

# IEI NEWS

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A CENTURY OF SERVICE TO THE NATION

Volume 29

Number 2

## Thirty-fourth National Convention of Metallurgical & Materials Engineers and National Conference

### Sustainability and Steel Industry

The Institution of Engineers (India), Jharkhand State Centre organised the Thirty-fourth National Convention of Metallurgical & Materials Engineers and National Conference on 'Sustainability and Steel Industry' during 30-31 March 2022 in association with Sustainable Development Forum, IEI, and Birla Institute of Technology, Mesra, as the Knowledge Partner.

The Inaugural Session was held at the premises of BIT Mesra and was streamed live online. At the onset, Er M I Alam, Chairman, IEI Jharkhand State Centre welcomed the delegates and the august gathering of academicians and industry professionals. Mr A K Saxena, Chairman, BOG - Sustainable Development Forum introduced the theme and explained how the usage of steel has gradually increased from previous decades. He further elucidated the sustainable



Prof (Dr) Indranil  
Manna



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## Thirty-fourth National Convention of Aerospace Engineers and National Conference

### Advances in Aerospace Engineering

Kanpur Local Centre of the Institution organized the Thirty-fourth National Convention of Aerospace Engineers during 21-22 March 2022 in virtual mode. A National Conference was also organized on the occasion on the theme **Advances in Aerospace Engineering**. During the Inaugural Function, Mr A S Kiran Kumar, Former Chairman, ISRO graced the function as the Chief Guest and Smt T K Anuradha, Distinguished Scientist (Retd) and Former Director, ISRO HQ, Bangalore graced the occasion as the Guest of Honour. Dr H O Thakare, President, IEI, in his Presidential Address mentioned that the objective of the National Convention is to focus and discuss the recent technological developments on aerospace engineering applications, which enables the practicing professionals, researchers and students to be aware of the emerging technologies in propulsion



Mr A S Kiran Kumar



Smt T K Anuradha

systems, flight dynamics, aerodynamic structure, design and system engineering etc. Convener of the event and Chairman, Technical Committee, Prof Debi Prasad Mishra, Director, NITTTR, Kolkata briefed the audience about the theme of the National Convention. Dr P V Venkitakrishnan, Chairman, Aerospace Engineering Division Board chaired over the Inaugural Session. In

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

Digital technology has been beneficial in improving people's cognitive ability. We have to explore the use of technologies, which can be beneficial for people's mental and physical health, through stimulating cognitive abilities including executive functioning, memory and reasoning.



Technologies are being developed to help older people in their physical activities and become more active. It has been observed that use of technology in primary care with older adults identified how information provided to an older adult with regard to taking their medications could in turn improve medication adherence, primarily by prompting better informed discussions between the patient and the clinician. A pocket activity tracker can give insight into the amount of physical activity older people undertake and increase awareness and motivation to increase their physical activity. Conducting a telehealth intervention once a month for the older people should be explored and monitored. This intervention pertains to the care of older people living with advanced dementia.

Conversely, engagement with technology can become difficult and cumbersome for people in later life, for example difficulty with the graphic user interface, pressing multiple buttons and any peripheral devices and/or screens (e.g. smartphones) due to age-related health issues (e.g. dexterity, eyesight issues and cognitive changes) and for people who have various disabilities. Virtual Assistants (VAs) can allow such people (including older adults) to stand benefitted from technology such as enjoying listening to music, setting medication reminders and making telephone calls, including critical point of contacts and/or emergency phone contacts. VA smart speaker technology and other respective technology devices can function as an emergency response system and help older people connect with friends and family, link to vital services and offer assistance.

However, technology scepticism, can affect older people's relationship with smart technologies. There are some important barriers and enablers to technology among older people surrounding psychological and sociological aspects of use. It has been found that technology is beneficial to

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# Advances in Aerospace Engineering

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his address, Dr Venkitakrishnan emphasized on collaborative efforts with public-private enterprises and opined that Aerospace Engineering Division of the Institution would provide the larger platform to share views and thoughts with academia, R&D and industry in an effective manner.

