



IEI NEWS

June 2022

Advances in Mineral Processing
Studies on Strategic and
Critical Minerals of India

3

Fire and Safety Issues and
Challenges/Opportunities
in Industries

4

Unequal Cities – Bringing Balance
through Development of Smart Cities:
IoT based Smart City Infrastructure
and it's Application Model

5

Reports of World Engineering
Day for Sustainable
Development 2022

9

Reports of World
Water Day 2022

11

A CENTURY OF SERVICE TO THE NATION

Volume 29

Number 3

IEI Technical Webinar under the aegis of
Interdisciplinary Coordination Committee

Climate Change in the Arctic and Beyond

West Bengal State Centre of the Institution organized Technical Webinar on the theme **Climate Change in the Arctic and Beyond** on 26 May 2022 under the aegis of Interdisciplinary Coordination Committee. Ms Elena Doms, Business Leader, Speaker and Investor in ESG and Sustainable Transformation, Sustainability, Strategy & Finance Director at Mastercard was the theme speaker of the event. Mr Bhaskar Dutta, Business Consultant & Vice President (Retd), Thyssenkrupp Industries and Convener, Mechanical Engineering Division, West Bengal State Centre, IEI shared his views on climate change with the audience and introduced the speaker. Mr Anirban Datta, Chief Technology Officer, MESCIA Engineers and Joint Honorary Secretary, West Bengal State Centre, The Institution of Engineers (India) was the moderator of the event. The webinar started with welcome address delivered by Dr Nirmal Das,



Ms Elena Doms

Chairman, West Bengal State Centre, IEI. Dr G Ranganath, Chairman, CATE, IEI in his address mentioned that climate change, changes in biological diversity, and the accumulation of toxic substances in the atmosphere are three principle interrelated issues affecting the rapidly shifting arctic environment. Mr Sandip Kumar Deb, Vice President, IEI was present in the function and addressed the virtual



Mr Bhaskar Dutta

Contd. on page 3

IEI Technical Webinar under the aegis of
Marine Engineering Division Board

Improvement of Carbon Intensity Index for Ships

West Bengal State Centre, IEI in association with Institute of Marine Engineers (India), Kolkata Branch and Association of Ex-Cadets of DMET, Kolkata organized Technical Webinar on the theme **Improvement of Carbon Intensity Index for Ships** on 22 April, 2022 under the aegis



Mr Sadhan Kumar
Sarkar

of Marine Engineering Division Board, IEI. Mr Sadhan Kumar Sarkar, Former Director in charge, Marine Engineering and Research Institute, Kolkata (Indian Maritime University, Kolkata Campus); Mr Arun Kumar Singh, Faculty, Department of Marine Engineering, Indian Maritime University and Mr Amit Bhatnagar, Senior Principal Surveyor, Indian Register of Shipping and Vice President, Institute of Marine Engineers (India) graced the function as panelists. Mr Gautam Sen, Chairman, Marine



Mr Arun Kumar Singh

Engineering Division, West Bengal State Centre was the moderator of the event. The webinar session was started with welcome address delivered by Dr Nirmal Das, Chairman, West Bengal State Centre, IEI. Cdr Dr Bhaskar M Bhandarkar, Chairman, Marine Engineering Division Board in his address highlighted the significance of marine transportation

Contd. on page 2

From the President's Desk.....



In order to give an impetus to manufacturing in India and make India a global manufacturing hub, the 'Make in India' campaign was launched by the Government of India to facilitate investment, foster innovation, enhance skill development, protect intellectual property & build best-in-class manufacturing infrastructure. It was a significant step towards import substitution, aimed to facilitate the country to move towards self reliance.

In the year 2020, when countries across the globe were struggling to cope with havoc created by COVID pandemic, Hon'ble Prime Minister of India ushered in the vision of making India Aatma Nirbhar. Since then numerous initiatives and policy reforms have been taken up by the government to trail the path to self-reliance. Despite the numerous challenges and hardships that the COVID pandemic brought forth, the Government of India saw it as a blessing in disguise and portrayed it as an opportune time to emerge as a powerful nation globally and become self-reliant.

The objective of Make in India initiative was to boost entrepreneurship in India. It was noted that this is the time to break the cycle of exporting raw material and importing finish goods to boost up the manufacturing sector in India. The aim of this campaign is to make the country and its citizens independent and self-reliant in all senses. Five facets of Aatma Nirbhar Bharat has been identified as Economy, Infrastructure, System, Vibrant Demography and Demand that will lead the country towards a new economy supported by world class infrastructure, a technology driven system and full capacity utilization of the supply chain. The country is now on the way to execute the five phase roadmap of 'Self Reliant India', that include recharging businesses with MSMEs, economic reforms for migrants and farmers, agricultural reforms through financial support, policy reforms to fast-track investment, leading towards new horizons of growth and Government reforms and enablers towards healthcare, technology driven education policy etc. Recently there has been an emphasis towards making India self-reliant in defence, technology and infrastructure development and steps were taken for synergy between ministries working on projects and labour reforms. With the

Contd. on page 8

Improvement of Carbon Intensity Index for Ships

Contd. from page 1

in global perspective, mentioned the impact of marine pollution, function, scope and strategy of IMO, MARPOL etc. Mr Sandip Kumar Deb, Vice President, IEI in his address focused on application of solar energy in marine sector. Dr G Ranganath, Chairman, CATE in his address, stated that maritime transport is the most energy efficient and sustainable mode of transportation; However, the carbon dioxide emission caused due to huge maritime traffic is the key factor to monitor, control, sustain and improve air quality. Dr H O Thakare,



Mr Amit Bhatnagar

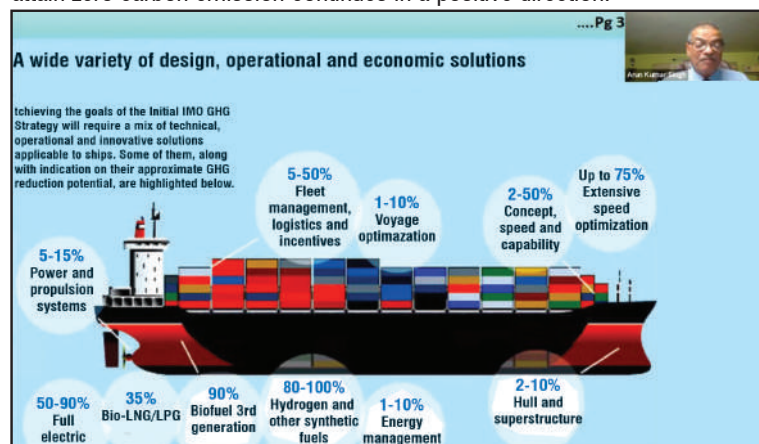
President, IEI in his address briefed about carbon intensity index measurement methodology and added that the rating thresholds will become increasingly stringent towards 2030. He also discussed briefly about the measures taken by International Maritime Organization to reduce greenhouse gas emissions.

Mr Sadhan Kumar Sarkar delivered his presentation on the topic 'Marine System Design to Curtail GHG Emission'. He started his presentation with the present status of global fossil carbon emission, CO₂ accumulation in the atmosphere, environmental impact due to emission etc. Mr Sarkar, in his address advocated for adoption of business carbon offsetting strategy by the industries to improve energy efficiency, emphasized on transition to renewable energy and application of carbon free fuel. He also explained the applicability of Energy Efficiency Design Index (EEDI), Ship Energy Efficiency Management Plan (SEEMP), Energy Efficiency Existing Ship Index (EEXI), as introduced by IMO. He stated that the ship builders and



Mr Gautam Sen

which is compatible with LNG fuelled ships. Mr Singh explained function of biofuels, including Biomethane, Biomethanol, Ammonia, Hydrogen, Hybrid batteries, Electric propulsion; highlighted the future challenges, namely life cycle emissions, bunkering infrastructure and methane slip. He explained the application of fuel cells as an alternative to IC engines to reduce emissions. In his concluding remarks, Mr Singh stated that the search for ultimate fuel to attain zero carbon emission continues in a positive direction.



Courtesy: Mr Arun Kumar Singh

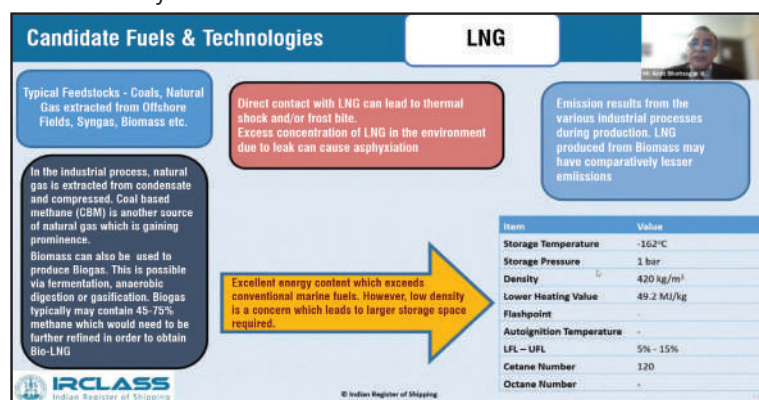
The presentation from Mr Amit Bhatnagar included different stages of IMO-GHG study. He explained alternative fuels and innovative technologies identified in the fuel candidate measures in order to realize decarbonization goals. He discussed at a length the properties of Fatty Acid Methyl Ester (FAME), which include B20 blend for the trial period as proposed by IRS. He explained the potential effects of bio-fuel blends on engine, oily water separator, purifiers or Overboard Discharge Monitor (ODM) used in marine applications. He discussed onboard carbon capture method through installation of scrubber system to capture CO₂ from the flue gases, installation of dedicated CO₂ storage tanks and discharge of CO₂ at receptor ports or at offshore installations. He explained application of nuclear propulsion in marine industry and mentioned that ice breakers and naval sub-marines are



Courtesy: Mr Sadhan Kumar Sarkar

marine designers should explore new avenues in design and retrofits that enable ships to comply with EEXI requirements. He discussed minimizing loss in marine energy through sound waste heat recovery system, advancement in propeller design to reduce propeller loss, optimum utilization of thrust power to minimize hull losses. He discussed different methods to improve hull and propeller efficiency with improved design aspects. He explained the function of Bulbous Bow, which is applied to increase ship speed, reduce fuel consumption, reduce the bow wave and make the ship more energy efficient. He also explained hull air lubrication and its effect.

