

series hybrids, and power-split hybrids, highlighting their respective advantages and operation modes. Finally, he conduct a walk around of the Toyota hybrid vehicle, highlighting its key components, including the gasoline engine, electric motor, battery pack, regenerative braking system, and power electronics.

The Seminar featured multiple technical sessions across two days, where papers were presented on emerging topics, which include; 'Design and Fabrication of Driver Dizziness Alert System'; 'Design and Analysis of Nano Material Catalytic Converter'; 'Testing of Hydrogen and Biodiesel in Reactivity Compression Ignition Engine'; 'Testing of CNG and Biodiesel in Reactivity Compression Ignition Engine'; 'Development of Natural Fibre Reinforced Composite for Thermal Insulation Application', 'Design and Fabrication of Regenerative Clutch Power Generation System'; 'Fabrication of Safety Car Door Lock System Using PIR Sensor' and 'Design and Fabrication of Dual Disc Brake in Single Lever'.

The recommendations that emerged from the deliberation during the two-day seminar are as follows:-

Promote Adoption: Use of hydrogen, fuel cell, CNG and flex fuel vehicles in order to reduce tailpipe emissions and reliance on fossil fuels needs to be encouraged; Infrastructure Development: Investment and expansion of refueling infrastructure, including hydrogen stations and CNG filling points, to support green vehicle adoption, should be looked into; Technological Advancement: Ongoing research and development to enhance the efficiency, durability and cost-effectiveness of green vehicle technologies need to be supported; Policy Incentives: Government incentives such as tax credits, subsidies and grants to reduce initial costs as well as investment in green vehicles and infrastructure need to be implemented; Interdisciplinary Collaboration: Partnerships between governments, research institutions and industry stakeholders to accelerate innovation and address challenges in green vehicle technology need to be fostered; Consumer Education: Awareness about the benefits of green vehicles should be increased and the information regarding importance of transitioning from fossil fuels to build support and overcome resistance should be disseminated; Regulatory Standards: Regulations to ensure the safety, reliability as well as environmental sustainability of green vehicles and fuels should be established and enforced; Funding and Innovation: Funds for infrastructure development to be allocated and innovation through grants and incentives in order to improve fuel technology and performance to be encouraged.

IEI Celebrates

World Environment Day 2024

Theme : Land Restoration, Desertification and Drought Resilience

World Environment Day was celebrated by the Centres/Forum of the Institution all over the country on 5 June, 2024. Brief accounts of the celebration as received from various Centres are reported hereunder.

STATE CENTRES

Bihar



On 05 June 2024, Bihar State Centre, IEI observed World Environment Day 2024 at Patna. Er Jai Prakash Narayan, Chairman, Bihar State Centre, IEI welcomed the guests and participants. Er

Neel Mani Rangesh, Honorary Secretary, Bihar State Centre, IEI and Mr Ajoy Kumar Sinha, Council Member, IEI welcomed the Chief Guest of the event, Shri Vivek Kumar Singh, IAS, Chairman, Real Estate Regulatory Authority (RERA), Government of Bihar and Keynote Speaker of the event, Shri Bharat Jyoti, IFS (Retd), Chairman, Biodiversity Board, Bihar Government. Mr Singh explained the importance of environmental conservation and emphasized that if our environment is safe and protected then we are happy and secure, otherwise our future is at risk. He reiterated the significance of trees for the existence of water and urged everyone to plant trees for a green environment. Shri Jyoti explained the theme of World Environment Day 2024, addressing the issues like land degradation, desertification and drought situations. He shared his valuable insights for preserving biodiversity. He focused on the current situation in Bihar and applauds the commendable efforts made by the State Government with the support of the public and suggested further steps to advance this admirable mission.

Haryana



On 05 June 2024, Haryana State Centre, IEI observed World Environment Day 2024 at Karnal. Er Rajeev Vasudeva, Chairman, Haryana State Centre, IEI presided over the function. Er K K Mahajan,

Environmental Professional graced the occasion as the Chief Guest and presented Keynote address on the theme. He explained how our activities are affecting the land which leads to degradation and desertification. He emphasized that land provides all to survive with food, water and natural resources and the unsustainable land practices has affected agriculture, water bodies and the livelihoods of citizens. He highlighted various methods for land restoration like reforestation, soil conservation, sustainable agriculture and restoration of natural ecosystems. He mentioned that land degradation and desertification plays a fundamental role in breaking the poverty cycle and if it is unchecked, global temperature will rise leading to high food prices, lack of portable water and migration putting unsustainable pressure on fertile lands. He stressed that removal of trees and vegetation disrupts the water cycle, reduces fertility, increases erosion, making the land to desertification. Er K C Sethi, Former Vice President, IEI explained the history of IEI and the technical activities being carried out by IEI. At the end, Er Vasudeva proposed the vote of thanks.

Jammu & Kashmir



Jammu & Kashmir State Centre, IEI, in association with Urban Environmental Engineering Department (UEED), Jammu & Kashmir observed World Environment Day 2024 at Srinagar on 08 June 2024.

The event commenced with a field visit to 2.21 MLD Sewerage Treatment Plant at Raj Bagh, Srinagar. During this visit, Er Naseer Ahmad Kakroo, Former Chief Engineer, Er Fayaz Mehra, Executive Engineer and Er Reyaz Ahmad, Assistant Executive Engineer provided an in depth overview of wastewater treatment and sewerage treatment processes. Er Ftikhar Ahmad Hakim, Chairman, Jammu & Kashmir State Centre, IEI in his address expressed his gratitude to all the participants for their presence and contributions. Dr Jahangeer Ali, Honorary Secretary, Jammu & Kashmir State Centre, IEI coordinated the program, ensuring its smooth execution. The discussion underscored the importance of sustainable land management and innovative solutions to combat land degradation, desertification, droughts, eco-restoration of water system and policy framework for revival of freshwater systems.

Meghalaya



On 05 June 2024, Meghalaya State Centre, IEI observed World Environment Day 2024 at Sadew, East Khasii Hills, Meghalaya. Er Federick E Kharshing, Chairman, Meghalaya State Centre, IEI

welcomed the members, spoke about the theme. At the end, Er Sekhar Dey, Honorary Secretary, Meghalaya State Centre, IEI proposed the vote of thanks.

Uttar Pradesh



On 05 June 2024, Uttar Pradesh State Centre, IEI observed World Environment Day 2024 at Lucnow. Er Masarrat Noor Khan, Immediate Past Chairman, Uttar Pradesh State Centre, IEI welcomed the guests and shared his

views on the topic. Er V B Singh, Past Vice President, IEI expressed his views as a Convener of the program. Mr Ashish Tiwari, Secretary, Environment, Government of Uttar Pradesh graced the occasion as the Chief Guest. He stressed the need to restore ecosystem, combat desertification and enhance drought resilience to ensure sustainable land use and food security. He highlighted the day as adopted by United Nations General Assembly to spread awareness, preserve and enhance the environment worldwide.

Mr Tiwari opined that protecting our environment requires combination of individual actions, community efforts and policy formulation, which include, minimizing waste by reducing consumption, efficient use of water by reducing wastage, lower energy consumption by using energy efficient appliances, reduce carbon emission by using public transportation etc. At the end, Er Vijaya Pratap Singh, Honorary Secretary, Uttar Pradesh State Centre, IEI proposed the vote of thanks.