Guest of Honour, Smt T K Anuradha in her address, stated that Indian



**Prof Debi Prasad Mishra**

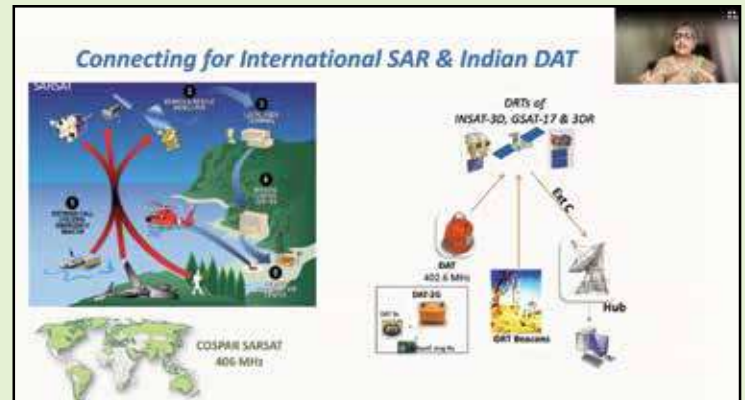
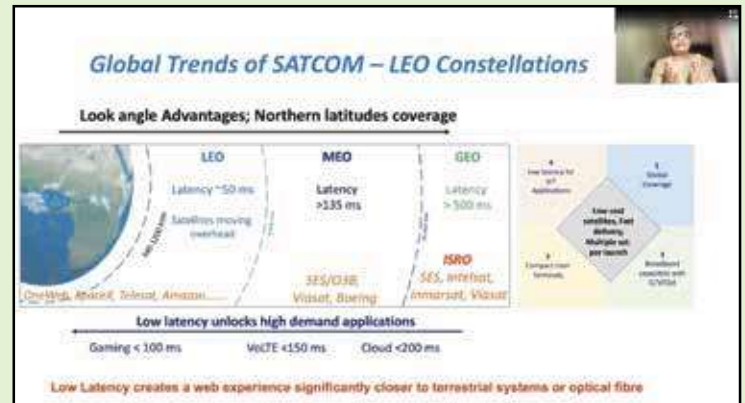
Aerospace Industry is on the global radar today with emerging potential, when there are vast opportunities to explore, which is well poised with expertise and technical capabilities. There are huge enthusiasm and conducive ambience in the Government Policies with large opportunities in different sectors of aerospace industry, she opined. She highlighted the tireless effort of Indian aerospace industry for developing indigenous products, which include cryogenic engines, sensors, propellants, actuators etc. She further explained dynamic and adaptable transformation in Indian Space programs, application of Remote Sensing Satellites in resource mapping and resource management, role of Indian navigation system for innovation with optimum resources and so on. She stressed on positive intentions, strong policies and highest degree of effort to make Indian aerospace industry self reliant.

Chief Guest of the function, Mr A S Kiran Kumar in his address discussed the advancement in space technology by means of human-machine interface. He focused on the technological challenges associated with different ranges of space missions and development of space skills. He

explained space communication as the most reliable transportation system across the globe with minimum time required. He also deliberated on the applications of miniaturized electronic systems with optimum power usage, effective thermal management and accurate design aspects and application of 3D Printing to obtain manufacturing of aero components in a leaner, faster and agile manner. On the occasion, Prof B N Raghunandan, Department of Aerospace Engineering, IISc Bangalore; Shri R Madhavan, Chairman & Managing Director, Hindustan Aeronautics Limited and Shri S Somanath, Chairman, ISRO, Secretary, Department of Space & Chairman, Space Commission, Government of India (in absentia) were felicitated as eminent engineering personalities for their immense contribution in the field of aerospace engineering. A Proceeding was released on the occasion in the august presence of the dignitaries. Earlier, Prof (Dr) Pradeep Kumar, Past Chairman, Kanpur Local Centre delivered the opening remarks. Mr Vivek Asthana, Chairman, Kanpur Local Centre welcomed the dignitaries and the attendees present

on the occasion. At the end of Inaugural Function, Mr Rama Kant Yadav, Honorary Secretary, Kanpur Local Centre proposed the vote of thanks.

Prestigious Dr Vikram Sarabhai Memorial Lecture was delivered by Smt T K Anuradha, Distinguished Scientist (Retd) and Former Director, ISRO HQ, Bangalore on the topic 'Satellite based Communication in India'. She started her deliberation with the role of different countries in development of space technology. She then briefed the audience about the vision of Indian Space Program, introduced by the doyens in the field of Indian space programs, Dr Homi Jehangir Bhabha and Dr Vikram Sarabhai. She



discussed the development of indigenous rocket launching stations in India, which leads to self reliance in satellite communications, remote sensing, navigation, meteorology and explorations. She further discussed on applications of satellite communications in e-governance, disaster warning systems, healthcare, education etc. In her concluding remarks, the speaker highlighted that terrestrial advancements in 5G/6G, Leo global constellation and other technologies have ushered in a new revolution.

Prof Debi Prasad Mishra, Professor, Department of Aerospace Engineering, IIT Kanpur and Director, National Institute of Technical Teachers' Training and Research (NITTTR) Kolkata delivered State of the Art Lecture on the topic 'Futuristic Perspective of Aerospace Technologies for Modern India'. In his lecture, Prof Mishra focused on the major drivers in the field of aerospace technology, namely ISRO, DRDO, National Aerospace laboratories, Hindustan Aeronautics Limited etc. He demonstrated on the applications of Indian ballistic missiles, thrust areas in Indian space program as the future landscape of aerospace technology, which include satellite protection, stealth technology, deep space understanding, hypersonics etc. He explained the operation of Advanced Medium Combat Aircraft as a stealth multirole fighter with GE F-414 propulsion engine, serpentine air intake, internal weapon bay, radar absorbing materials and conformal antennae. He discussed on civil aircraft with structural health monitoring and integrated vehicle health management system. A panel discussion was organized on the occasion on the topic 'Future of Aerospace Engineering', in presence of Prof B N Raghunandan, Dr P V Venkitakrishnan, Prof Debi Prasad Mishra and Mr Vivek Asthana.