Mr Arun Kumar Singh delivered his presentation on the topic 'The Search for Carbon Free Energy for Shipping'. Mr Singh started his presentation with the significant transformation in the energy sources over the years for maritime transportation and ship propulsion. He explained short term technology measures to reduce carbon emission. He explained Flettner Rotor, Towing Kites, sails, solar panels and shore side power with the objective to reduce future direct fuel requirement and subsequently create the provision of additional auxiliary power. He explained application of Drop - in fuel and Alternative fuel, which include Fatty Acid Methyl Ester, Hydrotreated Vegetable Oil, Dimethyl Ether etc. He also discussed Bio LNG, Liquefied Bromide-Methane, Liquefied synthetic Methane with zero carbon emission,



Courtesy: Mr Amit Bhatnagar

using nuclear propulsion for several decades. The speaker also explained the working principle of battery powered ships with electric propulsion system. Mr Bhatnagar discussed on safety compliance, rules and regulations, range of IRS guidelines for upcoming candidate fuels and technologies. In his concluding remarks, the speaker focused on exploration of different avenues to reinforce IMO decarbonization drive. Mr Bhatnagar further opined that onboard carbon capture may be a good interim solution however, this would call facilities at the port to receive onboard generated CO₂; Moreover, the bunkering efficiency would be subject to change considering the fact that Ammonia and Hydrogen require larger fuel storage volumes; It may be more practical for ships to undergo frequent bunkering rather than reserve larger storage space onboard.

Moderator of the event, Mr Gautam Sen summed up the proceedings of deliberation. Dr Raju Basak, Honorary Secretary, West Bengal State Centre, IEI proposed the Vote of Thanks. The program was well attended by the dignitaries and participants.

Advances in Mineral Processing Studies on Strategic and Critical Minerals of India

Telangana State Centre, IEI organized One Day Seminar on the theme **Advances in Mineral Processing Studies on Strategic and Critical Minerals** of India on 30 April, 2022 at Hyderabad. On the occasion, Dr Sanjay Kumar Jha, Chairman & Managing Director, Mishra Dhatu Nigam Limited (MIDHANI), Hyderabad graced the inaugural function as the Chief Guest and addressed the august audience. In his address, Dr Jha stated that huge consumption of high grade ores results in rapid depletion of the same. He opined that due to mechanized mining as well as high demand of industrial minerals specially strategic minerals for public utilities and

Chief Scientist, CSIR-IMMT, Government of India and Council Member, IEI delivered lecture on the topic 'Effect of Microwave Heat Energy in Minerals and Material Processing'. The speaker lucidly explained the application of microwave energy to food, minerals processing namely Ilmenite, Zircon, Sillimanite etc. The classification of materials based on response to microwave heating as transparency, reflections and absorbing minerals, benefits of using microwave heat treatment on Sillimanite, use of Microwave sintering furnace in formation of Mullite from Sillimanite, use of microwave heating for gemstone industry were also discussed. Dr Rao also highlighted significant energy saving opportunities and eco-friendly production process with shorter time span using microwave heating.

Dr K Anand Rao, Scientific Officer/ H+ & Head, Mineral Beneficiation Section, Mineral Processing Division, BARC, Hyderabad delivered lecture on the topic 'Emerging Trends in the Processing of Strategic and Critical Metal Resources – Experiences'. Dr Rao highlighted the need to tap low grade resources of strategic and critical metals in India, their nature and occurrence. Further, challenges and exploitation of low grade conventional and unconventional resources were also delineated during deliberation. The emphasis of the presentation was to explore possible sustainable technologies for extraction of low grade resources such as; Advanced mining and characterization techniques; Energy efficient processes; Ore pre-concentration; Pre-treatment methods; Eco-friendly and economical technologies; Process intensification; Comprehensive Extraction; Water economy; Modeling and automation; Emerging technologies such as Deep Eutectic solvent extraction, Super critical fluid extraction and Membrane contactation. Few technologies elaborated in the presentation are Geometallurgy, Mobile plants, QUEMSCAN, High Pressure Grinding Rolls, Knelson/Falcon concentrators, Bio-heap leaching, Electro/Microwave/Ultrasonic assisted leaching, Pulsed Columns, Slurry extractors for Solvent Extraction, and Solvometallurgy.

During the second technical session, Dr G Venkateswara Rao, Deputy General Manager (MP), R&D Centre, NMDC Limited, Hyderabad delivered lecture on the topic 'Role of NMDC In Beneficiation & Utilisation of Low

Contd. on page 4



in defense, it is necessary to upgrade lean and off grade ores for use in various industrial applications. Mr B Brahma Reddy, Chairman, Telangana State Centre and Council Member, IEI delivered the welcome speech and chaired the session. Mr M Srinivasa Rao, Committee Member, Telangana State Centre, IEI & Convener of the event introduced about the theme. Past Chairmen, Past Honorary Secretaries, Council Members of IEI, Committee members of the host Centre, Corporate members and others were present on the occasion. Dr G Venkata Subbaiah, Honorary Secretary, Telangana State Centre, IEI proposed the vote of thanks at the end of the inaugural session.

Two technical sessions were organized on the occasion. During the first technical session, Dr Raghupatruni Bhima Rao, Geo Scientist & Former

Climate Change in the Arctic and Beyond

Contd. from page 1

audience. Mr Bhaskar Dutta, in his address briefed about various issues of climate change mitigation, carbon capture and decarbonization. In his address, Mr Dutta highlighted the financial implications in global perspective to shift from conventional to nonconventional energy platform.

Theme speaker of the event, Ms Elena Domes shared her own experience about the transformation of the arctic region day by day due to change in climate. Through pictorial presentation, she briefly introduced arctic stories, polar days and nights, climate change observations including disappearance of ice on river top and opined that the region got four times warmer. She explained the lifestyle in arctic region, gradual changes in climatic conditions and associated parameters in the region, seasonal agriculture and plantations. Then she spoke on the impact of arctic climate on the world. She discussed arctic portal, arctic boundaries, gradual reduction of arctic ice and its effect on the habitat, accelerated ice loss in Greenland ice sheet, Wilkes Basin, East Antarctica etc. She explained frequent draught in Amazon rain forest as the deep impact of climate change in arctic region. She explained the impact of ocean circulation due to polar process, influence of

sea ice on marine eco system, impact of climate change on ice sheets and glaciers and discharge of fresh water, which influence ocean circulation, eco system and global sea level. She further discussed the impact of stable and wavy polar vortex, movement of cold air, function of strong and weak jet stream, changing pattern of global foot print index, which is on the higher side. She also discussed biosphere integrity, carbon capture methodology, decarbonization, different issues in climate finance and so on. She mentioned that scientists are working hard to achieve cost effective solution for a sustainable climate. She also expressed her concern about the frequent heat waves occurring in India and Pakistan. Moderator of the event, Mr Anirban Datta mentioned that climate change is the mission for all sections and segments of the society, cutting across the boundaries of all



Mr Anirban Datta

engineering disciplines, science and technology. An interactive session was organized at the end of the lecture. Dr Raju Basak, Honorary Secretary, West Bengal State Centre proposed the Vote of Thanks.

Fire and Safety Issues and Challenges/Opportunities in Industries

South Gujarat Local Centre, IEI organized Technical Webinar on the theme **Fire and Safety Issues and Challenges/Opportunities in Industries** on 09 February 2022 under the aegis of Mechanical Engineering Division Board [MCDB]. Mr Dinanath Akela, Central Boiler Board, New Delhi and



Mr Dinanath Akela

BEE Certified Energy Manager and Dr D V Bhatt, Professor (Retd), Department of Mechanical Engineering, SVNIT, Surat were the panelists and Dr Ketan D Panchal, Assistant Professor, Department of Mechanical Engineering, Dr S & SS Gandhi Engineering College, Surat and Honorary Secretary, South Gujarat Local Centre was the moderator. The program was started with welcome address delivered by Dr Jignesh G Vaghasia, Chairman, South Gujarat Local Centre. Dr Enti Ranga Reddy, Chairman, MCDB, IEI in his address, stated that every industry requires a prioritized sense of, and action towards safety; Certain industries focus greater on ergonomic safety due to the occupational hazards they offer; Industries like construction, oil



Dr D V Bhatt

and gas, pharmaceuticals, FMCG, logistics, paint, automobile work with heavy equipment on a daily basis, increases the risk of injuries manifold, he mentioned. Dr Reddy further explained that in an era of highly competitive business environment, any interruption due to fire can be catastrophic as a major fire can bring a business to halt and interrupt the whole process of operations. He opined that proper monitoring and control of the sources of ignition, combustion and storage of inflammable material can reduce this probability; Frequent inspection and a well structured preventive maintenance schedule can lower the risk of accident followed by a well planned and clean shop floor. Dr G Ranganath, Chairman, CATE, IEI in his address explained that fire accident has a deadly impact upon the existence and performance of residential buildings as well as commercial establishments. He discussed at a length different stages of fire, classification of fire, different degrees of burn etc. Chairman, CATE further explained different causes of industrial fire, effect of hazardous chemicals and metals, applications of different categories of fire extinguishers. He concluded his address mentioning different academic curriculums on industrial safety and the career opportunities for the engineers. Dr Ketan D Panchal, moderator of the session introduced the panelists.