LOCAL CENTRES

Aligarh

On 05 June 2024, Aligarh Local Centre, IEI observed World Environment Day 2024 at Aligarh. Dr (Mrs) Salma Shaheen, Chairman, Aligarh Local Centre, IEI delivered the welcome address. Chief Guest of the event, Er Hari Prakash Gupta, Director, Hicks Thermometer Private Limited emphasized the importance of clean environment. Guest of Honour of the event, Prof



Mohammad Luqman Khan, Former Vice Chancellor, Lingaya's University, Faridabad emphasized that everybody should be responsible to protect the environment and warned the future generation will face severe problems if environmental issues are not prioritized. Special Guest of the event, Shri Subodh Nandan Sharma, Environmentalist & Chief Editor, Hamari Dharti mentioned that without environmental protection, water bodies will be destroyed in future. Prof I H Farooqi, Chairman and Professor, Department of Civil Engineering, AMU, Aligarh emphasized that land restoration is crucial for protecting the environment, build resilience to drought and supporting a growing global population. He opined that preventing topsoil loss is essential for agricultural land restoration and its associated economic benefits. Er K KUPadhyay, AE, Harduaganj Thermal Power Station, Kasimpur, Aligarh shared his thoughts on 'Roadblocks & Role of Society in Environment Protection'. Dr Anwar Khwaja, GM, Nagar Nigam, Aligarh explained the activities of Aligarh Nagar Nigam related to maintaining a clean environment in Aligarh.

Bareilly

On 05 June 2024, Bareilly Local Centre, IEI observed World Environment Day 2024 at Bareilly. Er Sudhir Kumar Gupta, Immediate Past Chairman, Bareilly Local Centre, IEI welcomed all and explained about the theme. He mentioned



that land restoration combats desertification and enhances drought resilience by revitalizing degraded lands and the techniques like reforestation, sustainable agriculture and soil conservation improves soil health, water retention and biodiversity. He stressed that these efforts supports ecosystems, mitigate climate change impacts, secure livelihoods and promoting sustainable balance between activities and natural resources. Speakers of the event, Er Z N Khan, Former Chief Engineer, Jal Nigam, Bareilly emphasized that land restoration in future will be pivotal in reversing desertification and bolstering drought resilience. He stressed that innovative techniques, precision agriculture, soil microbiome management will rejuvenate ecosystems and this will enhance water retention, restore biodiversity and ensure sustainable land use. Er D N Yadab, GM, Vadilal Industries, C B Ganj, Bareilly shared his views about a robust plan for land restoration, desertification prevention and drought resilience including reforestation with species, adopting sustainable farming practices, improving soil health, etc. At the end, Er Sudhir Kumar Gupta proposed the vote of thanks.

Bokaro Steel City



On 05 June 2024, Bokaro Steel City Local Centre, IEI observed World Environment Day 2024, in association with SAIL Bokaro Steel Plant at Bokaro. Er Harihara Rout, Honorary Secretary, Bokaro Steel City Local Centre, IEI stressed on waste to wealth and circular economy drive. Mr Rajan Prasad, Executive Director (P&A) and additional charge ED (Works), Bokaro Steel Limited graced the occasion as the Chief Guest and Mr P K Baisakhiya, General Manager (Maintenance) and additional charge of Utilities of Bokaro Steel Limited graced the occasion as the Guest of Honour. A pledge was administered to all the participants, emphasizing their commitment to environment conservation. Mr Prasad appealed to the new generation to live in harmony with the nature and contributing more to protect the environment. Mr Baisakhiya stressed upon energy conservation and decarbonisation drive for a greener future of India. On this occasion, Mr Nitesh Ranjan, GM/Environment, Mr Amit Anand, AGM/HRD, Mr Amit Anand, AGM/HRD and Mr Shailesh Kumar Dubey, AGM/CRM-3 presented their papers on the theme. At the end, Er Harihara Rout proposed the vote of thanks.

Coimbatore



Coimbatore Local Centre, IEI, in association with SPCU (Environment Development), PSG Polytechnic College, Coimbatore observed World Environment Day 2024 at Coimbatore on 13 June 2024. Prof (Dr) J Krishnamoorthi, Chairman, Coimbatore Local Centre, IEI delivered the welcome address and presided over the function. Guest Speaker of the event, Mr K Kalidasan, President, OSAI Environmental Organisation, Coimbatore emphasized the significance of sustainable living and underscores the necessity of conserving water, energy and minimizing the use of fossil fuels. He encouraged the students to care for nature and stressed everyone to protect the biosphere as 30 million of species are needed to protect. At the end, Prof (Dr) G Madhan Mohan, Honorary Secretary, Coimbatore Local Centre, IEI proposed the vote of thanks.

Dhanbad



On 05 June 2024, Dhanbad Local Centre, IEI observed World Environment Day 2024 at Dhanbad. Prof (Dr) Biswajit Paul, Honorary Secretary, Dhanbad Local Centre, IEI introduced the theme of the day and delivered lecture on the topic 'Post-Mining Reclamation of Arid Desertified Ugnite Mining Lands – A Case Study of Kutch, Gujarat'. Prof Alok Sinha, Department of Civil Engineering, IIT ISM Dhanbad; Er N Ansari, Ex Chief Manager (E & M), Bharat Coking Coal Limited, Bastacola, Dhanbad; Prof B K Naick, Assistant Professor, Electrical Engineering Department, IIT ISM Dhanbad, students from Environmental Science and Engineering, IIT ISM Dhanbad and Committee Members of IIT ISM Dhanbad attended the event. At the end, Er N Ansari, on behalf of Dhanbad Local Centre, IEI proposed the vote of thanks.

Durgapur

On 05 June 2024, Durgapur Local Centre, IEI observed World Environment Day 2024 at Durgapur. Dr Krishnanu Sarkar, Assistant Professor in Economics, Durgapur Women's College and Visiting Lecturer, NIT Durgapur

Guest and Dr Prakash Kariyajanavar, Chairman, Environmental Science Department, Gulbarga University, Gulbarga graced the occasion as the Keynote Speaker. Dr Sridhar R Pande, Chairman, Kalaburagi Local Centre, IEI presided over. At the end, Er Seetharam Munnur, Honorary Secretary, Kalaburagi Local Centre, IEI proposed the vote of thanks.

Kanpur

On 05 June 2024, Kanpur Local Centre, IEI, in association with the Department of Civil Engineering, HBTU, Kanpur and Association of Professional Graduate Civil Engineers, Kanpur Chapter observed World Environment Day 2024 at Kanpur. Dr Mukesh Kumar Singh, Chairman, Kanpur



Local Centre, IEI welcomed the Theme Speaker Er Divakar Bhaskar, Executive/Environmental Engineer, Kanpur Nagar Nigam and other Members. Er Bhaskar focused on the crisis of climate change, nature, biodiversity loss and the pollution and waste. He highlighted the actions taken by Kanpur Municipal Corporation to control air pollution, conservation of ponds, plantation drives, anti smog guns, mechanical sweepers, Green Belt construction, deployment of water sprinklers, anti-smog guns etc. He also explained about the Afforestation method of Miyawaki forests, created by Kanpur Municipal Corporation. At the end, Er Ram Autar Dixit, Honorary Secretary, Kanpur Local Centre, IEI proposed the vote of thanks.

Meerut

On 05 June 2024, Meerut Local Centre, IEI observed World Environment Day 2024 through online mode and a webinar was organised on the occasion. Er Raj Pal Agarwal, Chairman, Meerut Local Centre, IEI delivered the welcome address and welcomed the Speaker of the event, Dr Nidhi Sharma, Lecturer, D. N Polytechnic, Meerut. Dr Sharma explained the importance of World Environment Day and stressed on necessary steps to safeguard the planet. She emphasized the need for understanding the importance of land restoration and urged for working together towards a sustainable future. The webinar emphasized the collective responsibility to protect home, earth, underscores the delicate balance of humans, animals, birds and plants and the primary goals are to raise awareness about environmental issues, fulfil our duties towards nature and promote sustainable practices. The webinar stressed the importance of land restoration and sustainable practices to combat desertification and build resilience against drought and inspired participants to take meaningful steps towards environmental conservation. At the end, Er Subhash Chandra Mittal, Honorary Secretary, Meerut Local Centre, IEI proposed the vote of thanks.