Twenty Papers were presented during five technical sessions on diversified topics. The first technical session was held on the topic 'Aerodynamics', chaired by Mr M M Kothari, Director, M/s Maharashtra Pipe and Allied Industries, Manufacturer of Ground Handling Equipment for HAL and Air Force & Member, ASDB, IEI. The second technical session was held on the topic 'Propulsion', chaired by Mr Sumit Kantilal Khinvasara, Serial Entrepreneur and Founder, GEOSPATIAL Design Labs Private Limited, Nashik & Member, ASDB, IEI. The third technical session was held on the topic 'Structures', chaired by Dr P V Venkitakrishnan, Distinguished Scientist, Director, CBPO, ISRO HQ(Retd) & Prof Satish Dhawan Scientist,

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**Prof B N Raghunandan**



**Shri R Madhavan**



**Shri S Somanath**



## Sustainability and Steel Industry

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development objectives and modus operandi of industries to maintain the standards agreed upon in the Paris Agreement and become more carbon neutral. Following up, Dr. B Bhoi, Chairman, Metallurgical & Materials Engineering Division Board, IEL expressed his views and emphasized on the importance of the study of metallurgical and materials engineering. He said steel industry is the country's backbone and narrated how steel production had changed the course of Indian history. He further mentioned the progress by the various steel industries and their contributions in the field of export of steel and iron which boosted the growth of the country's economy. Dr H O Thakare, President, IEL in his address highlighted usage of steel and how it can be made more sustainable. He elucidated the differences between the functionalities of the steel industries in India and in the rest of the world. Dr Thakare said steel industries are one of the top energy consumers of India, however, various measures are being taken to make steel production and consumption more sustainable.

Prof (Dr) Indranil Manna, Vice-Chancellor, BIT Mesra graced the session as the Chief Guest. While addressing the gathering, he highlighted that India has become one of the largest steel producers in the world. He said steel industry is heavily dependent on instruments and investments. Prof Manna

mentioned that large amount of fossil fuel is required for production of steel which increases the carbon footprints. Despite that, the role of the steel industries in shaping the modern world is enormous and economical growth of the country cannot be imagined without steel industries, he opined. Dr Manna said infrastructural development is inevitable for progress of the developing countries for which steel is a compulsory item. Therefore, he advocated for the synergy required in social, economical and environmental aspects and encouraged sustainable production of steel without endangering the environment.

On this occasion, Mr Anirban Dasgupta, Director in-charge, SAIL-Bhilai Steel Plant and Mr Arun Kumar Agrawal, Director (Technical), MECON Limited, Ranchi, were felicitated as the eminent engineering

personalities for their enormous contributions to field of Metallurgical and Materials Engineering. Names of the recipients of Young Engineer Awards

in Metallurgical & Materials Engineering Division for FY 2021-22 were announced on this occasion. The recipients namely Dr (Ms) Neha Sardana,



Mr Jagdish Arora

Assistant Professor, Department of Metallurgical and Materials Engineering, Indian Institute of Technology Ropar, Rupnagar, Punjab; Dr (Ms) Anupma Thakur, Research Fellow, Discipline of Chemical Engineering, Indian Institute of Technology Gandhinagar, Gujarat and Dr Ajit Behera, Assistant Professor, Department of Metallurgical & Materials Engineering, National Institute of Technology Rourkela, Sundargarh, Odisha were present online during the inaugural session. Er Manoj Kumar, Honorary Secretary, IEL

Jharkhand State Centre proposed the vote of thanks at the end.

Inaugural Session was followed by V Subramony Memorial Lecture, which was delivered by Mr Jagdish Arora, Executive Director, Centre for Engineering & Technology, Steel Authority of India Ltd., Ispat Bhawan, Ranchi, Jharkhand on the topic 'Decarbonisation of Steel Industry'.

He elaborated in detail on the need of decarbonisation in the steel industry, carbon neutrality and uses of hydrogen etc. Mr Arora stressed on worldwide carbon emission by steel industries and compared that with Indian scenario. He touched upon major steel-making technologies like Blast Furnace-Basic Oxygen Furnace (BOF) Route and Direct Reduce Iron (DRI), Electric Arc Furnace (EAF) Route etc.

Nineteen papers were presented by the experts from industries, academia and research organisation embracing the theme of the National Conference during the four Technical Sessions spanning over two days. The sessions were chaired by Mr Somesh Biswas, Chief Corporate Sustainability, TATA Steel, Jamshedpur, Dr. Mayadhar Debta, Principal Scientist, CSIR-Institute of Minerals and Materials Technology, Bhubaneswar, Mr D K Ambastha, Chief General Manager, MECON, Ranchi and Mr Ajay Kumar, Chief General Manager, CET SAIL, Ranchi. Mr A Rajasekaran, Senior General Manager, Environmental Engineering, MECON Ltd, Ranchi, Mr Nisheet Kumar Senior General Manager, MECON Ltd, Ranchi, Mr M R Kumar, Senior General Manager, MECON Ltd, Ranchi and Mr S K Das, Centre for Engineering & Technology, Steel Authority of India Ltd were present and contributed as the rapporteurs of the sessions.