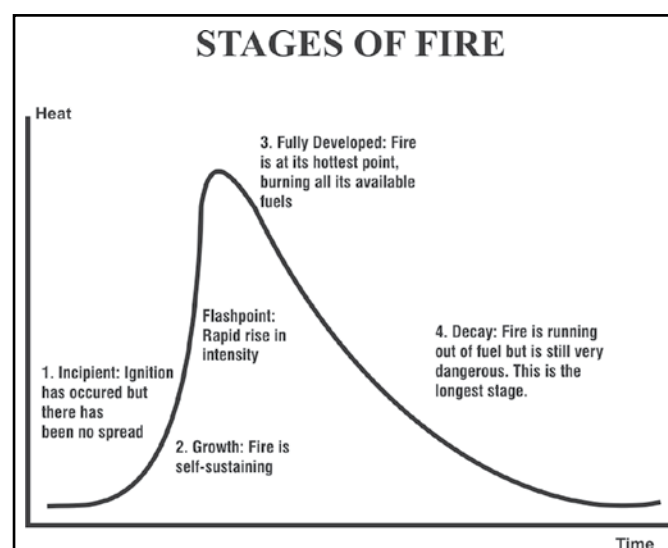


Dr Ketan D Panchal

Mr Dinanath Akela delivered lecture on the topic 'Recent Chemical Substances Related Accidents in India'. Mr Akela started his presentation with specifically mentioning the accidents occurred in industries due to hazardous chemicals. Then he discussed at a length the safety measures in power plants, preventive

measures, monitoring systems in different domains of power sector, which include boiler, turbine, pulverized coal storage, electrical equipment, electrical systems, etc. He also discussed on the acts, rules and regulations of storage of explosive and hazardous materials, significance of safety audits, mock drills and safety protocols, duties and responsibilities of safety personnel on shop floor etc.

Prof (Dr) D V Bhatt in his lecture focused on how to improve the safety awareness to reduce accident and enhance productivity. He emphasized on strict adherence of safety norms, standing orders and safety instructions as applicable for various machines and operating systems. He stressed on operating the machines with rated speed and feed to achieve optimum efficiency. He also emphasized on application of tools with right specifications at right point of operations and subsequent rejection of old ones. Prof Bhatt spoke on the proper training and development of personnel to operate hazardous machines and systems. He also analyzed the probable causes of accidents and advocated for using safety guards during operation. He further recommended adequate illumination in the workstations, proper ventilation, display of safety instructions at proper places and sole concentration during operation. He explained accident assessment procedure at shop floor, applications of personal protective equipment etc. The speaker concluded his lecture mentioning the key safety protocols and the role of supervisors to ensure safety measures at the shop floor. Moderator of the webinar, Dr Ketan D Panchal summed up the deliberations at the end of the session. A brief question-answer session was also organized, wherein the participants interacted with the Panelists. The programme concluded with the vote of thanks delivered by Dr Ketan D Panchal, Honorary Secretary, South Gujarat Local Centre, IEI.



Courtesy: Dr G Ranganath, Chairman, CATE, IEI

Advances in Mineral Processing Studies on Strategic and Critical Minerals of India

Contd. from page 3

Grade and Lean Grade Iron Ores'. He briefed the importance of minerals beneficiation, various techniques of beneficiation, role of R&D in beneficiation of minerals, role of NMDC Limited R&D Centre in beneficiation of low and lean grade iron ores, recovery of iron values from iron ore slimes, development of process flow sheet for beneficiation and utilisation of Banded Hematite Jasper, beneficiation of Banded Hematite Quartzite, production of Pellet Grade Concentrate from SGIO and so on. The session also covered the latest technologies used in processing of iron ore and non-conventional process of Beneficiation and different aspects of National Steel Policy.

Prof V V Basava Rao, Department of Chemical Engineering, and Director,

Academics and Research & Development, University College of Technology (A), Osmania University, Hyderabad delivered lecture on 'Applications of Gas-Solid Fluidized Bed Technology' and gave an overview of circulating fluidization Beds (CFB) and covered aspects on flow regimes, hydrodynamics, heat & mass transfer characteristics including industrial application of gas-solid fluidized bed systems in iron-ore processing, ilmenite roasting, alumina calcinations.

Mr A V Sheshagiri Rao, Chief Metallurgist, Azad Engineering Private Limited delivered lecture on the topic 'Quality Concepts for Process Improvements'. In his lecture, Mr Rao highlighted the importance of role of Quality Systems in various stages of mineral processing. He further explained different quality concepts and processes, which include POKA-YOKE, KAIZEN, 5S, QUALITY CIRCLE etc.

Unequal Cities – Bringing Balance through Development of Smart Cities: IoT based Smart City Infrastructure and it's Application Model

South Gujarat Local Centre, IEI in association with Idea & Innovation Cell, Veer Narmad South Gujarat University, Surat organized Technical Webinar on the theme **Unequal Cities – Bringing Balance through Development of Smart Cities: IOT based Smart City Infrastructure and it's Application Model** on 17 February 2022 under the aegis of Interdisciplinary Coordination Committee [ICC]. Dr Aditi Sharma, Associate Professor, Department of Computer Science and Engineering, Parul Institute of Technology, Parul University, Vadodara, Gujarat; Mr Pritimoy Sanyal, Head, Technology Cell, Maulana Abul Kalam Azad University of Technology, West Bengal and Dr Achyut Sarkar, Assistant Professor, Department of Computer Science & Engineering, National Institute of Technology, Arunachal Pradesh graced the function as panelists. Dr Ketan D Panchal, Assistant Professor, Department of Mechanical Engineering, Dr S & S S Gandhi Government Engineering College, Surat and Honorary Secretary, South Gujarat Local Centre was the moderator.

The event was started with the welcome address delivered by Dr Jignesh G Vagharia, Chairman, South Gujarat Local Centre, IEI. In his address, Dr Vagharia addressed the pertinent issues of smart cities, role of digital transformation and its derived benefit at large. Dr H O Thakare, President, IEI in his address explained smart city as a framework, predominantly composed of Information and Communication Technologies (ICT), to develop, deploy, and promote sustainable development practices to address the growing issues and challenges in urbanization; A major part of this ICT framework is an intelligent network of connected objects and machines, able to transmit data using wireless technology and the cloud. He also mentioned that in near future, two third of the world population will be leaving in urban areas, which will necessitate incorporating intelligent services to meet the needs of the residents. An emerging solution to deal with this scenario is the convergence of information and communication technologies through the implementation of the concepts of smart cities and Internet of Things to provide solutions in diverse fields like infrastructure, transportation, and surveillance, add Dr Thakare.



Dr Aditi Sharma

Dr Aditi Sharma, in her presentation introduced smart cities as the optimization of city functions and acceleration of economic growth through utilization of smart technologies. She explained the role of fourth industrial revolution in the transformation of smart cities by means of digital revolution. The speaker explained the function of IoT for changing the business dimensions through introducing smarter products, sound connectivity through real time communications, convergence of operations and information through advanced analytics and so on. She deliberated on the advancement, perspectives, challenges in technical standardization of IoT and smart cities. She explained A 7 layer of smart cities, namely infrastructure, acquisition, interconnection, integration, analytics, apps and services. She also deliberated on the challenges to implement smart cities infrastructure, different smart services etc.



Mr Pritimoy Sanyal

Mr Pritimoy Sanyal delivered his presentation on the topic 'Smart Farming for Smart City'. He had started his deliberation with the problems associated with traditional farming, namely small and fragmented land holdings, deficiency in soil performance due to low grade fertilizers, biocides and manure, growing urbanization and lack of farm mechanization. He explained the application

of AI based classifier as an useful tool for precision farming and application of image processing for disease prediction and identification, deep learning based weather monitoring and forecasting, IoT based precision farming, which include remote based agriculture monitoring. He explained the working principle of cost effective polyhouse for creating controlled environment, which is characterized by sensor based applications, hybrid nutrient film technology, application of IoT based alignment sensors, controlled and limited use of water etc. The speaker emphasized on more research and collaboration for smart farming, development of cost effective microclimate weather station, organizing more workshops on greenhouse maintenance etc.



Dr Achyut Sarkar

Dr Achyut Sarkar presented his lecture on the topic 'IoT based Smart City Infrastructure and its' Application Model'. He started his lecture with smart city concept and the objective to implement smart city infrastructure to optimize city functions and promote economic growth, that results improvement of the quality of life for citizens using smart technologies and data analysis. He explained

application of IoT in smart city infrastructure and explained IoT as the network of connected devices that communicate and exchange data, which may include vehicles to home appliances and on street sensors. He further added that IoT devices use edge computing, which ensure that only the most relevant and important data is delivered over the communication network; Additionally, a security system is implemented to protect, monitor and control the data transmission from the smart city network and prevent unauthorized access to the city IoT network. He stated different features of smart city initiatives, which include energy conservation, application of smart grid technologies, enhancement of environmental efficiency, waste management and sanitation through internet enabled rubbish collection, bins and fleet management systems. He also discussed other characteristics of smart cities, which include real time space management, structural health monitoring, improved productivity etc. Dr Sarkar explained four-step working principle of smart cities, namely; Real time data collection through smart sensors; data analysis to gain meaningful insights into the operations of city services; Communication of data analysis output to the decision maker and; Actions to improve operations, asset management and improvement of the quality of city life. The speaker further focused on the security of smart cities and stressed on implementation of physical data vaults, resilient authentication management, when government, software developers, private agencies, device manufacturers and the network service managers need to work together to deliver integrated solutions with core security objectives. The speaker also discussed smart healthcare system for smart cities, role of IoT, Blockchain Technology in smart healthcare and so on. In his concluding remarks, the speaker strongly advocated for instituting smart interconnected systems for urban areas, which provide immense benefits for the citizens around the world not only to improve the quality of life, but also to ensure sustainability and the best possible use of resources.