Rourkela

On 05 June 2024, Rourkela Local Centre, IEI observed World Environment Day 2024 through hybrid mode. Er Santosh Kumar Polaki, Chairman,



Rourkela Local Centre, IEI welcomed the members and guests. Dr G Ranganath, President, IEI graced the occasion through his online presence and delivered introductory speech on

the significance of the day. Dr Nutan Kumar Das, Vice-President, IEI also attended the program through virtual mode and addressed the audience. Speaker of the event, Dr Himanshu Bhushan Sahu, Professor, Department of Mining Engineering, National Institute of Technology Rourkela delivered lecture on 'Combating Land Degradation and Desertification – Lessons from the Mining Industry'. Prof Sahu emphasized that land sustains life on earth and it is storage of water and nutrients required for plants and living micro-macro-organisms. He opined that natural resources like forests, farmlands, wetlands, etc provided the human beings and animals with food, water,

raw materials to survive. He highlighted that a large hectare of world's land is degraded, which affecting billions of people and stressed the need to restoration of land after mining in order to utilize the land for useful purpose. At the end, Dr Ajit Behera, Honorary Secretary, Rourkela Local Centre, IEI proposed the vote of thanks.

Sunabeda

On 05 June 2024, Sunabeda Local Centre, IEI observed World Environment Day 2024 at Sunabeda. Chief Speaker of the event, Er Sanjeeb Kumar Mishra, Senior Manager, Hindustan Aeronautics Limited, Sunabeda explained about the theme and emphasized



that desertification and drought resilience underscores the existential threats create by climate change. Er Bishoyi Sanjaya Kumar, Honorary Secretary, Sunabeda Local Centre, IEI explained the importance of the day.

Tiruchirappalli

On 04 June 2024, Tiruchirappalli Local Centre, IEI, in association with Indian Institute of Welding, Tiruchirappalli Branch; Computer Society of India, Tiruchirappalli Chapter; Safety Quality Forum, IEI, New Delhi; Indian Welding Society, Southern Zone; Indian Institute of Metals, Tiruchirappalli Chapter; Indian Institution of Industrial Engineering, Tiruchirappalli; Indian Institution of Plant Engineer, Trichy Chapter; Kumari Arival Peravai, Kanyakumari



and Indian Society for Non-destructive Testing, Trichy Chapter observed World Environment Day 2024 through hybrid mode. Mr V Sundararaju, IFS, Former Deputy Conservator of Forests, Tiruchirappalli graced the occasion as the Chief Guest. Topics covered in the event were: building resilience against drought, conserve biodiversity, restore freshwater ecosystems and renew coastal and marine areas, save the soil and make agriculture sustainable.

Trichur

On 05 June 2024, Trichur Local Centre, IEI observed World Environment Day 2024 at Trichur. Er Thomas John V, Chairman, Trichur Local Centre, IEI delivered the welcome speech. Prof (Dr) Abdul Hakim V M,



Professor & Head, Department of Soil & Water Conservation Engineering, Kelappaji College of Agricultural Engineering and Technology, [KCAET], Kerala Agricultural University, Thavanur stressed the need for improving irrigation efficiency by implementing root zone irrigation system through which land restoration can be achieved, conserving water for attaining drought resilience and extending water literacy to all. He explained how floods lead to subsequent drought and the effect of land degradation, desertification, their early signs and preventive measures. At the end, Er Kumar P R, Honorary Secretary, Trichur Local Centre, IEI proposed the vote of thanks.

Udaipur

On 05 June 2024, Udaipur Local Centre, IEI observed World Environment Day 2024 at Udaipur. Er Chandra Prakash Jain, Chairman, Udaipur Local Centre, IEI welcomed the Chief Guest & Keynote Speaker of the session, Dr M L Parihar, Additional Manager, Government of India, Department of



Atomic Energy, Nuclear Fuel Complex – Kota Project, Rawatbhata and Special Guest & Speaker, Dr Nihal Jain, Former Principal, Chief Conservator of Forests, Government of Rajasthan.

Dr Parihar in his address mentioned that the degradation of land due to deforestation, excessive grazing, urbanization, etc which leads to loss of biodiversity, decrease in agricultural productivity, etc. He said that population pressure, improper land management, deforestation are leading to food insecurity, displacement of communities and climate change due to drought, water shortage, irrigation and hydroelectric power related problems. He urged to work together for mother earth, plant more trees, conserve energy and natural resource, reject recycle plastic and its products by using three R's(reduce, reuse and recycle). Dr Nihal Jain expressed concern about the increasing temperature of the planet and its impact on the nature. He appealed all to move towards e appealed all to move towards o waste, healthy habits, green living and zero carbon emission. Er Purushottam Paliwal, Honorary Secretary, Udaipur Local Centre, IEI underscores the inter-relationship between land degradation, desertification and drought, which highlighted the urgent need for concrete global action and is to serve as a catalyst for new commitment to restore health and resilience of earth's landmass to promote a sustainable future for future generations. At the end, Er Paliwal proposed the vote of thanks.

Visakhapatnam

On 05 June 2024, Visakhapatnam Local Centre, IEI observed World Environment Day 2024 at Visakhapatnam. Er Venkata Satya G Pakki, Chairman, Visakhapatnam Local Centre, IEI presided over the function. Er Rapeti Nageswra Rao, Honorary Secretary, Visakhapatnam Local Centre,



IEI welcomed the gathering. Prof (Dr) S Bala Prasad, Professor of Environmental Engineering, Department of Civil Engineering, Andhra University, Visakhapatnam graced the occasion as the Chief Guest and delivered lecture on the theme.

This event highlighted on environment, ecological footprint, ecosystem restoration, drivers of ecosystem change, ecological connectivity, etc.

Warangal

On 05 June 2024, Warangal Local Centre, IEI, in association Kamala Institute of Technology and Science (KITS), Karimnagar observed World Environment Day 2024 at Warangal. Dr Anumula Rama Chandra Reddy, Chairman,



Warangal Local Centre, IEI explained the activities of IEI and highlighted the importance in celebrating this event. Chief Guest of the event, Prof Amba Prasad Rao, Professor (HAG), Department of Mechanical

Engineering, NIT Warangal, in his address mentioned the gradual degradation of the environment over the years due to urbanization, civilization, use of fossil fuels, etc. He said that climate change, untimely rain, variations in seasons, severe summer caused reduced glaciers, forest fires, extinction of certain species and animals, plants due to degradation of environment.



The Institution of Engineers (India) IEI Industry Excellence Award 2024

Request for Participation

The IEI Industry Excellence Award has been instituted to recognize industry leaders for their innovation, excellence in engineering operations and thereby, to lead their industry in competitive manner. The benchmarks created by the industries in India have included productivity, quality, safety and performance assurance thereby giving India the rightful place in the global markets. Realizing that such industries can provide the leadership to a large number of other industries in the country, it has been considered appropriate by the IEI Council to institute the IEI Industry Excellence Awards in the year 2008.

Applications in specified format (visit link: <https://www.ieindia.org/webui/IEI-Activities.aspx#industry-excellence-award>) are invited from prospective applicants for IEI Industry Excellence Award 2024. The last date of receipt of application for the Award 2024 is **31 October 2024**. Interested applicants are requested to send their applications (Two hard copies & One soft copy in Pendrive/CD) to the below mentioned address.

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

Empanelment as Advocate/ Attorneys & Chartered Accountant for Engineers

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

Applicants are requested to send a hard copy of their application to the **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>.

IEI Celebrates World Telecommunication and Information Society Day 2024

Theme: Digital Innovation for Sustainable Development

World Telecommunication and Information Society Day was celebrated by the Centres of the Institution all over the country on May 17, 2024. Brief Accounts of celebrations as received from various Centres are given hereunder.