During Valedictory Session, Mr Avijit Ghosh, Former Chairman and Managing Director, Heavy Engineering Corporation Limited was present and delivered the concluding address. The rapporteurs of technical sessions summed up their respective sessions. Er M I Alam, Chairman, IEL Jharkhand State Centre felicitated the dignitaries and Er Manoj Kumar, Honorary Secretary, IEL Jharkhand State Centre proposed the vote of thanks.

Eminent Engineering Personalities



Mr Anirban Dasgupta



Mr Arun Kumar Agrawal

## Advances in Aerospace Engineering

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ISRO HQ, Bangalore & Chairman, ASDB, IEL. The fourth technical session was organized on the topic 'Flight Mechanics'. Mr K Asok Kumar, Deputy Director – C25 (Retd), ISRO, Department of Space, Government of India & Member, ASDB, IEL chaired the session. The last technical session was organized on the topic 'Design and System Engineering', which was chaired by Dr P V Venkitakrishnan.

During the valedictory function, Prof Debi Prasad Mishra, Chairman, Technical Committee summed up the proceedings of two-day deliberation. Chairmen of the technical sessions, Dr P V Venkitakrishnan, Chairman, ASDB, Mr K Asok Kumar, Member, ASDB and Mr M M Kothari, Member, ASDB deliberated on the outcome from the Papers presented during the technical sessions. Recommendations emanated from the National Conference are collated and furnished as follows.

*More research is required in the field of space communications for long range travel across the globe with minimum time that leads to a better*

*communication system; Indigenous command and control of aerospace systems including development of high efficiency aircraft engines, hypersonic propulsion, propellant less propulsion, turbo machinery etc has taken the centre stage, which need to explore further in positive direction; Advancements in radar and drone technology, reusable launch vehicles, ground support systems, and satellite based navigation of aircrafts be boost up in a holistic manner; Underwater space communications, aviation electronics, flight mechanics, aerodynamic structure need to be explored with dedicated research wing; Suitable policy need to be formulated to develop satellite communications in wider range for disaster warning, agriculture, e-governance, healthcare, education etc; Infrastructural facilities for additive manufacturing and 3D printing need to be developed for mass manufacturing of aero components in a leaner, faster, agile and cost effective manner; Application of textile engineering interface in aerospace engineering need to be reviewed.*

## Increasing Use of Electric Vehicles and its Advantages

IEI Gorakhpur Local Centre organised Technical webinar on **Increasing Use of Electric Vehicles and its Advantages** on 10 April 2022 under the aegis of Electrical Engineering Division Board of IEI. Mr Dharendra Chaturvedi, Chairman of Gorakhpur Local Centre welcomed the speakers and briefed about the theme of the webinar. Er M P Kandoi, Executive Committee Member, Gorakhpur Local Centre moderated the session and introduced the speakers.

Dr K S Verma, Professor Department of Electrical Engineering Kamla Nehru Institute of Technology, Sultanpur (UP) presented a brief history of Electric Cars since 1837 and the motors use in Electric Vehicles (EV) in detail. He said various types of Electric Motors are used in EV like DC Series Motor, Brushless DC Motor, Permanent Magnet Synchronous Motor (PMSM), Three phase AC Induction Motor, and Switched Reluctance Motors (SRM). He expressed his views on selecting the right motor for electric vehicle. He said that MATLAB Simulink is a powerful tool for design and validation of the system. This



Dr K S Verma

feature- laden software with its computing prowess is good to accelerate the design phase. Dr Verma elaborated that MATLAB Simulink and Simscape provide features to design and simulate essential Electric Vehicle use cases. He said that seven most important uses for MATLAB are: 1) Tune regenerative braking algorithms, 2) Explore electric powertrain architectures, 3) Modify a suspension design, 4) Optimize vehicle performance, 5) Develop active chassis controls, 6) Validate ADAS algorithms, and 7) Test using hardware in the loop (HIL). Dr Verma compared Battery Electrical Vehicle (BEV), Hybrid Electrical Vehicle (HEV) and Fuel Cell Electric Vehicle (FCEV). He also described the use of copper in electric vehicles. ICE requires 48 pond cu, HEB require 88 pond cu & Battery EV require 183 pond cu. He further emphasized on the use of copper, which is an indispensable component of EVs and it is used in the electric motors, batteries, inverters, wiring and in charging stations because of its durability, malleability, reliability and superior electrical conductivity. He also discussed about the activities of the Electric Mobility Forum while concluding.



Prof K G Upadhyaya

Prof K G Upadhyaya, former Professor, Electrical Engineering Department, Madan Mohan Malaviya University of Technology, Gorakhpur shared his views on Lithium-Ion Battery which is mostly used

for its high energy density, high power density, environmental friendliness, low self-discharge rate, and long service life and thus has a wide application in electronics products. He illustrated that Li-ion batteries for EV have high capacity and large serial-parallel numbers which combine with features such as durability, uniformity, cost, and safety. Prof Upadhyaya explained the status of Li-ion battery and Battery Management System (BMS) in EV. He explained the effect of cold weather on Li-ion and opined that Li-ion batteries are the best choice for clean EV applications because of its performance. Prof Upadhyaya also highlighted the issues with EV like performance loss due to low temperature which slows the expansion of the EV market, specially in cold countries. He proposed thermal management system for battery which can be able to maintain a battery pack at optimum temperature.