Dr Ketan D Panchal

A question-answer session was held at the end of the webinar, when the panelists shared their expertise with the participants. Moderator of the session, Dr Ketan D Panchal summed up the deliberations and at the end of the session and proposed the vote of thanks.

Computer Application in Mining

Durgapur Local Centre, IEI organized Technical Webinar on the theme **Computer Application in Mining** on 27 February 2022 under the aegis of Mining Engineering Division Board [MNDB]. Prof (Dr) Netai Chandra Dey, Professor (HAG), Department of Mining Engineering, IEST Shibpur and Chairman, Mining Engineering Division Board, IEI; Dr Arindam Biswas, Associate Professor and Head, Mining Engineering Department, Kazi Nazrul University, Asansol; Mr Ali Murtoja Shaikh, Deputy Manager, Mining, Coal India Limited and Dr Joydeep Dutta, Assistant Professor, Department of Computer Science, Kazi Nazrul University graced the function as panelists and shared their thoughts with the august audience. Mr Ranadeep Bhattacharjee, Deputy Manager, Coal India Limited and Mr Manoj Kumar Biswal, Senior Technical Officer, CSIR-CMERI, Durgapur and Immediate Past Honorary Secretary, Durgapur Local Centre, IEI moderated the session. The programme was started with the welcome address delivered by Mr Safikul Islam, Chairman, Durgapur Local Centre, IEI. In his address, Mr Islam highlighted technological intervention in mining sector including automation and digitalization. Dr G Ranganath, Chairman, CATE, IEI in his address stated the significance of monitoring the mining operations through computer applications. He further encouraged the participants to be the Corporate Members in Mining Engineering Division. Prof (Dr) Netai Chandra Dey, Chairman, Mining Engineering Division Board briefed the august audience about the appropriateness of the theme of the webinar. In his address, Prof Dey stated that with increased mechanization and automation in mining practices, application of electronic instruments apart from communication and office applications paving its way towards computerization and digitization of mining operations that have a deep impact from environmental and social perspectives. He explained the significance of sustainability in mining operations to improve the operational efficiency, which results short and long term benefits of the organizations and benefits of the society at large. Mr Manas Majumdar, Honorary Secretary, Durgapur Local Centre introduced the moderators of the webinar session. Mr M K Biswal, moderator of the session highlighted the theme of the seminar and explained the application of software based mine planning. He also mentioned the new dimensions and imaginative accuracy of mine survey with modern chip based instruments.



Prof (Dr) Netai Chandra Dey



Dr Arindam Biswas

Prof (Dr) Netai Chandra Dey delivered his lecture on the topic 'Computer based Application of Ergonomic Concepts in Mining'. In his lecture, Prof Dey deliberated on human-machine interface; ergonomics; application of various software to identify basic ergonomic rating for persons engaged in mines; computer application in ergonomics to improve safety and efficiency of workforce. He explained that ergonomics are related to human and their job; In larger scope, ergonomics examines human behavioral, and physiological capabilities and limitations; Professionals in the field of ergonomics normally design new work environments or modify established work environments based on the studies on the human capabilities and limitation; The basic premise of ergonomics is that job demands should not exceed workers' capabilities and limitations to ensure that they would not be exposed to work stresses that can adversely affect safety and health as well as the company's productivity. Therefore, the objective of an ergonomics program is to provide a safe and productive workplace to the worker's comfort to fulfil the goals and objectives of the organization, he added. Prof Dey further discussed the Ergonomics Risk Factors (ERF), namely Awkward Posture, Force, Repetition, Vibration, Static Loading, Contact Stress and Extreme Temperature. He stated that longer shift lengths and fatigue, mental overload and under load, intermittent heavy physical work, reduced task variation, sedentary work in fixed postures and whole-body vibration leads to risks for health and safety.



Dr Joydeep Dutta

Dr Arindam Biswas, delivered his lecture on the topic 'IIoT for the Mining Industry: Open Research Directions'. He explained Industrial Internet of Things as the convergence of information and operation technology and discussed the application of the same for mine safety and other mining applications. He discussed different stages of mining life cycle and explained Industrial Internet Reference Architecture, RAMI 4.0 six layer IIoT Architecture and its applications in mining industry, M2M IIoT architecture, Arrow head framework, key challenges in mining industry, synthesized IIoT architecture for Mining industry etc.



Mr Ali Murtoja Shaikh

Dr Joydeep Dutta in his lecture, focussed on the core mining areas, where computers are applied, namely survey machines, material handling, GPS system, preservation of operational mining data etc.

Contd. on page 10

One Day Seminar under the aegis of Chemical Engineering Division Board

Waste Management and Environmental Sustainability

Indore Local Centre, IEI in association with the Medi-Caps University, Indore organized One day Seminar on the theme Waste Management and Environmental Sustainability on 22 April, 2022 at Indore, on the occasion of observation of International Earth Day. Dr D K Wagela, Senior Scientist, Madhya Pradesh Pollution Control Board [MPPCB] graced the function as Chief Guest. In his address, Dr Wagela threw light on different issues of environmental management. He spoke on water crisis, deforestation and quality of air. He further briefed the audience about various initiatives taken by MPPCB and Indore Municipality about water recharging. Keynote speaker



of the session, Dr Pramey Upadhyaya delivered lecture on the topic 'Next Generation Energy Efficient Computing' and enlighten the audience about the application of next generation computers to save the mother earth. Keynote speaker, Dr Kishore Pawar in his lecture deliberated the life cycle of butterflies and their contribution in maintaining the ecosystem through the pollination. Dr Yashbir Singh Shivay, Principal Scientist, ICAR New Delhi delivered the theme lecture and discussed on municipal solid waste management, latest technologies for converting the organic solid waste to compost etc. Dr Pankaj Patidar, G M Environment Arvind Limited, Ahmedabad delivered his address on the topic 'Utilization of ETP Sludge generated from Textile Industries as an Alternative Fuel' and highlighted the best utilization of waste in the form of energy. Prof (Dr) S D Upadhyaya discussed on climate change, global warming etc and stressed on more plantation. Dr D K Patnaik, Vice Chancellor, Medi-Caps University emphasized on taking small steps to save the mother earth. Prof (Dr) Ms Shilpa Tripathi, Chairman, Chemical Engineering Division Board was present in the event and briefed the audience about the importance of International Earth Day.

IEI DIARY



Agricultural Engineering Division

Thirty-fifth National Convention of Agricultural Engineers on **"Utilization of Modern Technologies in Agricultural Engineering for Sustainable Agriculture Production"**

Hosur, September 16-17, 2022

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

Aerospace Engineering Division

Thirty-fifth National Convention of Aerospace Engineers on **"Smart Materials and their Applications in Aerospace Structures"**

Chandigarh, November 25-26, 2022

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

Civil Engineering Division

All India Seminar on **"Water Security : Challenges for Present and Future"**

Ranchi, August 20-21, 2022

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, PO : Doranda, Ranchi 834002 [☎: 0651-2491344, Mobile: 9431382798, E-mail : jharkhandsc@ieiindia.org, Website: ieijscjharkhand.org]

All India Workshop on **"Fire and Disaster Mitigation"**

Lucknow, August 27-28, 2022

The Honorary Secretary, IEI, Uttar Pradesh State Centre, Engineers' Bhawan, River Bank Colony, Lucknow 226018, Ph: 0522-2625322, E-mail : upsc@ieiindia.org, Website: www.ieiup.org.in]

All India Seminar on **"IoT in Civil Engineering"**

Chennai, September 01-02, 2022

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

All India Workshop on **"Design Competition of Domestic Incinerator for Semi-wet Waste"**

Kollam, September 17-18, 2022

The Honorary Secretary, IEI, Kollam Local Centre, Department of Chemical Engineering Building, TKM College of Engineering, Kollam 691005, Kerala [☎: 0474-2716699, Fax: 0474-2712023, E-mail: kollamlec@ieiindia.org, Website: www.ieikollamlec.org]

Thirty-seventh National Convention of Civil Engineers on **"Emerging Technologies and Seismic Concerns"**

Indore, October 16-17, 2022

The Honorary Secretary, IEI, Indore Local Centre,

SGSITS Campus, 23, Sir M Visvesvaraya Marg (Park Road), Indore 452003 [☎: 0731-2434057, E-mail: indorelc@ieiindia.org, Website: www.ieindia.org]

All India Seminar on **"Use of Green Technology in Road Construction"**

Ranchi, November 12-13, 2022

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, PO : Doranda, Ranchi 834002 [☎: 0651-2491344, Mobile: 9431382798, E-mail : jharkhandsc@ieiindia.org, Website: ieijscjharkhand.org]

Chemical Engineering Division

Thirty-seventh National Convention of Chemical Engineers on **"Battery Energy Storage System"**, Chennai, September 09-10, 2022

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

Computer Engineering Division

All India Seminar on **"Role of AI, Machine Learning & Data Science in Modern Era"**

Bareilly, September 27-28, 2022

The Honorary Secretary, IEI, Bareilly Local Centre, 44, Camphor State Colony, Near Camphor Estate Colony, Rampur Road, C B Ganj, Bareilly 243502, Uttar Pradesh [Mobile: 9634953691, E-mail: bareillylc@ieiindia.org]

All India Seminar on **"Fullstack Developer Skills Breakdown along with AWS and Kubernetes"**