STATE CENTRES

Karnataka

On 17 May 2024, Karnataka State Centre, IEI observed World Telecommunication & Information Society Day 2024 through virtual mode. A webinar was organised on the topic 'Digital Technologies for Older Persons & Health Ageing'. Er M Nagaraj, Chairman, Karnataka State Centre, IEI explained how digital technologies are taking its priority which is elicited the ability of the society. Dr Manish Kumar, Assistant Professor, Department of Master of Computer Applications, M S Ramaiah Institute of Technology, Bengaluru graced the occasion as the Keynote speaker. Dr Kumar delivered Keynote lecture on the topic 'Quantum Computing and Cyber Security' and explained the capabilities of Quantum Algorithms, such as Shor's Algorithm, which threaten the security of current encryption methods. He stressed the urgent need for the development implementation of quantum-resistant cryptographic techniques. He also discussed how quantum computing enhance cyber security measures through advanced data analysis and pattern recognition, paving the way for more robust and secure communication systems in the digital era.

Kerala



Kerala State Centre, IEI observed World Telecommunication & Information Society Day 2024 at Thiruvananthapuram on 15 May 2024. Er P Balakrishnan Nair, Chairman, Kerala State Centre, IEI welcomed the participants and introduced the Speaker

of the event, Dr B S Monoj, Professor and Associate Dean, Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram. Dr Monoj delivered lecture on the topic 'Emerging Areas in Communications'. At the end, Er K R Suresh Kumar, Honorary Secretary, Kerala State Centre, IEI proposed the vote of thanks.

Punjab & Chandigarh

On 17 May 2024, Punjab & Chandigarh State Centre, IEI observed World Telecommunication & Information Society Day 2024 through online platform. A webinar was organised on the occasion. Dr Labh Singh Bhari, Chairman, Punjab & Chandigarh State Centre, IEI welcomed the participants. Chief Guest of the event, Prof (Dr) Tara Singh Kamal, Former Vice President, IEI addressed the gathering and explained the importance of sustainability for preserving our planet and natural resources like water and air. He emphasized that sustainability creating a balanced and sustainable future for our planet and its inhabitants. Key Speaker of the event, Er Mohal Lal, ITS, Deputy Director General, Rural Punjab, DoT, Ministry of Communications & IT emphasized that digital innovation contributes to sustainable development with various sectors like IoT enabled smart agriculture, blockchain for supply chain transparency and digital transactions and these innovations support in achieving multiple Sustainable Development Goals (SDGs) like

health and well-being, quality education, clean water, sustainable cities, etc. He highlighted that Government of India has initiated several projects to enhance digital connectivity and inclusivity and the National Broadband Mission aims for digital empowerment by providing broadband access to all villages, increasing tower density with significant investments. Er Sukhvir Singh Mundi, Vice President, IEI explained the importance of Sustainable Digitalization which involves in encouraging the development and use of technologies with sustainability considerations in mind. At the end, Er Swinder Singh, Honorary Secretary, Punjab & Chandigarh State Centre, IEI proposed the vote of thanks.

Tamilnadu



Tamilnadu State Centre, IEI observed World Telecommunication & Information Society Day 2024 at Chennai on 18 May 2024. Dr V Karthikeyan, Chairman, Tamilnadu State Centre, IEI delivered welcome speech

and explained the development of digital innovation in different stages. Dr S Dharmalingam, Council Member, IEI explained the theme of World Telecommunication and Information Society Day. Dr G Ranganath, President, IEI graced the occasion with his online presence and addressed the audience. Chief Guest of the event, Mr Bharathi Athinarayanan, Technologist/National MAARG Mentor, Bangalore focussed on the challenges faced by digital innovation including insufficiency of appropriate policies, lack of knowhow for innovators, lack of understanding of the systemic issues in the environment and lack of collaboration. He discussed the key components of digital innovation, which include data driven decision making, user-centric design, disruptive business models etc and said that by embracing those key components, organizations can harness the power of digital innovation to drive growth, enhance competitiveness and able to deliver value to the customers in the digital age. At the end, Er Gokul D, Honorary Secretary, Tamilnadu State Centre, IEI proposed the vote of thanks.

West Bengal



On 17 May 2024, West Bengal State Centre, IEI observed World Telecommunication & Information Society Day 2024 at Kolkata. Prof (Dr) Raju Basak, Chairman, West

Bengal State Centre, IEI delivered the welcome address. Er Ram Chandra Chakraborty, Managing Director, PSI Metals India Limited, Kolkata explained about the significance of World Telecommunication & Information Society Day and Er Chanchal Chakraborty, Managing Director, ATM Towers India Ltd spoke on the theme of the event. Mr Debasis Sarkar, Chief General Manager, BSNL delivered Keynote Address. Dr Nabarun Bhattacharya, Director-IT, MAKAUT and Mr Souvick Kumar Das, ITS, Deputy Director General, RTEC,

DoT delivered lecture on the theme. During the technical session, Ms Nikhila Vishnuvajhala, AGM, Business Development & Sales, Banyan Nation, Mumbai deliberated on Digital Waste Management Solution. She discussed about plastic waste management system and stressed in eliminating 90% of contaminants i.e., residual products like oil, shampoo, lotion, etc by using Mappr Platform – a digital platform consisting of web-based monitoring, aggregation & analytics tool consisting of web-based planning, tracking, visualization and analytics tool. Dr Amlan Chakrabarti, HoD & Full Professor, A K Choudhury School of Information Technology, University of Calcutta delivered lecture on 'Digital Infrastructure for Water Loss Management' and focused on simulation study for comparative leakage detection accuracy analysis of different network models using Artificial Neural Network. Dr Arpan Pal, Distinguished Chief Scientist, TCS Research delivered lecture on 'Low Power AI for Edge Computing'. At the end, Er Anirban Datta, Honorary Secretary, West Bengal State Centre, IEI proposed the vote of thanks.

LOCAL CENTRES

Amravati



On 17 May 2024, Amravati Local Centre, IEI observed World Telecommunication & Information Society Day 2024 at Amravati. Er Ganesh Uttaerao Barabde, Chairman, Amravati Local

Centre, IEI delivered the welcome address. Er Anand Wamanrao Jawanjali, Chairman, Maharashtra State Centre, IEI graced the function as the Chief Guest. Keynote Speaker of the event, Er Ajay Wanjari, Sub Divisional Engineer, BSNL, Amravati delivered lecture on the theme. He stressed the need of modern telecommunication techniques, to be used in the fast growing world and opined that the progress of the economy lies in using modern telecommunication technologies and its implementation in timely manner. He explained the journey and the development of telecommunication right from 1G to 6G and laser technology. He discussed about probable threats of using on human being and mentioned that under the control of TRAI, these threats are kept to be as minimum as possible. Er Harish Vinayakrao Mohod, Honorary Secretary, Amravati Local Centre, IEI proposed the vote of thanks.

Jamshedpur

On 17 May 2024, Jamshedpur Local Centre, IEI observed World Telecommunication & Information Society Day 2024 through online platform. A webinar was organised on the occasion. Er Satish Kumar Tiwary, Chairman, Jamshedpur Local Centre, IEI welcomed the members and dignitaries. Speaker of the event, Mr Raja Bose, Head, Customer Experience, Bihar & Jharkhand Circle, Airtel delivered lecture on the topic 'Digital Innovation for Sustainable Development'. He spoke about mobile telephony evolution, importance and scope of innovation for sustainable development, benefits of innovation for sustainable development, use of technology in our day to day life, digital impact on human to human, human to machine and machine to machine.

Kanyakumari



On 17 May 2024, Kanyakumari Local Centre, IEI observed World Telecommunication & Information Society Day 2024 at Kanyakumari. Prof (Dr) Marsaline Beno M, Honorary Secretary,

Kanyakumari Local Centre, IEI welcomed all. Er S Bright Selvin, Chairman, Kanyakumari Local Centre, IEI presided over the function. He emphasized the pivotal role of Telecommunication and Information Technology in

today's world and underscored the importance of leveraging technological advancements for the betterment of the society. The Keynote address was delivered by Dr S Arumuga Perumal, Past Chairman of Kanyakumari Local Centre. In his address, Dr Perumal shed light on transformative potential of technology in education and discussed Network based teaching and learning, AI-based instructions, role of Augmented Reality (AR) and Virtual Reality in education etc.