Dr Shekhar Yadav, Assistant Prof, Electrical Engineering Department, Madan Mohan Malaviya University of Technology, Gorakhpur explained in detail about the benefits of EV, which are lower running cost, low maintenance cost, zero tail pipe emissions, ease of drive, convenience of charging at home, and no noise pollutions. He also described about the types of EVs in detail, which are 1) Battery Electrical Vehicle (BEV), 2) Hybrid Electrical Vehicle (HEV), 3) Plug-in Hybrid Electrical Vehicle (PHEV), and 4) Fuel Cell Electric Vehicle (FCEV).



Dr Shekhar Yadav

Er Suresh Chandra, Chief Engineer, Nagar Nigam Gorakhpur said that introducing EVs in the towns and cities is the need of the present time as it reduces pollution and costs and Governments are committed towards this. He informed that at present in Gorakhpur fifteen buses are plying and ten more buses will arrive soon. Er Chandra also briefed that a good amount has been sanctioned for contract of E-bus, building charging station and maintenance of depot. He further affirmed the involvement of Gorakhpur Municipal Corporation for regular monitoring and frequent inspections of sites, get charging stations and completing the road within timeframe. Er Ved Prakash Gupta, Honorary Secretary, Gorakhpur Local Centre proposed the vote of thanks at the end.



Er Suresh Chandra



Er M P Kandoi

## Human Re-Engineering in Modern Society

The Institution of Engineers (India), South Gujarat Local Centre organised IEI Technical Webinar on **Human Re-Engineering in Modern Society** on 24 February 2022 under the aegis of the Computer Engineering Division Board of IEI. Dr Jignesh G Vaghasia, Chairman, South Gujarat Local Centre welcomed the panellists and the participants. He also briefed about the activities of IEI. Dr Ketan D Panchal, Honorary Secretary, South Gujarat Local Centre moderated the session and introduced the panellists.



Dr Aarti Saini

Dr Aarti Saini, Assistant Professor, Department of Commerce, Shaheed Bhagat Singh College, University of Delhi, New Delhi, India and Editor, South Asian Journal of Marketing deliberated that the religions explicitly enhances capacity of moral behaviour and emphasizes moral values such as truthfulness, generosity and disinterested action. She said people have good homes, big building but pollution makes them tired and depressed due to decreased work ability. Dr Saini advised a comprehensive and systematic approach for increasing performance

which leads to set of fundamental rethinking, redesign and solutions for the business processes to achieve radical improvement. She concluded re-engineering is built on the notion of breaking the existing model and way of thinking.



Mr Rohan Bhalla

Mr Rohan Bhalla, Senior Research Fellow, Jamia Milia Islamia University, New Delhi discussed on mental status of people in India. He said that people experience problems like mental illness, stress and depression etc. which are not addressed properly. Mr Bhalla corroborated his views with statistics and presented a ratio of mental health infrastructure in our country as 0.30 Psychiatrists per person, and 2.15 in-patient beds per 1 lakh people. However, Government spends about 881 Crore on Mental Health, he mentioned while concluding.



Dr Ketan D Panchal

Dr Ketan D Panchal, Honorary Secretary, South Gujarat Local Centre summed up the session and proposed the vote of thanks at the end of the webinar.



# 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, August 29-30, 2022

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

## Civil Engineering Division

One day Workshop on **"Advancement in Smart Cities by IoT & Artificial Intelligence"**

June 01, 2022, Kancheepuram Local Centre

The Honorary Secretary, IEI, Kancheepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheepuramlec@ieindia.org]

Technical Webinar on **"Application of Sustainable Concrete in Modern Constructions"**

Kancheepuram, July 6, 2022

The Honorary Secretary, IEI, Kancheepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheepuramlec@ieindia.org]

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

Chennai, July 22-23, 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]

## Chemical Engineering Division

Thirty-seventh National Convention of Chemical Engineers on **"Battery Energy Storage System"**, Chennai, September 16-17, 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]

## Computer Engineering Division

All India Seminar on **"Information Privacy"**

Kancheepuram, June 01-02, 2022

The Honorary Secretary, IEI, Kancheepuram

Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheepuramlec@ieindia.org]

All India Seminar on **"Web Development"**

Kancheepuram, June 03-04, 2022

The Honorary Secretary, IEI, Kancheepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheepuramlec@ieindia.org]

All India Seminar on **"Application of Cognitive Systems in Computer"**

Kancheepuram, June 27-28, 2022

The Honorary Secretary, IEI, Kancheepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheepuramlec@ieindia.org]

One Day Seminar on **"Cloud Computing"**

Kancheepuram, June 29, 2022

The Honorary Secretary, IEI, Kancheepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheepuramlec@ieindia.org]

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@ieindia.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@ieindia.org, Web: www.ieitvlc.org]

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

Kancheepuram, July 27-28, 2022

The Honorary Secretary, IEI, Kancheepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheepuramlec@ieindia.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@ieindia.org]

## Electronics and Telecom. Engineering Division

All India Seminar on **"Trends in Data Communication & AI"**

Jaipur, June 11-12, 2022

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

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

Chennai, July 4-5, 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 **"Fundamentals of Artificial Intelligence"**