Kattankulathur, September 27-28, 2022

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

Thirty-fifth National Convention of Computer Engineers on **"Cyber Security/Privacy"**

Bareilly, February 18-19, 2023

The Honorary Secretary, IEI, Bareilly Local Centre, 44, Camphor State Colony, Near Camphor Estate Colony, Rampur Road, C B Ganj, Bareilly 243502, Uttar Pradesh [Mobile: 9634953691, E-mail: bareillylc@ieiindia.org]

Electrical Engineering Division

All India Seminar on **"Domestic Energy Audit Training"**

Tiruvallur, July 15-16, 2022

The Honorary Secretary, IEI, Tiruvallur Local Centre, A 301, Anna Block, Dr MGR Educational and Research Institute, Maduravoyal, Chennai 600095, [☎: 8838566419, E-mail: tiruvallurlec@ieiindia.org, Web: www.ieitvlc.org]

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

Kanchepuram, July 27-28, 2022

The Honorary Secretary, The Institution of Engineers (India), Kanchepuram Local Centre, Jerusalem College of Engineering Campus, Velachery Main Road, Narayanapuram, Pallikaranai, Chennai 600100 [Mobile: 9789924739, E-mail: kanchepuramlec@ieiindia.org, Website: ieindiaklc.org]

All India Seminar on **"Opportunities and Challenges of Electric Vehicles in Agriculture"**

Kattankularthur, August 18-19, 2022

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

All India Workshop on **"IoT Based Monitoring of Solar PV System"**

Chennai, August 30-31, 2022

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

Thirty-seventh National Convention of Electrical Engineers on **"Green Energy and Clean Energy for New India"**

Jabalpur, November 12-13, 2022

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

Electronics and Telecom. Engineering Division

All India Workshop on **"Trends in Data Communication & AI"**,

Jaipur, July 24-25, 2022

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

All India Seminar on **"Fundamentals of Artificial Intelligence"**

Kanchepuram, July 29-30, 2022

The Honorary Secretary, The Institution of Engineers (India), Kanchepuram Local Centre, Jerusalem College of Engineering Campus, Velachery Main Road, Narayanapuram, Pallikaranai, Chennai 600100 [Mobile: 9789924739, E-mail: kanchepuramlec@ieiindia.org, Website: ieindiaklc.org]

All India Seminar on **"Recent Trends in Antenna Engineering and Applications in Biomedical Field"**

Chennai, August 23-24, 2022

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

All India Seminar on "Recent Trends and Research Issues in Image Processing"

Coimbatore, October 19-20, 2022

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

Thirty-seventh National Convention of Electronics & Telecommunication Engineers on "The Impact of 5G: Creating New Value across Industries and Society"

Hyderabad, November 18-19, 2022

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

Environmental Engineering Division

Thirty-sixth National Convention of Environmental Engineers on "Technology for Green Fireworks: Holistic approach towards Environmental Challenges"

Madurai, August 26-27, 2022

The Honorary Secretary, IEI, Madurai Local Centre, Er T M Jambulingam Bhavan, No.1, Vivekananda Nagar, 120 Feet Road, Surveyor Colony, K Pudur, Madurai 625007 [☎: 0452-4373067, E-mail: madurailc@ieindia.org]

All India Seminar on "Recycle and Reuse of Wastewater"

Bareilly, October 16-17, 2022

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

Marine Engineering Division

Thirty-sixth National Convention of Marine Engineers on "Contemporary Developments in Maritime Technologies"

Visakhapatnam, October 15-16, 2022

The Honorary Secretary, IEI, Visakhapatnam Local Centre, 43-18-22, "Visvesvaraya Bhavan", Venkatarajunagar, Railway Station Road, Visakhapatnam 530016 [☎: 0891-2947460, E-mail: visakhapatnamlc@ieindia.org]

All India Seminar on "Smart and Sustainable Marine Operations: Emerging Paradigm"

Ranchi, January 07-08, 2023

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, PO : Doranda, Ranchi 834002 [☎: 0651-2491344, Mobile: 9431382798, E-mail : jharkhandsc@ieindia.org, Website: ieijscjharkhand.org]

Mechanical Engineering Division

All India Seminar on "Advancements in Bio Fuels"

Chennai, August 18-19, 2022

The Honorary Secretary, IEI, Tamilnadu State Centre, No. 19, Swami Sivananda Salai, Chepauk, Chennai 600005 [☎: 044-25360614

/9962950333, E-mail: tnscc@ieindia.org, Website : www.ieitnsc.org]

All India Seminar on "Challenges in the Processing of Titanium alloys for Defense, Aerospace and Marine Applications"

Chennai, August 25-26, 2022

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

All India Seminar on "An Application and Performance Analysis of Refractories in the Thermal Power Plant"

Bokaro Steel City, December 17-18, 2022

The Honorary Secretary, IEI, Bokaro Steel City Local Centre, Abhiyanta Bhawan, Sector V-A, Bokaro Steel City 827006, [☎: 06542-267227, E-mail : bokarolc@ieindia.org, Web: www.bokarolc.org]

All India Seminar on "Digital Image Processing and Image Correlation Techniques for Defect and Deformation Measurement"

Kattankulathur, October 24-25, 2022

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

Thirty-seventh National Convention of Mechanical Engineers on "Advances in Battery Technologies for Electric and Hybrid Vehicles" Hyderabad, December 09-10, 2022

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

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

Nagpur, September 08-09, 2023

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

Metallurgical & Materials Engg. Division

All India Seminar on "Latest Developments in Engineering Materials and Manufacturing Processes"

Jaipur, September 17-18, 2022

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

Thirty-fifth National Convention of Metallurgical & Materials Engineers "Low-grade Ore and Waste: Challenges and Remedies"

Durgapur, January 21-22, 2023

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

Mining Engineering Division

Thirty-second National Convention of Mining Engineers on "Occupational Health Problem and Remedial Measures in Mining Operation"

Durgapur, 03-04 December, 2022

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

Production Engineering Division

All India Seminar on "Lean Manufacturing to Minimize Waste in Production Systems"

Kancheepuram, August 12-13, 2022

The Honorary Secretary, The Institution of Engineers (India), Kancheepuram Local Centre, Jerusalem College of Engineering Campus, Velachery Main Road, Narayanapuram, Pallikaranai, Chennai 600100 [Mobile: 9789924739, E-mail: kancheepuramlc@ieindia.org, Website: ieindiaklc.org]

Thirty-sixth National Convention of Production Engineers on "Smart Manufacturing"

Chennai, July 28-29, 2022

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

Contd. from page 12

From the President's Desk.....

Contd. from page 1

objective to make India self-reliant in the defence sector, private sectors have been invited to come forward in manufacturing as well as in the design and development of defence items to bring in fresh perspective to this otherwise classified sector. Today, India is one of the key player in the global economic landscape. The country's trade policies, government reforms, schemes and inherent economic strengths have positioned it as one of the most sought-after destinations for foreign investments. With the stage set, the engineers need to step in and contribute towards making this dream a reality.

IEI Celebrates

World Engineering Day for Sustainable Development 2022

Theme
**Build Back Wiser
Engineering the Future**

World Engineering Day for Sustainable Development was celebrated by the Centres of the Institution all over the country on March 04, 2022. Brief accounts of the celebration as received from various Centres are reported hereunder.

STATE CENTRES

Goa

Goa State Centre, IEI observed World Engineering Day for Sustainable Development on 04 March 2022 at Goa. Mr Nitin Kantak, Executive Director, Zuari Agro Chemicals Limited, Goa graced the function as Chief Guest. On the occasion, two guest speakers, Dr Balaji Ramakrishnan, Professor, Department of Civil Engineering, Indian Institute of Technology Bombay



and Mr Vaman Gaitonde, Ex-Managing Director, Modest Infrastructure Private Limited, Goa shared their knowledge and expertise with the audience. Mr Kantak, in his address highlighted that energy

through nuclear fission, material stronger than steel but lighter than plastic, technology to obtain fuel from carbon dioxide are the major breakthrough for sustainable development. Mr Gaitonde in his address presented the facets of clean water, sanitization, affordable and clean energy, sustainable cities and communication, climate action for sustainable development. Dr Balaji Ramakrishnan presented number of case studies, which include Harbour for Kuwait Oil Company; Thane creek Waterway; Development of Artificial Islands, Upper Zakum, Abu Dhabi, UA; Tunis Lake Development, Tunisia; Salam Beach Development, Bahrain; MAS Borrow, Bahrain etc. Earlier, Mr Gajanan Harihar Karkare, Chairman, Goa State Centre, IEI delivered the welcome address. At the end of the session, Mr Austin Socorro Rodrigues, Honorary Secretary, Goa State Centre, IEI conveyed the vote of thanks.

Madhya Pradesh

Madhya Pradesh State Centre, IEI observed World Engineering Day for Sustainable Development on 4 March 2022 through online mode. Keynote speaker of the session, Dr H L Tiwari, Associate Professor, Department of Civil Engineering, MANIT, Bhopal spoke on Watershed Management. Guest Speaker of the session, Mr Prabhat Kumar, Senior Manager, BHEL, Bhopal delivered lecture on environment friendly self-lubrication in hydro turbines and pumps. Mr Jayesh Jasnardhanan, Manager, BHEL, Bhopal in his lecture discussed on PTFE Tribology in thrust bearing and Guide Bearing Technology in vertical machines. Earlier, on behalf of Madhya Pradesh State Centre, Dr Bharat Modhera, Organising Secretary of the event welcomed the dignitaries and participants. At the end of the session, Mr Sunil Joshi, Co-convenor of the event proposed the vote of thanks.