Kota



On 17 May 2024, Kota Local Centre, IEI observed World Telecommunication & Information Society Day 2024 at Kota. Er Ashok Kumar Patni, Chairman, Kota Local Centre, IEI welcomed the Chief Guest of the session, Er Naveen

Bhushan Sharma, IES, Divisional & Telecom Engineer, Kota Division, Indian Railways, Kota; Keynote Speaker Dr Anil Kumar Khatri, HoD, Department of Electronics, Government Polytechnic College, Kota, Rajasthan, Er Mahendra Kumar Chauhan, Chairman, Rajasthan State Centre, dignitaries and the participants. Dr Khatri discussed about the importance of digital innovation, digital technologies, smart agriculture, water management, etc. Dr Sharma emphasized that the benefit of digital innovation should be extended to every village, city, community and to those leading a life of poverty. Er Dharmendra Kumar Jain, Honorary Secretary of Kota Local Centre proposed the vote of thanks.

Madurai



Madurai Local Centre, IEI observed World Telecommunication & Information Society Day 2024 at Madurai on 01 June 2024. The event started with welcome address delivered by Prof (Dr) P Udhaya

Kumar, Chairman, Madurai Local Centre, IEI. Chief Guest of the session, Dr S Murugan, Professor, Department of Computer Sciences and Engineering, Latha Mathavan Engineering College, Madurai outlined the impact of digital innovations on societal, environmental and economic developments. He explained the benefits of implementing smart agriculture using IoT. He concluded that adverse effects of digital innovations should be analysed and steps to be taken for mitigating the effects in sustainable development. At the end, Er A T Baskar, Honorary Secretary, Madurai Local Centre, IEI proposed the vote of thanks.

Meerut



On 17 May 2024, Meerut Local Centre, IEI in association with BSNL, UP (West), Meerut observed World Telecommunication & Information Society Day 2024 at Meerut. Er M L Jain, Past Chairman, Meerut Local Centre, IEI welcomed

the Chief Guest of the event, Er A K Garg, ITS, CGM, BSNL, UP (W), Meerut; Guest of Honours, Mr Manish Kumar, ITS, PGM (Meerut Business Area) and Er P P Shrivastava, IP&T, Senior GM (HR/Admin), BSNL, UP(W), Meerut and all the participants. Speaker of the event, Er Archana Arora, ADT (BSS), BSNL, Meerut discussed the potential of digital technologies transcending the geographical limitations and enhancing connectivity. He further emphasized the benefits of inclusive growth through digital innovation and

empowerment of local communities. Er Amit Kumar Bansal, ADT (Material Management), BSNL, UP(W), Meerut highlighted the advancement in telecommunications and their impact on society and emphasized the role of policy and regulatory environment in fostering digital innovation. Er Manish Rajpal, AGM (Sales & Marketing), BSNL, UP (W), Meerut emphasized on the importance of digital transformation in achieving sustainable development goals. Er Vikas Agarwal, GM (Transmission), UP (W), BSNL, Meerut focused on the integration of advanced technologies like AI, IoT, Blockchain in various sectors. He emphasized the necessity of addressing environment, economic and social challenges through innovative solutions and gave an overview of Sustainable Development Goals. At the end, Er Subhash Chandra Mittal, Honorary Secretary, Meerut Local Centre, IEI proposed the vote of thanks.

Sunabeda



On 17 May 2024, Sunabeda Local Centre, IEI observed World Telecommunication & Information Society Day 2024 at Sunabeda. Chief Speaker of the event, Er Pradeep Kumar Das, Senior Manager, Hindustan Aeronautics Limited,

Sunabeda explained about digital innovation in advancing sustainable development across the globe. Er Manas Ranjan Subudhi, Senior Manager, Hindustan Aeronautics Limited, Sunabeda also spoke on the occasion. Er Bishoyi Sanjaya Kumar, Honorary Secretary, Sunabeda Local Centre, IEI explained the importance of the day.

Warangal

On 17 May 2024, Warangal Local Centre, IEI observed World Telecommunication & Information Society Day 2024 at Warangal. Dr Anumula Rama Chandra Reddy, Chairman, Warangal Local Centre, IEI welcomed the august audience, explained the activities of IEI and the importance of celebrating this event. Chief Guest of the event, Prof L Anjaneyulu, Professor, Department of Electronics and Communication Engineering, NIT Warangal explained that digital innovation has emerged as a crucial element in the contemporary



business environment owing to several compelling reasons like Competitive Differentiation, Organizational Effectiveness, Advanced Customer Engagement, Data driven Strategic Planning, Business Model Transformation etc, which can significantly enhance engagement with the customers, partners and suppliers. He opined that businesses can improve customer experiences by leveraging cutting-edge technologies like AI and machine learning enabling to create personalized, interactive, satisfying journey for their customers. He stressed that sustainability and digitalization stands as macro-trends shaping of the current economy and society hence urging major transitions. Mr M Chandramouli, GM and Dr Vijaya Bhasker Reddy, Deputy GM, Telecom, BSNL, Warangal spoke about the importance of digital innovation.. Dr A V Sridhar, Honorary Secretary, Warangal Local Centre, IEI proposed the vote of thanks.

57th ENGINEERS' DAY

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

September 15 is celebrated every year in the country since the year 1967 as "Engineers' Day" to commemorate the birthday of the legendary engineer Sir Mokshagundam Visvesvaraya. Sir Visvesvaraya, an eminent Indian engineer and statesman was born in a remote village of Karnataka, the State that is incidentally now the Hi-tech State of the country. Due to his outstanding contribution to the society, Government of India conferred "Bharat Ratna" on this legend in the year 1955. He was also called the precursor of economic planning in India. His learned discourse on Economic Planning in India, Planned Economy for India and Reconstructing India, was the first available document on the planning effort of the country and it is still held as the parent source matter for economic planners. A theme of national importance is chosen every year by the Council of the Institution and deliberated at its various State/Local Centres to educate the engineering fraternity in general and the society in particular. This year the 57th Engineers' Day will be celebrated all over the country on the theme "Driving Sustainability with Engineering Solutions Embracing the Latest AI-driven Technologies".



Bharat Ratna Sir M Visvesvaraya

The Institution of Engineers (India) will celebrate the 57th Engineers' Day on September 15, commemorating the 163rd birthday of Bharat Ratna Sir

Mokshagundam Visvesvaraya. This day not only honors his pioneering spirit but also serves as a tribute to engineers worldwide, whose innovations and dedication shape our modern world. This year's theme, "Driving Sustainability with Engineering Solutions Embracing the Latest AI-driven Technologies," underscores the pivotal role of engineering in solving global challenges.

AI is revolutionizing our journey towards sustainability. In the fight against climate change, AI enhances predictive models, enabling better preparation for extreme weather and optimizing renewable energy use. In agriculture, AI-driven analytics are transforming crop management, leading to higher yields and a smaller environmental footprint. Urban areas benefit immensely from AI-powered traffic systems that reduce congestion and emissions, while intelligent waste management systems ensure efficient recycling.

Furthermore, AI is the key to optimizing resource management, from water to manufacturing processes, ensuring maximum efficiency and minimal waste. These advancements highlight the profound impact AI has on creating sustainable solutions for a brighter future. The integration of AI interfaces in sustainable engineering solutions has unlocked new realms of innovation. AI-driven platforms enable real-time monitoring and analysis, providing engineers with critical insights for informed decision-making. From smart grids that balance energy loads to adaptive systems that respond to environmental changes, AI interfaces enhance the effectiveness of sustainable engineering practices.

The Institution of Engineers (India) calls upon all State and Local Centres and associated entities to celebrate Engineers' Day in a grand and befitting manner. Let us honour the innovative spirit and contributions of engineers who are driving sustainability through cutting-edge AI-driven technologies. Together, we can pave the way for a greener and more sustainable tomorrow. Join the movement, celebrate innovation, and be part of the change!