Kancheepuram, July 29-30, 2022

The Honorary Secretary, IEI, Kancheepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: kancheepuramlec@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.ieitssc.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, E r T M Jambulingam Bhavan, No.1, Vivekananda Nagar, 120 Feet Road, Surveyor Colony, K Pudur, Madurai 625007 [☎: 0452-4373067, E-mail: madurailc@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]

## Mechanical Engineering Division

### All India Seminar on "Advancements in Bio Fuels"

Chennai, July 8-9, 2022

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

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

Chennai, July 14-15, 2022

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

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

Nagpur, September 08-09, 2023

The Honorary Secretary, IEI, Nagpur Local Centre, North Ambazari Road, Nagpur 440010, [☎: 0712-2525617, E-mail : [nagpurlc@ieindia.org](mailto: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](mailto: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](mailto:durgapurlc@ieindia.org); Website: [www.ieidurgapurlc.org](http://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, IEI, Kancheepuram Local Centre, Agni College of Technology – ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [Email: [kancheepuramlc@ieindia.org](mailto:kancheepuramlc@ieindia.org)]

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

Chennai, July 1-2, 2022

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

## Textile Engineering Division

### Thirty-fourth National Convention of Textile Engineers on "Innovative Textile Materials"

Kanpur, September 17-18, 2022

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

## Interdisciplinary

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

Hyderabad, July 24-25, 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](mailto:telanganasc@ieindia.org), Website: [www.ieitsc.org.in](http://www.ieitsc.org.in)]



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

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those with medium levels of cognitive reserve, improving their quality of life through active involvement in the digital world. Those with higher cognitive reserve found the technology to be less beneficial, highlighting their perceived lack of digital awareness. This is another crucial understanding of how technology can fit into people's lives and become part of it without being separate or an additional extra.

There remain some ensuring barriers to use, including psychological issues of motivation, attitudes, privacy, trust and social issues involved in learning

the technology. It is recommended that more research involving older people as co-developers with a multidisciplinary approach is needed in addressing these barriers.

The World Telecommunication and Information Society Day (WTISD) is being celebrated annually on 17 May since 1969 to mark the founding of International Telecommunication Union (ITU) and the signing of the first International Telegraph Convention in 1865. Theme for this year's WTISD is 'Digital Technologies for Older Persons and Healthy Ageing'. The Centres of IEI have observed this day by organising local seminars and Webinars. Reports and recommendations from those programmes will be reported subsequently in forthcoming issues of IEI News.



# 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

### Assam

Assam State Centre, IEI organized a Workshop on World Engineering Day for Sustainable Development on 04 March 2022 on the theme 'Build Back Wiser Engineering the Future' along with Northeast Startup Festival. Earlier, Er Pulak Sarmah, Honorary Secretary, Assam State Centre, IEI welcomed all the delegates and the participants and introduced the speaker Dr Amarjyoti Kashyap, President, ENVIRON, a leading NGO of Northeast India, National award winner Environmentalist and Inventor. In his speech, he dealt with Solid Waste Management in urban as well as rural areas with some simplified ways and technologies developed by him for the successful solid waste management practices like 'Waste Assimilator for the management of biodegradable solid waste at source' and 'Household Plastic Craft' to Utilize Plastic Waste at source. Er. Pankaj Gogoi, Project Director, Northeast Startup Festival 2022 shared the Mission and Vision of Northeast Startup Festival and outlined the development of Startup Ecosystem. Four Startup Groups presented their ventures and shared their ideas with the audience as a part of Hackathon organised along with the event. Prof (Dr) N N Patwari, Chairman, Assam State Centre, IEI summed up the session by saying that everyone of civil society should act responsibly, contribute for sustainable growth and promote eco-friendly environment. Er Pulak Sarmah, Honorary Secretary, Assam State Centre, IEI proposed the vote of thanks.



the delegates and briefly discussed about IEI. He stressed on considering environmental and social aspects while conceiving the engineering ideas alongwith the traditional parameters like quality, cost and time etc. The Guest of Honour and Keynote Speaker Prof (Dr) Om Prakash, Indian Institute of Technology, Patna said concept of engineering exists since ancient times and basic tenet of engineering has always been solving complex issues. Er D K Jha, Honorary Secretary, IEI Bihar State Centre proposed the vote of thanks at the end.



### Karnataka

Karnataka State Centre, IEI, observed World Engineering Day for Sustainable Development on 04 March 2022. Dr Enti Ranga Reddy, Honorary Secretary, Karnataka State Centre, IEI delivered the welcome address and said that engineering plays a very important role in day to day life. Mr V Sudarshan, Managing Director, Spectrum Tool Engineers Pvt Ltd, Bengaluru was the keynote speaker of the event. He stated that engineers are increasingly required to play a leadership role in sustainable development, overcoming global challenges, such as depletion of resources, environmental pollution,



rapid population growth and damaging the ecosystems. Mr V Sudarshan opined that in the 20th century, engineering achievements were attained without considering their impact on social, economic,

environmental and natural systems and hence was not sustainable in the long run. On this occasion, three books, namely 'Work Quality Management', 'Management Principles' and 'Eddelu Huchchu Rama' (in Kannada), written by Er B Puriashotham, Member, IEI, Karnataka State Centre, were released by Dr Enti Ranga Reddy and Dr A M Nagaraj and Prof T J Ramamurthy, Committee Members, Karnataka State Centre. Dr Reddy proposed the vote of thanks at the end.