LOCAL CENTRES

Alwar

Alwar Local Centre, IEI, in collaboration with Safety & Quality Forum, IEI observed World Engineering Day for Sustainable Development & National Safety Day on 06 March 2022 at Alwar. Special Guest of the event, Mr Sajjan Singh Yadav, Council Member IEI expressed his views on the theme



of the day. Mr Praveen Kumar Singh, Director, Safety Quality Forum, New Delhi was present in the event as Special Guest of Honour and addressed the audience. At the beginning, Mr Subhash Chandra Joshi, Chairman, Alwar Local Centre, IEI welcomed all guests. Mr Raj Deep Sharma, Honorary Secretary, Alwar Local Centre, IEI proposed the vote of thanks.

Anantapuram

Anantapuram Local Centre, IEI observed World Engineering Day for Sustainable Development on 01 April 2022 through online mode. Keynote Speaker of the session, Prof C Sashidhar, Registrar, JNT University, Anantapuram in his address emphasized on addressing climate change issues and developing technologies for a carbon free economy. The speaker deliberated at a length on waste recycle and stressed on the philosophy of Reduce, Reuse and Recycle. In the beginning, Prof (Dr) Ms Chigarapalle Shoba Bindu, Honorary Secretary, Anantapuram Local Centre, welcomed the guests. Dr B Dileep Kumar, Associate Professor, Chemical Engineering Department, Jawaharlal Nehru Technological University (JNTU), & Dr B Lalitha, Coordinator, Software Development Centre, JNTU, Anantapuram were present on the occasion and shared their views.

Asansol

Asansol Local Centre, IEI observed World Engineering Day for Sustainable Development on 04 March 2022 and a webinar was organized on the occasion. Chief Guest of the function, Dr Sambit S Mondal, Electronics and Communication Engineering Department, Asansol Engineering College WB in his address emphasized on technology transfer for the betterment of the society. Speaker of the event, Mr Kantilal Parihar, AGM, Facilities SAIL-ISP, Burnpur IISCO delivered lecture on the occasion. Mr Tarun Tapan Lahiri, Chairman, Asansol Local Centre, IEI delivered the welcome speech. Mr Sumanta Karmakar, Honorary Secretary, Asansol Local Centre, IEI proposed the vote of thanks at the end of the session.

Dharwad

Dharwad Local Centre, IEI observed World Engineering Day for Sustainable Development on 04 March 2022 at Dharwad. Chief Guest of the function, Dr Prakash M Kulkarni, President, Bhageerath Mysuru called upon the engineers to focus on the detrimental impact of water pollution on human life and livelihood, restructuring water governance for the future, making service providers accountable, transparent in decision making and costing for services. Mr Vijaykumar Hanamantappa Totiger, Chairman, Dharwad Local Centre, IEI in his



address mentioned that robust information and societal engineering, requires communication infrastructure to ensure availability of healthcare, clean water and sanitation, affordable housing and efficient urban mobility and public transport. Mr Sidlingappa Sangappa Kerur, Honorary Secretary, Dharwad Local Centre, IEI proposed vote of thanks.

Erode

Erode Local Centre, IEI observed World Engineering Day for Sustainable Development on 19 March 2022 through online mode. Speaker of the event, Dr M Srinivasan, Professor & Head, Department of Electrical & Electronics Engineering, Navodaya Institute of Technology, Raichur, Karnataka stated that engineering solutions need to be consider the traditional drivers of quality, cost, time, etc and these solutions need to demonstrate value clearly. Prof (Dr) R Nallusamy, Chairman, Erode Local Centre, IEI welcomed all the members and briefed about the importance of the programme. Prof (Dr) Kumaravelan Radhakrishnan, Honorary Secretary, Erode Local Centre, IEI proposed the vote of thanks.

Jabalpur

Jabalpur Local Centre, IEI observed World Engineering Day for Sustainable Development on 04 March 2022 through online mode. Mr Amrendra Narayan, Past Secretary General, Asia Pacific Telecommunity delivered the Keynote address. Mr Arvind Sharma, Principal, Jabalpur Engineering College, Jabalpur and Dr Indra Kumar Khanna, Group Director, Takshshila Institute of Engineering and Technology, Jabalpur delivered Guest Lecture on the occasion. Mr Rakesh Kumar Rathore, Council Member IEI was present in the event and addressed the audience. Mr Sanjay Kumar Mehta, Honorary Secretary, Jabalpur Local Centre, IEI proposed the vote of thanks.

Kochi

Kochi Local Centre, IEI observed World Engineering Day for Sustainable Development on 04 March 2022 through online mode. Dr Usha S, Professor and Head, Department of Civil Engineering, Sree Narayana Gurukulam College of Engineering, Kadayripu, Ernakulam well explained about geopolymers binders and its industrial applications. Earlier, Mr P A Salahuddeen, Chairman, Kochi Local Centre delivered the welcome address. Mr Babu K S, Honorary Secretary, Kochi Local Centre proposed the vote of thanks.

Kota

Kota Local Centre, IEI observed World Engineering Day for Sustainable Development on 06 March 2022 at Kota. Mr V S Sharma, Former Director, Department of Technical Education, Rajasthan graced the function as Chief Guest. Keynote speaker of the event, Prof (Dr) Sanjeev Mishra, Mechanical Engineering Department, Rajasthan Technical University, Kota in his address highlighted the journey of industrialization with vivid and interesting

milestones of technological advancement for betterment of the society at large. He deliberated on information technology driven manufacturing systems, application of Cyber Physical Systems (CPS), Internet of Things (IoT), Cyber Security, Additive Manufacturing, Simulation, Augmented

Reality, Horizontal and Vertical Integration, Autonomous Robots etc. Earlier, Mr Devendra Kumar Bhargava, Chairman, Kota Local Centre delivered the welcome address. He further explained about the theme and introduced the



Chief Guest & Keynote speaker.

Palghat

Palghat Local Centre, IEI, organized World Engineering Day for Sustainable Development on 04 March 2022 and a webinar was organised on this occasion. Keynote Speaker of the day, Dr P R Sreemahadevan Pillai, Director, Ahalia Group of Academic Institutions in his address mentioned that the day offers an opportunity to highlight the engineering achievements and implementation of new technologies including basic need for food, health, housing, roads, water, energy and management of planet's resources. Engineering is the vital profession in addressing basic human needs in alleviating poverty, promoting secure and sustainable development, responding to the emergency situations, reconstructing infrastructure, bridging the knowledge divide and promoting intellectual cooperation, added Dr Pillai. Earlier, Mr K Madhana Mohan, Chairman, Palghat Local Centre, IEI delivered the welcome address. At the end of the session, Prof (Dr) C Pradip, Honorary Secretary, Palghat Local Centre, IEI proposed the vote of thanks.

Tiruchirappalli

Tiruchirappalli Local Centre, IEI observed World Engineering Day for Sustainable Development on 4 March 2022 and a webinar was organized on the topic 'Engineering for a Healthy Planet'. Speaker of the event, Dr S Ravimaran, Principal and Professor, Department of Computer Science and Engineering, MAM College of Engineering, Tiruchirappalli in his lecture mentioned that sustainable development aims to balance environmental, social and economic factors. He discussed on development of resources in a sustainable manner with reduced energy consumption through the development of energy efficient industrial processes, application of low energy lighting systems etc. Earlier, Mr R Selvaraj, Past Chairman, Tiruchirappalli Local Centre, IEI welcomed the speaker and participants. Mr Kevin Ark Kumar, Honorary Secretary, Tiruchirappalli Local Centre proposed the vote of thanks.

Computer Application in Mining

Contd. from page 6

He further spoke on intelligent and smart mining, application of automation and robotics in mining, application of expert systems and machine learning in mining applications, etc. In his concluding remark, Dr Dutta stated that larger mining operations apply more digital technologies and minor producers require digital transformation solutions tailored to their capabilities and needs, applicable to their scale of operations.



Mr Ratnadeep Bhattacharjee

Mr Ali Murtoja Shaikh in his lecture, discussed the role of IT in Mining sector, emanated from the recommendations of 12th National Safety Conference, held on January 2020, which include digital tracking of machinery, development of digital platform for rescue operations etc. He explained the application of different software to collate and analyse geotechnical information, reserve estimation calculation, geological modelling, mine

design, pit optimization, blasting optimization etc. He explained the function of GEOVIA Minex, the recognized software for geological modelling and mine planning solutions for coals and other stratified deposits like limestone, bauxite etc. He also discussed the application of BlastIQ software for an effective centralized Blast Information Management, application of software for communication between surface to underground etc.



Mr Manoj Kumar Biswal

Moderator of the session, Mr Ratnadeep Bhattacharjee summed up the proceedings of deliberations. Mr Bhattacharjee briefed that the presentations given by the speakers in the respective field of their expertise are highly informative and research oriented with huge in-depth knowledge, which is definitely very much useful for the participants. Mr Manas Majumdar, Honorary Secretary, Durgapur Local Centre proposed the Vote of Thanks.

IEI Celebrates World Water Day



Theme- Groundwater: Making the Invisible Visible

The World Water Day was celebrated by the Institution all over the country on March 22, 2022.

Accounts of celebration received from various Centres and Forum are reported hereunder.