News-in-Brief

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

STATE CENTRES

Karnataka

Observed National Science Day on 29 February 2024. Prof Kattera A Suresh, Former Professor at the Raman Research Institute and Former Director of the Centre for Nano & Soft Matter Sciences, Bengaluru, delivered presentation on 'Shining Contributions of Indian Science'. In his lecture, Prof Suresh, who is currently an Emeritus Professor at the Raman Research Institute, focused on the theme of National Science Day 2024, 'Science for Sustainable Future'. He began his lecture remembering the remarkable achievements by the earlier Indian scientists Prof Suresh then shifted focus to the contributions of modern Indian scientists, including Nobel laureates Sir C V Raman, Dr Subrahmanyan Chandrasekhar, Dr Har Gobind Khorana, and Dr Venkatraman Ramakrishnan, as well as other eminent figures like Sir Jagadish Chandra Bose, Shri Srinivasa Ramanujan, Dr Meghnad Saha, Dr Satyendra Nath Bose and Dr G N Ramachandran. He highlighted their world-class contributions to physics, mathematics, medicine and chemistry.

Tamil Nadu

In collaboration with the Tamil Nadu Energy Development Agency (TEDA) and the National Environmental Climatic Change Forum (NECCF), organized a Seminar on Biofuel on 08 March, 2024. The seminar featured Dr A Sivathanu Pillai, Chairman, National Environmental Climatic Change Forum (NECCF), as the Chief Guest and Shri Hans Raj Verma, Chairman and Managing Director of TEDA as the Guest of Honour. Dr Pillai delivered an insightful presentation on energy security and the future of biofuel, advocating for the development of an Energy Island incorporating offshore windmills, solar, tidal energy and hydrogen generation. He highlighted the potential of satellite-based solar energy generation via microwave towers. Guest speakers, Dr Vandith from the Sardar Swaran Singh National Institute of Bio-Energy (SSSNIBE), Thiru Elangovan, a social scientist from Kuthapakkam and Dr J Balamurugan, Senior Manager, TEDA addressed national biofuel pathways, subsidies, village-level biofuel opportunities and stakeholder interactions on biofuel policy and technology transfer.

Telangana

Observed National Science Day through online mode on 28 February, 2024. Dr Martha N Reddy, Former Scientist, DRDO & Outreach Teacher to the Youth delivered Lecture on the theme 'Raman Effect: Ubiquitous Practical Applications'.

Observed National Safety Day through online mode on 04 March, 2024. Shri V V Sasi Kumar, Deputy Chief Inspector of Factories, Government of Telangana, Hyderabad delivered Keynote Speech on the theme 'ESG in the Context of OSH'.

Observed World Earth Day through online mode on 22 April, 2024. Dr P Srinivas Rao, Chief Engineer (Retd.) I&CAD Department and Former Member, Tripura State Pollution Control Board (TSPCB), delivered a Lecture on the theme 'Planet and Plastic' as the Keynote Speaker.

Observed National Survey Day on the topic 'Focus on Safety Leadership for Environmental Social and Governance (ESG) Excellence' on 20 April, 2024 through online mode. Prof (Dr) Muralikrishna V Iyanki, Former Dr Raja Ramanna DRDO Distinguished Fellow, Government of India, delivered lecture on the theme as the Keynote Speaker.

Uttarakhand

Organized a seminar on 'Construction Practices in Himalayan Region' on 01 February 2024, in association with BRIDCUL (Bridge, Ropeway, Tunnel and Other Infrastructure Development Corporation of Uttarakhand Limited) Dehradun. Shri Pushkar Singh Dhani, Chief Minister of Uttarakhand, graced the function as the Chief Guest and Shri Satpal Maharaj, Tourism Minister, Uttarakhand, was the Guest of Honour. The Keynote address on soil properties was delivered by Prof Satyendra Mittal, Civil Engineering Department, Indian Institute of Technology Roorkee. Er Deepak Yadav, Managing Director, BRIDCUL, delivered his speech about bridge, ropeway and tunnel constructions in hilly regions. Shri Satpal

Maharaj spoke on the importance of tourism in Uttarakhand and also talked about construction in the hilly region without harming the wild forests and mountains do not cause any harm. The program was conducted over three sessions featuring a range of lectures. Dr Rishi Gupta, CEO, Setu Technologies Inc, Victoria, Canada delivered lecture through virtual mode on the topic 'Green Surface treated Fiber Reinforcement & Health Monitoring for Sustainable Infrastructure. Prof (Dr) Satish Chandra, Civil Engineering Department, IIT Roorkee spoke on All Weather Roads. Prof (Dr) Sanjay Chikarmane, Civil Engineering Department, IIT Roorkee presented case studies about the failure of bridges. Er B G Agarwal delivered lecture on 'Infrastructures using Latest Technology in Himalayan Region'. Mr Sudhir Sinha, Former Chief Engineer, UP-PWD spoke on 'Ways and Means for achieving 100% Quality Assurance in Highways'. Dr Ajay Singh Chaurasia, Scientist G, CBRI, Roorkee delivered lecture on 'Sustainable Construction Practices for Buildings in Hilly Areas'. Dr S K Singh, Scientist G, CBRI, Roorkee delivered lecture on 'Use of Pre-engineered Structure in Himalayan Region'. Er Rajesh Prasad, Director-Projects, Ronmas India Private Limited delivered lecture on 'Challenges in Ropeway Construction in Hilly Terrain'. Er Aviral Jain, Yamunotri Sky Car Private Limited, Mussoorie discussed on 'Opportunities and Challenges as PPP Partner in Ropeway sector, Uttarakhand and so on.

Organized a 3-day Workshop on 'Concrete Quality and Concrete Mix Design' during 06-08 February, 2024. Experts from the relevant fields delivered lecture on Seismic Design Building Aspects, Significance of concrete in construction, Mix Design Concrete etc. Hands on training was also obtained in the Civil Engineering Lab of Uttarakhand State Centre.

Organized a technical visit to Dhalipur/Dhakrani power house on 24 February 2024. Er Johri, General Manager, Uttarakhand Jal Vidyut Nigam Ltd (UJVNL) welcomed all at the UJVNL Centre, Dhalipur, and provided an insightful briefing on the Dhalipur Channel, detailing its historical background and construction process. The channel was built to supply water to powerhouses along the Yamuna River at Dakpathar, downstream of Kalsi in Dehradun. Initially, challenges were encountered during construction, but these were overcome through engineering solutions. The channel itself is lined and supports two powerhouses: Dhakrani with installed capacity of 33.75 MW) and Dhalipur with installed capacity of 51.0 MW, demonstrating the generation of hydroelectric power as a renewable energy source. During the visit, the executive committee members learned about power generation, identified operational challenges and explored solutions. Additionally, the visit extended to Asan Barrage, a significant Ramsar site declared in 2020, located at the confluence of the Dhalipur powerhouse discharge and Asan River. This site is renowned for bird watching, attracting migratory birds from Eurasia, showcasing the ecological significance alongside its engineering achievements in power generation and water management.

Organized a workshop on 'Solar Policy / PM Solar Yojana 2024' on 4 March 2024. Er Narendra Singh, Past President IEI, was the Chief Guest of the program. Er A K Tyagi, Chief Project Officer of Uttarakhand Renewable Energy Development Agency (UREDA) and Advisor to the Government of India, was the Keynote Speaker. Er N K Yadav, Chairman Uttarakhand State Centre, told that solar energy has a potential to fulfill the demand of energy of rural areas by Agro photovoltaic panels, which are solar panels, installed on agricultural land and crops are intercropped between them. He also stressed that solar water pumps play an important role in irrigation systems. Er Satish Kumar Chauhan, Honorary Secretary Uttarakhand State Centre, explained about the economy of solar power production.

LOCAL CENTRES

Coimbatore

In collaboration with the Department of Foundry Technology at PSG Polytechnic College, Coimbatore, hosted a technical lecture on 'Advanced Technologies: Industry 4.0 and 5.0 in Foundry' on 21 March, 2024. The event focused on the evolution and impact of industrial revolutions on the foundry sector, which

is a pivotal supplier of metallic components for various industries including automotive, aerospace and energy. Guest Speaker of the session, Mr Rajkumar Balan, Site Engineer, BRADKEN India Private Limited, gave an overview of the advanced technologies in the advent of fourth and fifth industrial revolution.