### Punjab & Chandigarh

Punjab & Chandigarh State Centre, IEI, celebrated World Engineering Day for Sustainable Development on the theme 'Build Back Wiser-Engineering the Future' in association with BAM Khalsa College, Garhshankar on 04 March 2022 at Chandigarh. Er Sukhviri Singh Mundi, Chairman, Punjab & Chandigarh State Centre welcomed the participants. Chief Guest Prof (Dr) T S Kamal, Former Vice President, IEI addressed the gathering and shared his views. Dr A S Balgir, Additional General Manager, Indian Ordnance Factories, Department of Defence Production, Ministry of Defence, Government of India was the key speaker on this occasion. He briefly described the role of engineers and their engineering achievements for the development of

### Delhi

Delhi State Centre, IEI organized World Engineering Day for Sustainable Development on 04 March 2022 on the theme 'Build Back Wiser Engineering- the Future' in virtual mode. Dr Anil Kumar Haritash, Professor, Department of Environmental Engineering, Delhi Technological University graced the event as the Chief Guest. Prof S K Singh, Chairman, IEI Delhi State Centre, welcomed the delegates and the participants. He said the Day offers an opportunity to highlight engineering achievements and improving the public understanding of how engineering and technology became central to modern life and sustainable development. He emphasized on the contribution of engineers in ensuring clean accessible water, sanitation systems, affordable healthcare and reliable energy. Prof Singh touched upon the issue of COVID 19 outbreak that affected the health and the economy of the country, which may increase the social crisis like inequality, exclusion, discrimination and global unemployment in medium and long term. Er Rajesh Sharma, Honorary Secretary, Delhi State Centre, IEI proposed the vote of thanks at the end.

### Bihar

Bihar State Centre, IEI celebrated World Engineering Day for Sustainable Development on 04 March 2022 on the theme 'Build Back Wiser Engineering the Future'. Er B N Singh, Chairman, IEI Bihar State Centre welcomed





terms of reasonable economic and financial returns on investments for implementation of each work. Prof (Dr) Baljit Singh Khera, FIE, Honorary Secretary, Punjab & Chandigarh State Centre, IEI, Chandigarh proposed the vote of thanks.

## Puducherry

Puducherry State Centre, IEI organized World Engineering Day for Sustainable Development jointly with the Department of Mechanical Engineering, Manakula Vinayagar Institute of Technology, Puducherry on 04 March 2022 on the theme 'Build Back Wiser Engineering the Future'. Mr V Satyanarayanan, Senior Vice President, Global Technology Services graced the occasion as Chief Guest and addressed the gathering. Mr S V Sugumaran, Vice Chairman and Dr Narayanasamy Kesavan, Secretary, Sri Manakula Vinayagar Educational Trust and Dr S Thirougnaname, Honorary Secretary, Puducherry State Centre, IEI delivered the felicitation address. Dr S Malarkkan, Principal Manakula Vinayagar Institute of Technology welcomed Dr B Rajaram, Professor & Head, Department of Mechanical Engineering and the Chairman of Puducherry State Centre, IEI delivered the vote of thanks.



## Tamilnadu

Tamilnadu State Centre, IEI celebrated World Engineering Day for Sustainable Development on 04 March 2022 on the theme 'Build Back Wiser Engineering the Future'. The welcome speech was delivered by Er R Ramadoss, Immediate Past Chairman, Tamil Nadu State Centre, IEI. Padmabhushan Thirualachari Ramasami, former Secretary, Department of Science & Technology (Govt of India) and former Director, Central Leather Research Institute, Chennai graced the event as the Chief Guest. Dr T M



Gunaraja, Past President, IEI and Dr C Muthamizhchelvan, Vice Chancellor, SRM Institute of Science & Technology, Chennai were the Guests of Honour. Dr Gunaraja, Past President, IEI explained about the World Engineering Day for Sustainable Development and Dr Muthamizhchelvan elaborated on the general principles for sustainable engineering solutions for the future. Er K N Sivaraju, Honorary Secretary, Tamil Nadu State Centre, IEI proposed the vote of thanks.

## Tripura

Tripura State Centre, IEI organized World Engineering Day for Sustainable Development on 04 March 2022 on the theme 'Build Back Wiser Engineering the Future'. Er M R Gopal, General Manager & OIC, National Bank for Agriculture & Rural Development, Agartala graced the occasion as Chief Guest. Er R K Majumder, IAS (Retd) and former Director, Urban Development Department,



society. Dr Balgir further elaborated on 17 Sustainable Development Goals (SDGs) set forth by UNESCO as agenda points envision 2030. He opined that the engineers need to justify action/decision taken in

Tripura shared his views as Special Speaker on the theme. Er C Debnath, Chairman, Tripura State Centre, IEI, presided over the session. At the outset, Dr Subhadeep Bhattacharjee, Honorary Secretary, Tripura State Centre, IEI delivered the welcome address.