STATE CENTRES

Delhi

Delhi State Centre, IEI observed World Water Day on 22 March 2022 in association with Delhi Technological University and Safety & Quality Forum IEI at Delhi and also organized a Seminar on the occasion. Chief Guest Mr N Nigam, Senior Scientist, Ministry of Earth Sciences, Government of India stated that human activities and climate variability results in mounting pressure on invisible groundwater resources and consequently pollution and over-extraction problems are reported in different parts of the world. Guest of Honour of the session, Mr Dinesh Kumar, Chairman, Safety and Quality Forum, IEI also spoke on the theme. On the occasion, Dr A Mukherjee, Former Scientist, Central Ground Water Board, Ministry of Jal Shakti, Government of India delivered lecture on the topic 'Prevalence, Fate, Toxicity and Management of Arsenic in Groundwater; Mr Ankur Sawhney, Senior Manager, Absolute Water Private Limited, Delhi presented on the topic 'Water Treatment, Reuse and Recycle; and Dr Neetu Rani, Assistant Professor, Guru Govinda Singh Indraprastha University [GGSIU], Delhi on the topic 'Wetlands for Water Conservation'. Earlier, Dr Santosh Kumar Singh, Chairman, Delhi State Centre, IEI delivered welcome address. At the end, Mr Rajesh, Honorary Secretary, Delhi State Centre, IEI proposed the vote of thanks.

Karnataka

Karnataka State Centre, IEI observed World Water Day on 22 March 2022 at Bengaluru. Keynote speaker of the event, Dr K R Sooryanarayana, Former Regional Director, Central Ground Water Board, Government of India briefly outlined the groundwater and rural drinking water supply scenario in India. He mentioned that the aquifers are under the threat of over-exploitation



and contamination due to unscientific extraction of the resource. He further opined that the activities on water conservation, artificial recharge of ground water resources and Water use Efficiency (WUE) need to be

focussed more. Earlier, Dr Enti Ranga Reddy, Honorary Secretary, Karnataka State Centre presented the Inaugural Address and stated the importance of water as a life source for human beings, industries and all other respective platforms. At the end, he also proposed the vote of thanks and appreciated the speaker for his lucid presentation on the subject.

Tamilnadu

Tamilnadu State Centre, IEI, observed World Water Day on 22 March 2022 through online mode. Guest Speaker of the event, Mr Ramesh Subramanian, Founder and Consultant, RMET Consultancy, Chennai highlighted the importance of availability of fresh water and needs to conserve water. He further pointed out the scarcity of ground water due to accelerated industrialization. Earlier, Mr S Kannan, Chairman, Tamilnadu State Centre, IEI welcomed the audience. At the end, Mr K N Sivaraju, Honorary Secretary, Tamilnadu State Centre, IEI proposed the vote of thanks.

Telangana

Telangana State Centre, IEI, observed World Water Day on 22 March 2022 through online mode. Chief Guest and Speaker Mr V Prakash Rao, Chairman,

Telangana Water Resources Development Corporation Limited & Chairman, Telangana Peninsular River Basins Council addressed the gathering and delivered a lecture on the theme. In his address, Mr Rao emphasized on introducing academic curriculum on water conservation. Earlier, Mr B Brahma Reddy, Chairman, Telangana State Centre, IEI welcomed the dignitaries and participants. At the end, Dr G Ventaka Subbaiah, Honorary Secretary, Telangana State Centre, IEI proposed the vote of thanks.

LOCAL CENTRES

Aligarh

Aligarh Local Centre, IEI observed World Water Day on 22 March 2022 at Aligarh. Guest of Honour, Prof Mukhtar Ahmad, Former Professor, Department of Electrical Engineering, AMU, Aligarh stated the importance of water in different spheres and emphasized that engineers who are the policy makers must incorporate suitable policy for water security and measures to reduce the wastage of water. Prof Mohammad Kamil, Department of Petroleum Studies, ZHCET, AMU, Aligarh and former Chairman, Aligarh Local Centre, IEI highlighted the importance of water in the present scenario. Earlier, Mr Suresh Chandra Gupta, Chairman, Aligarh Local Centre, IEI delivered the welcome address. Prof Mohammad Kamil proposed the vote of thanks.

Bareilly

Bareilly Local Centre, IEI observed World Water Day on 22 March 2022 at Bareilly. Speaker of the event, Mr Z N Khan, Former Chief Engineer, Jal Sansthan, Uttarakhand highlighted the importance of groundwater, which is a vital resource of drinking water as well as indispensable for agriculture and industry. It also sustains the ecosystems, maintains base flow of rivers,



prevents land subsidence, seawater intrusion and climate change adaptation, he mentioned. Mr Khan explained ground water as a significant part of climate change adaptation process and is often a solution for people without access to safe water. Earlier

Mr Sudhir Kumar Gupta, Chairman, Bareilly Local Centre, IEI deliberated welcome address and stated that groundwater is the key resource of the planet, which should be protected from pollution and exploitation. Mr S C Mehra, Immediate Past Chairman, Mr Suresh Chandra Sundrani and Mr K B Agarwal, Past Chairmen, Bareilly Local Centre; Dr Pankaj Omprakash Sharma, Immediate Past Honorary Secretary, Bareilly Local Centre also shared their views on the theme. At the end, Mr Mahendra Kumar Agarwal, Honorary Secretary, Bareilly Local Centre, IEI proposed the vote of thanks.

Brahmapur

Brahmapur Local Centre, IEI observed World Water Day on 22 March 2022 at Brahmapur. Chief Guest of the event, Mr Kishore Chandra Jena, former Senior General Manager, Southco, Berhampur briefly described how safe drinking water has to be provided from non polluting groundwater. Guest of Honour Mr Ashutosh Patra,



former Joint Director and Engineering Head, State Agriculture Department, Odisha explained different methods to reduce the contamination of sea water and surface water for the use of all living beings. Dr Chittaranjan Ray, Director, Nebraska Water Centre, Professor of Civil & Environmental Engineering, Water for Food Daugherty Global Institute, University of Nebraska explained about the water level change both in sea and groundwater due to pollution and emphasized by joining rivers to facilitate ground water recharge and irrigation. Earlier, Mr Kasi Biswanath Choudhury, Chairman, Brahmapur Local Centre, delivered the welcomed address and spoke on the theme. Convener of the event, Mr L K Tripathy proposed the vote of thanks.

Gorakhpur

Gorakhpur Local Centre, IEI observed World Water Day through virtual mode on 22 March 2022. On the occasion, Mr Om Shankar Maurya, Retd General Manager, Tehri Complex, THDC India Ltd briefed the virtual audience about ground water contamination and rainwater harvesting. Mr Abhishek Kumar Singh, Guest Faculty, Department of Civil Engineering, Madan Mohan Malaviya University of Technology, Gorakhpur [MMMUT], Uttar Pradesh discussed on artificial recharging of groundwater/saline water and water quality monitoring to minimize contamination of arsenic, fluoride, toxic mineral, etc. Prof (Dr) Govind Pandey, Dean of Planning, Resource Generation and Alumni Relations, MMMUT, Gorakhpur, Uttar Pradesh deliberated on water management, urban water transfer, aquifer recharge etc. Earlier, Mr Dharendra Chaturvedi, Chairman, Gorakhpur Local Centre, IEI welcomed the Speakers and audience. At the end, Mr Ved Prakash Gupta, Honorary Secretary, Gorakhpur Local Centre proposed the vote of thanks.

Tirunelveli

Tirunelveli Local Centre, IEI observed World Water Day and organized Water Conservation Awareness Program and Tree Planting



Ceremony on 22 March 2022 at Seethaparpanllur, Tirunelveli. Chief Guest of the function, Mrs Valarmathi, Union Councillor of Seethaparpanllur explained the importance of water and its preserving techniques. Earlier, Prof (Dr) R Velayutham, Chairman, Tirunelveli Local Centre, IEI welcomed all. At the end, Mr Jimmi Carten M, Honorary Secretary, Tirunelveli Local Centre IEI proposed the vote of thanks.

Tumakuru

Tumakuru Local Centre, IEI, observed World Water Day on 22 March 2022 at Gubi, Tumakuru. Chief Guest and Speaker of the event, Mr M D Nadaf, Executive Engineer (Retd), PWD, Bangalore, Karnataka discussed



on the significance of water for existence, proper utilization of water, water conservation, etc. At the beginning, Prof (Dr) Ms Shantala C P, Chairman, Tumakuru Local Centre, IEI delivered the welcome address. Mr Giridhar S Kulkarni, Honorary Secretary, Tumakuru Local Centre proposed the vote of thanks.

IEI Industry Excellence Award 2022

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 2022. The last date of receipt of application for the Award 2022 is **30 September 2022**. Interested applicants are requested to send their applications (Two hard copies & One soft copy in Pendrive/CD) to the below mentioned address.

The Director [Technical]

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

IEI DIARY

Contd. from page 8

Textile Engineering Division

Thirty-fourth National Convention of Textile Engineers on "**Innovative Textile Materials**" Kanpur, September 10-11, 2022

The Honorary Secretary, IEI, Kanpur Local Centre, Engineers Bhawan, HBTU Campus, Nawabganj, Kanpur 208002 [☎: 0512-2560034, Mobile: 9140018277, E-mail: kanpurlc@ieindia.org, Website : www.ieikanpur.org]

Thirty-fifth National Convention of Textile Engineers on "**Resource Efficient Technologies in Textile Manufacturing**"

Kolkata, February 11-12, 2023

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

Interdisciplinary Coordination Committee

All India Seminar on "**National Education Policy 2020: Synergies for Technical Education**"

Lucknow, September 24-25, 2022

The Honorary Secretary, IEI, Uttar Pradesh State Centre, Engineers' Bhawan, River Bank Colony, Lucknow 226018, Ph: 0522-2625322, E-mail : upsc@ieindia.org, Website: www.ieiup.org.in]

All India Seminar on "**Pipe Distribution Systems in Irrigation Project for Improving Water Use Efficiency**"

Hyderabad, October 21-22, 2022

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



Water Management Forum

A Peripheral body of the Institution of Engineers (India)

The Institution of Engineers (India)



Gujarat State Centre, Bhaikaka Bhavan, Law Garden, Ahmedabad 380006
Tel.: (079) 26400811, Email: watermanagementforum@gmail.com, Website: www.wmf-iee.org

NATIONAL POSTER COMPETITION ON “CONSERVATION of WATER” – 2022 FOR SCHOOL STUDENTS

Water Management Forum has launched National Poster Competition with a view to make children aware about need of conserving the precious resource of water and also involves their parents in the above noble cause. The competition is open for all students of India studying in standard V to Standard XII from **15TH JUNE 2022 to 30th SEPTEMBER 2022**.