In collaboration with the Department of Production Engineering, PSG College of Technology, Coimbatore, organized a technical lecture on 'Statistical Quality Control (SQC) Tools' on 22 March, 2024. The session was led by the Guest Speaker, Er N Dhandapani, Engineer - Quality Assurance, Aquasub Engineering Unit - I, Coimbatore, who was welcomed by Dr J Pradeep Kumar, Associate Professor, Department of Production Engineering, PSG College of Technology. ErDhandapani elaborated on various Statistical Quality Control (SQC) tools including check sheets, bar charts/histograms, cause and effect diagrams, control charts, Pareto analysis and scatter diagrams. He emphasized on the significance of these tools in industrial problem-solving activities. Through practical case studies, he demonstrated the implementation of these tools on the shop floor, illustrating their effectiveness in identifying, understanding, analyzing problems and determining their root causes.

In association with Karpagam College of Engineering, Coimbatore, organized a technical lecture on 'Hardware Security' on 23 March, 2024. Guest Speaker of the event was Dr P Saravanan, Associate Professor, Department of Electronics and Communication Engineering, PSG College of Technology, Coimbatore. The lecture focused on the critical themes of hardware authentication and the identification of malicious components within integrated circuits (ICs), using advanced tools and techniques. Dr Saravanan highlighted the importance of authenticating hardware to ensure the components used in electronic devices are genuine and uncompromised. He said that this process was essential for maintaining system integrity and reliability across various sectors, from consumer electronics to critical infrastructure. The lecture also addressed the challenges of detecting malicious hardware, which can be intentionally embedded during manufacturing or introduced at any point in the supply chain. Such malicious components pose significant security risks, including data breaches, system manipulation and sabotage, underscoring the paramount importance of hardware security in today's interconnected and technologically driven world. He focused on the critical issue of hardware security, emphasizing the importance of authenticating hardware and detecting malicious components within integrated circuits (ICs). He discussed advanced tools and techniques for ensuring the integrity of hardware components, which is crucial in today's technologically advanced and interconnected world.

In collaboration with the Department of Biomedical Engineering, Hindusthan College of Engineering and Technology (HiCET), organized a technical webinar on 23 April, 2024. Guest Speaker, Dr Vivek Manoharan, Founder & CEO, 221B Biomedical & Teat at Home, and Co-Founder of Bipolar Factory, India & Singapore, delivered lecture on the topic 'Recent Trends in Healthcare Innovation and the Role of Academia'. Dr Manoharan's lecture provided insights into recent advancements and innovations in the healthcare sector. He elaborated on several emerging trends and inventions transforming healthcare, emphasizing the importance of higher studies and research in driving these changes. Dr Manoharan highlighted the opportunities available in the biomedical field across India, Singapore and other countries, drawing from his entrepreneurial experiences. He explained the process of creating a prototype and the significance of understanding market value to enhance the commercial viability of innovative devices. Additionally, he introduced the novel concept of Micro Biom, shedding light on its potential impact. The webinar successfully provided participants with a comprehensive overview of current healthcare innovations and the pivotal role of academia in fostering these advancements. Dr S Saravana Sundaram, Professor and Head, and Dr M Ganga, Associate Professor, Department of Biomedical Engineering, HiCET also spoke on the occasion.

Kanpur

Organized a lecture on 'Process Optimization using Machine Learning and AI Tools' on 19 April, 2024. The guest speaker for the occasion was Er Abhijit Singh, Data Scientist from Experian Credit Bureau, Mumbai, who delivered an informative lecture addressing the growing need for innovative approaches in enhancing efficiency and productivity in various industries through machine learning and Artificial Intelligence (AI) tools. He began by explaining the limitations of traditional process optimization methods and introduced the audience to the fundamentals of machine learning and AI, covering supervised learning, unsupervised learning, and reinforcement learning. He provided examples of popular algorithms and their real-world applications. The lecture included case studies and practical examples demonstrating the application of machine learning in optimizing diverse processes such as predictive maintenance, demand forecasting, inventory management and supply chain optimization. Er Singh also discussed specific AI tools and technologies like Natural Language Processing (NLP), Computer Vision and Reinforcement Learning, highlighting their roles in driving process optimization. Challenges related to data quality, interpretability and ethical considerations were addressed to provide a comprehensive understanding of implementing machine learning and AI solutions.



The Institution of Engineers (India) IEI Engineering Education Excellence Award 2024 Request for Participation

The IEI Engineering Education Excellence Award has been instituted to recognize leading Engineering Educational Institutions and encourage for better and more effective engineering education across the country. The engineering education sector has witnessed significant development, setting benchmarks for others to follow. Universities and institutions have expanded their scope beyond pedagogy and now engage in R&D activities, consultancy, patents, publications, skill development programs, industry interface, and the implementation of the New Education Policy (NEP), contributing to India's global prominence. Recognizing that such institutions can lead and inspire numerous others in the country, the IEI Council has decided to establish the IEI Engineering Education Excellence Awards.

Prospective applicants are invited to submit their applications in the specified format

(visit link: <https://www.ieindia.org/webui/IEI-Activities.aspx#engineering-education-excellence-award>) for the IEI Engineering Education Excellence Award 2024. The deadline for submitting of applications for the Award 2024 is **31 October 2024**. Interested applicants are requested to submit their applications (Four hard copies & One soft copy in Pendrive/CD) to the below mentioned address.

Deputy Director (Technical)

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

IEI DIARY



Aerospace Engineering Division

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

Ranchi, November 23-24, 2024

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

Agricultural Engineering Division

All India Seminar on **"Green Technologies for Sustainable Food Production and Processing"**

Coimbatore, October 24-25, 2024

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

One Day Seminar on **"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

Thirty-ninth National Convention of Architectural Engineers on **"Disaster Mitigative Architecture and Construction"**

Shimla, October 26-27, 2024

The Honorary Secretary, IEI, Himachal Pradesh State Centre, Victoria Place, Opposite Nigam Vihar, Shimla 171 002 [☎: 0177-2623736; E-mail: hpssc@ieindia.org; Website: http://hpiei.org/home.html]

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

Chennai, September 13, 2024

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

Chemical Engineering Division

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

Bhubaneswar, October 19-20, 2024

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

Civil Engineering Division

One Day Workshop on **"Water Reuse and Conservation"**

Agra, October 05, 2024

The Honorary Secretary, IEI, Agra Local Centre, Institute of Engineering and Technology, Dr Bhimrao Ambedkar University, Khandari Campus, Agra 282002 [Mobile: 8126892221; E-mail: agralc@ieindia.org]

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

Kochi, October 17-18, 2024

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

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]

Electrical Engineering Division

All India Seminar on **" Green Energy and Clean Energy for New India"**

Thiruvananthapuram, September 10-11, 2024

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]

All India Seminar on **"Fuzzy Logic Control, Control of Grid Integrated and WEC System"**

Bhubaneswar, October 07-08, 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]

One Day Workshop on **"IoT in Electrical Engineering"**

Agra, October 10, 2024

The Honorary Secretary, IEI, Agra Local Centre, Institute of Engineering and Technology, Dr Bhimrao Ambedkar University, Khandari Campus, Agra 282002 [Mobile: 8126892221; E-mail: agralc@ieindia.org]

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

Chennai, October 25-26, 2024

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

All India Seminar on **"Exploring Sensors In Electric Vehicle Applications"**

Kattankulathur, October 28-29, 2024

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

All India Seminar on **"Advancing Digital Innovations for Sustainability in Energy Environment Health and Agriculture"**

Durgapur, November 11, 2024

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

Electronics & Telecommunication Engg Division

Thirty-ninth National Convention of Electronics & Telecommunication Engineers on **"Internet of Things (IoT)"**

Delhi, October 05-06, 2024

The Honorary Secretary, IEI, Delhi State Centre, Bahadur Shah Zafar Marg, New Delhi 110 002, [☎: 011-23379948/23370489; Fax: 011-23370489; Email: delhisc@ieindia.org; Website: https://www.ieidsc.in]

All India Seminar on **"Emerging Technologies for 5G/6G Wireless Communication using AI/ML"**

Bhubaneswar, November 16-17, 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]

Environmental Engineering Division

All India Seminar on **"Green Technology for Environmental Management"**

Guwahati, September 21-22, 2024

The Honorary Secretary, IEI, Assam State Centre, East Lane, Panbazar Overbridge, Panbazar, Guwahati 781001 [☎: 0361-2548742, Mobile: 6026461095, E-mail: assamsc@ieindia.org, Website: www.ieiasc.org]

All India Seminar on **" Augmentation of Bio Ethanol & Bio-hydrogen from Organic Wastes"**

Chennai, October 05-06, 2024

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

One Day Seminar on **"Utilization of E-waste as an Alternative Construction Materials"**

Coimbatore, October 18, 2024

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

One Day Seminar on **"Energy Environment URJAVARAN"**

Ranchi, November 17, 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]

One Day Seminar on **"Industrialization and Mission LIFE IML 2024"**

Rourkela, December 07, 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 **"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]

Mechanical Engineering Division

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

Chandigarh, September 13-14, 2024

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

One Day Seminar on **"CNC Based Composite Structure and their Nonlinear Dynamic Analysis"**

Rourkela, September 14, 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 'Advancements in Electric Vehicles: Need of the Hour'

Gwalior, September 29-30, 2024

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

One Day Seminar on 'Next Gen Engineering in IoT: A New Era of Smart Products and Systems'

Madurai, September 20, 2024

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@ieiindia.org, Website: www.ieimadurailc.org]

All India Seminar on "Material Efficiency in Clean Energy Transition"

Thiruvananthapuram, October 22-23, 2024

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

All India Seminar on 'Integrating Industry 4.0 and Circular Economy: A Path to Sustainable Industrial Transformation in India'

Jaipur, November 09-10, 2024

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

International Conference on "Advances in Foundry and Forming Technology"

Ranchi, November 18-19, 2024

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

Metallurgical & Materials Engg. Division

All India Workshop on "Recent Trend In Materials and Manufacturing Processes"

Tiruchirappalli, October 18-19, 2024

The Honorary Secretary, IEI, Tiruchirappalli Local Centre, Einstein College of Engineering, Sir C V Raman Nagar, Seetharparanallur, Tirunelveli 627012 [☎: 0462-2487111, Fax: 0462-2487112, Mobile : 9489903804, E-mail :tirunelvelilc@ieiindia.org, Web: www.ieitylc.com]

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

Chennai, December 06-07, 2024

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

One Day Seminar on " Present future scenario of Nano Technology in field of Engineering Materials Agricultural Medical Sc"

Patna, November 10, 2024

The Honorary Secretary, IEI, Bihar State Centre, 1942, Kranti Marg (Hardinge Road), R-Block, Chauraha (near Petrol Pump), Patna 800001 [☎: 0612-2222639 / 2330544, E-mail: biharsc@ieiindia.org, Website: www.ieibihar.org]

Mining Engineering Division

All India Seminar on "Mining 4.0 Technology Vision for Safe Smart and Sustainable 3S Mining"

Ranchi, October 26-27, 2024

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

Production Engineering Division

All India Seminar on "Innovations in Green Sustainable Production Practices for Futuristic Industries"

Hyderabad, November 22-23 2024

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

Textile Engineering Division

Thirty-seventh National Convention of Textile Engineers on "Quality Profitability and Sustainability in Textiles"

Indore, September 28-29, 2024

The Honorary Secretary, IEI, Indore Local Centre, SGSITS Campus, 23, Sir M Visvesvaraya Marg, (Park Road), Indore 452003 [E-mail: indorelc@ieiindia.org]

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

Chennai, November 16, 2024

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

The Institution of Engineers (India)

IEI **Industry Excellence Award** **&** **IEI** **Engineering Education Excellence Award**

Ceremony

19 December 2024, Novotel, Kolkata

Air Ticketing through Travel Agent

IEI Corporate Members can access benefits of Corporate Air Ticket program, facilitated by M/s Ebix Travels Pvt Ltd. at a service charge. Details may be accessed at <https://www.ieindia.org/webui/IEI-AirTickets.html>



39th INDIAN ENGINEERING CONGRESS

Kolkata, December 20-22, 2024

Theme: Irresistible India - a Global Engineering Powerhouse



Organized by

The Institution of Engineers (India)

The last date for receiving Papers for 39th IEC has been extended till 30 September 2024

Hosted by: **West Bengal State Centre**

For details visit: www.39iec.org



Engineering Staff College of India

Autonomous Organ of The Institution of Engineers (India)
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ISO/IEC 17025:2017 Certified, AICTE & CEA Recognized Institution)

Continuing Professional Development Programmes (CPDPs) for the Month of September 2024

Sl. No.	Name of the Course	Scheduled Dates
1.	Engineering Simulation using ANSYS & CFD - With Hands-on Approach	02 - 05 Sep 24
2.	Climate-Resilient Regenerative Agricultural Practices for Conservation of Natural Resources	03 - 05 Sep 24
3.	Water Pollution Monitoring & Modelling using Software Applications – Theory & Practical's.	03 - 05 Sep 24
4.	Flexibilization of Thermal Power Plants	03 - 05 Sep 24
5.	Condition-Based Monitoring & Maintenance for Effective Utilization of Mining Machinery	04 - 06 Sep 24
6.	Disciplinary Proceedings	05 - 06 Sep 24
7.	Concepts on Design, Construction & Maintenance of Bridges	09 - 13 Sep 24
8.	Non – Destructive Testing and Failure Analysis of Castings, Forgings, Weldments, and Tubes	09 - 13 Sep 24
9.	Flood analysis using HEC-RAS Software	09 - 13 Sep 24
10.	Decision Making in the Digital Era.	10 - 12 Sep 24
11.	Power System Protection - Principles, Protection Relays, and Fault Analysis	10 - 13 Sep 24
12.	Engineering Simulation using LS-DYNA	16 - 19 Sep 24
13.	Solid Waste Management System and Sustainable Sanitation	16 - 18 Sep 24
14.	Creativity and Innovation Techniques for Technical Officers, Scientists and Engineers	17 - 20 Sep 24
15.	Information Security Policies & Security Audit	18 - 20 Sep 24
16.	Social Impacts of Mining Projects-Social Impact Assessment, Land Acquisition, Rehabilitation & Resettlement, Pollution Control Measures, Water and Soil Management, Controlled Blasting, Skill Development of Affected Persons	18 - 20 Sep 24
17.	Penetration of Renewables - Technical Challenges and Regulatory Framework	18 - 20 Sep 24
18.	Recent Trends in Design, Construction & Maintenance of Rigid Pavements	23 - 27 Sep 24
19.	Network Administration: Configuring & Securing LANs and WANs	23 - 27 Sep 24
20.	NDT Level II Certification in Ultrasonic Technique (in Accordance with ASNT Document No. SNT-TC-1A 2011)	23 Sep - 01 Oct 24
21.	Planning, Design, Construction, and O&M of Lift Irrigation Schemes	23 - 26 Sep 24
22.	Effective Trade Union Management	24 - 26 Sep 24
23.	Climate Change Adaptation through Agroecology and Organic Farming	25 - 27 Sep 24
24.	Wet Lands Management	25 - 27 Sep 24
25.	Big Data Analytics for Business Decisions (Hands-on on MS Excel & Tableau)	25 - 27 Sep 24
26.	Pilferage of Electricity - Detection & Prevention - Issues & Challenges	25 - 27 Sep 24
27.	Industry 5.0, Quality Aspects	25 - 27 Sep 24

For detail information please contact:

Engineering Staff College of India

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

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