The winners will be awarded cash prizes.

Entry Rules

The participants shall bear the expenses towards the material required for preparing the posters and no cost in this regard would be borne by Water Management Forum or The Institution of Engineers (India).

The theme for the poster competition is “CONSERVATION of WATER”

All posters must contain the following details at the back of the poster. (In English and capital letters only)-

Name of student, class, Section, School, full school address, father/mother's name, telephone number of school and parents along with STD code, signature of School Principal. Posters not signed by the school Principal or sent directly by student/parent to the Water Management Forum will not be accepted.

There will be two following Categories in the competition

Junior – From V th to VIII th standard	Senior- From IX th to XII th Standard
--	---

The Poster will have minimum A 3 Size of 30 cm X 42 cm, and maximum A 1 Size of 60cm X 84 cm. There will be no restriction on type of colors to be used.

All entries to be sent by post to the registered office of the Forum at:

The Director, Water Management Forum,
The Institution of Engineers (I), Bhaikaka Bhavan,
Opp Law Garden, Ellisbridge, Ahmedabad 380006.
Email - watermanagementforum@gmail.com.

Awards

Three best posters in both categories shall be selected by the Jury of three independent eminent persons appointed by the Forum, The Judge's decision shall remain final and no correspondence will be entertained. Winners shall be conferred upon an award, a certificate and cash prize. **1st Prize shall be Rs. 10,000/-; Second prize Rs. 5000/- and the third prize shall be Rs. 2000/-.** Awards/Prize shall be declared in due course by the Jury and will be informed accordingly to winners.

Published by: WATER MANAGEMENT FORUM,

Peripheral body of The Institution of Engineers (India), Contact: www.wmf-iee.org

WMF announces award for Best Contribution towards Conservation of Water in Individual as well as Institutional categories for the year - 2022

Criteria for consideration

- The Individual should be an engineer by profession. In case of in institution, it should have been engaged in engineering activities.
- The individual/institution must have achieved excellence in water resources management within India.
- The Awards will be considered broadly, but not limited to the following parameters:
 - Innovative protection of ground water augmentation- Rain water harvesting/ artificial recharge in urban and rural areas
 - Optimum utilization of water in agriculture sector
 - Promoting water use efficiency
 - Recycling/reuse of water
 - Creating awareness through public participation.
 - Adequate capacity building amongst stake holder.
 - Contribution towards related activities will also be considered.
- Award shall carry a Citation and Plaque.

Evaluation Criteria

The assessment of applications to identify contribution of professionals- individual/ institutional in the field as enumerated under(b) &(c) above through innovation, creativity, commitment, achievement, well researched and sustainability.

Awards

One best nomination in both categories shall be selected by the Jury of eminent persons appointed by WMF, The Judge's decision shall remain final and no correspondence will be entertained. Winner shall be conferred upon an Award, a certificate and a cash prize of Rs. 10000/- each.

Individuals/ Institutions shall make an application before 15th September '2022 in the format enclosed and send by post / courier to The Director, Water Management Forum, c/o The Institution of Engineers (India), Bahikaka Bhavan, Opp Law Garden, Near Ellisbridge Gymkhana, Ahmedabad 380006. Email – watermanagementforum@gmail.com

APPLICATION FORMAT FOR WATER MANAGEMENT FORUM AWARDS - 2022

1) NAME OF THE APPLICANT/ INSTITUTION	
2) ADDRESS: (Please provide email, telephone, mobile numbers)	
A) OFFICE :	
B) RESIDENCE:	
3) Details of membership with professional bodies:	
4) Significant contribution in the field of water management with supporting documents :	
5)Names and addresses of references(at least (2)) in the related field with whom either worked or known to the applicant's work :	
6) Social relevance of the contribution:	
7) Whether the achievements have already been recognized for awards by any well recognized organization? If so, the name of the body, award and the year of award may be given. A copy of citation may also be enclosed.	
8) Any additional information of relevance.	
PLACE:	
SIGNATURE	
NAME / HEAD OF THE ORGANISATON	
DATE:	

Note: Please attached necessary copies of documents dully attested.

IEI AWARDS

CALL FOR PAPERS

The Steel Authority of India Ltd (SAIL) had instituted two Awards, namely, **SAIL AWARD** and **DR M VISVESVARAYA AWARD** to be given away every year during the Indian Engineering Congress to author/s of the articles adjudged best on selected topics. The prize-winning papers will be published in the Technical Volume of 37th Indian Engineering Congress.

The topics for the year 2022 are given hereunder.

SAIL AWARD

Countering Cyclic Downtrends in Steel Industry

DR M VISVESVARAYA AWARD

Contribution of Indian Steel Sector towards Net Zero Emission by 2070

Intending contributors are requested to send the soft copy of the paper by email to award@ieindia.org (with subject heading Paper for SAIL/Dr M Visvesvaraya Award) and submit four nos. printed copies of their articles to :

Director (Technical)

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

Last date of submission: October 15, 2022

For downloading the template of paper and declaration form, please visit the following link:

https://www.ieindia.org/webui/IEI-Activities.aspx#Call_Papers



The Institution of Engineers (India)

Revised Fee Structure

(Effect from 01 April 2022)

[As per Decision of 713th Meeting of Council, Hyderabad, March 25-27, 2022]

FRESH APPLICATION

Grade	India & Nepal (₹) including GST
Fellow (FIE)	20060
Member (MIE)	8260
Associate Member (AMIE)	5900
For SMIE within 1 year of passing	5782
For SMIE within 1 year of passing from IM	5605

FOR TRANSFER CASES

Grade	India & Nepal (₹) including GST
AMIE to MIE	3540
AMIE to FIE	15340
MIE to FIE	13452
AMTIE to MTIE	1416

OTHER MEMBERSHIP RELATED FEE

Items	India & Nepal (₹) including GST
Chartered Engineer Certificate	29500
Chartered Engineer Certificate after upgradation / transfer of membership	5900



The Institution of Engineers (India)

Notification for

R&D Grant-in-Aid (2022-23)

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

Like every year, the Institution invites applications for the session 2022-2023 for funding industry-oriented R&D projects and research initiatives aimed at improving the life-style of common people from engineering students pursuing full time Diploma/UG/PG/PhD engineering program in AICTE/UGC/NAAC approved Institutions/Colleges/Universities. The application form and guidelines are available in our website <https://www.ieindia.org>. The projects should be carried out under the guidance of faculty members who are Corporate Members of IEI. Membership criteria for student(s), guide(s) and Institution(s) are as follows:

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

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

Director (Technical)

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

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

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

Be proud to be a Certified Professional Engineers (PE) and International Professional Engineers (IntPE)

Professional Engineers (PE) Certification by IEI

ELIGIBILITY REQUIREMENT

- BE/ BTech or equivalent recognised by Statutory Authority or Government of India
- Five years or more professional experiences
- Membership of recognised professional engineering institution / association
- Maintained Continued Professional Development (CPD) at a satisfactory level

For details, please visit the following link :

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

International Professional Engineers (IntPE) Certification by IEI

ELIGIBILITY REQUIREMENT

- BE/ BTech or equivalent recognised by Statutory Authority or Government of India
- Seven years or more professional experiences
- Minimum two years professional experience in significant engineering activity
- Membership of recognised professional engineering institution / association
- Maintained Continued Professional Development (CPD) at a satisfactory level

For details, please visit the following link :

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

**The eligible candidate can submit application in the prescribed format to:
The PE Cell, The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700020**

For any query and assistance, please send email to: pe@ieindia.org



Project Management Associates Weekend Programme



International Project Management Association

IPMA is a federation of about 72 Member Associations (MAs) who develop project management competences in their geographic areas of influence. Through IPMA, project management practitioners from all parts of the world can network, share ideas through effective collaboration and cooperation.

Who / Why to Attend

Professionals across all levels who want to understand the intricacies of Project Management and want to excel in managing projects to advance their career.

Discounted Program Registration Fee for IEI Members (15% discount from the published fee)

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

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

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

Next batch of on-line learning sessions on Project Management Competence Building (PMCB) based on ICB Version 4, knowledge base for IPMA Level C and Level D by our Learning partner PMA is from **July 8th and 9th, 15th & 16th 2022**. The relevant material is available in the link <https://www.pma-india.org/brochures>.

Exam Dates for Level C: 23, 29-30 July 2022 (0930 – 1730 hrs)

Exam Dates for Level D: 23 July 2022 (0930 – 1730 hrs)

Exam Venue: Secure and Seamless Online Exam & Assessment

For more details, please contact:

Arvind Agarwal, Head, PMA Cert (Certification Body)

Project Management Associates

FC-33, Plot No. 1 & 2, Periyar Centre, 3rd Floor, Institutional Area, Jasola, New Delhi – 110025

Tel: 011 41421511 Mob: +91 9711631534-35/39, 9840432229, Website: www.pma-india.org, Email: info@pma-india.org /

I.E.I NEWS

ISSN 0971-3352

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

President : Dr Hemant Omkarrao Thakare

Editor : Maj Gen MJS Syali, VSM (Retd)

Associate Editor: Dr Jitendra Saxena

Special Contributors: Mr S Chakraverty, Mr K Sen
 Mr P Chakraborty, Mr A Das, Ms H Roy, Mr S Bagchi

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

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