## Uttar Pradesh

Uttar Pradesh State Centre, IEI, organized World Engineering Day for Sustainable Development on 04 March 2022. Prof D V Mahindru, Professor, Shri Ram Swaroop Engineering College, Lucknow graced the event as the Chief Guest of the function.



He delivered a lecture on the climate change which is a burning problem the world is facing currently. He said waste is being recycled and reused to save the earth. Prof Mahindru touched upon the Nine-R Framework (i.e., refuse, rethink, reduce, reuse, repair, refurbish, remanufacture, repurpose, recycle and recover) which is the key for sustainable development. He apprised that engineers are working for 'Zero Waste' economy. Earlier, Er R K Trivedi, Past Chairman of the UP State Centre, welcomed all the guests. On this occasion, Er V B Singh, Vice President, IEI was present and shared his views. Dr Jaswant Singh, Honorary Secretary, Uttar Pradesh State Centre, IEI proposed the vote of thanks.

## LOCAL CENTRES

### Angul

Angul Local Centre, IEI organized World Engineering Day for Sustainable Development on 11 March 2022 on the theme 'Build Back Wiser Engineering the Future'. At the outset, Er S K Samantaray, Chairman, Angul Local Centre introduced the theme and set the tone of the event. Er Siba Ram Panda, Honorary Secretary, Angul Local Centre introduced the Chief Guest of the event, Er A P Panda, Executive Director, S & P Complex, Nalco presented a detailed overview on the topic. Er Rajkishor Mishra, former Executive Director, NALCO deliberated on the subject matter in detail before the august gathering. Er Satyabadi Mishra, Immediate Past Honorary Secretary, Angul Local Centre, IEI proposed the vote of thanks



### Bathinda

Bathinda Local Centre, IEI, organized a Webinar on the occasion of World Engineering Day for Sustainable Development on 03 March 2022. Prof (Dr) Jagtar Singh Sivia, Chairman, Bathinda Local Centre, IEI welcomed the delegates. Prof (Dr) Tara Singh Kamal, former Council Member and Chairman, Electronics & Telecommunication Engineering Division Board, IEI was present as Chief Guest and addressed the gathering. Dr Labh Singh, former Advisor to Department of Telecommunications, Government of India graced the event as panelist, who deliberated on the theme 'Build Back Wiser Engineering the Future'. He discussed the 17 sustainable development goals like no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, etc. Dr Singh also explained engineering is the application of scientific principle to design and build machines and structures including bridges, tunnels, roads, vehicles and buildings. Er Manpreet Kaur, Assistant Professor, Electronics and Communication Engineering Department, Yadavindra College of Engineering, Talwandi Sabo moderated the session and summed up the proceedings. Er J S Deol, Honorary Secretary, Bathinda Local Centre, IEI proposed the vote of thanks.



## Chandrapur

Chandrapur Local Centre, IEI celebrated World Engineering Day for Sustainable Development on March 04, 2022 on the theme 'Build Back Wiser Engineering the Future'. Er Naval Shirish Damle, Assistant Engineer, Maharashtra State Power Generation Company, Chandrapur Super Thermal Power Station, Chandrapur, Dr Z J Khan, Principal, Rajiv Gandhi College of Engineering, Research & Technology, Chandrapur and Er M K Shende, Chairman, Chandrapur Local Centre and Associate Professor, Department of Civil Engineering, Rajiv Gandhi College of Engineering, Research & Technology, Chandrapur graced the event as the panellists and shared their views. Er Naval Damle focused on various new technologies coming in the area of power sector with a special emphasis on the need of solar energy in day to day life. Dr Z J Khan deliberated on the role of engineers in building the nations. He encouraged the student fraternity for research in power sector. At the onset, Er M K Shende welcomed the guests, spoke on the theme of the day and cited various examples of engineering achievement in and around the world. Er Y D Parihar, Honorary Secretary, Chandrapur Local Centre proposed the vote of thanks.

## Coimbatore

Coimbatore Local Centre, IEI, celebrated World Engineering Day for Sustainable Development on the theme 'Build Back Wiser Engineering the Future' on March 04, 2022 in association with Department of Electronics and Communication Engineering, Coimbatore Institute of Technology, Coimbatore. On this occasion, the host Centre also organised a webinar on the topic 'Advancement in Next Generation Networks'. At the beginning, Dr S Shanmugam, Chairman, Coimbatore Local Centre, IEI welcomed the dignitaries and the participants. The Chief Guest Dr R Swaminathan, Assistant Professor, Department of Electrical Engineering, Indian Institute of Technology, Indore deliberated on the topic during inaugural session of the event. Dr A Rajeswari, Principal-in-Charge, Professor and Head, Department of Electronics and Communication Engineering, Coimbatore Institute of Technology addressed the gathering. Three technical sessions were organised where Dr R Swaminathan, Assistant Professor, Department of Electrical Engineering, Indian Institute of Technology delivered a lecture on the topic '5G Communications: Specifications, Use Cases and PHY Techniques', Dr Koushik Guha, Assistant Professor (Grade-I), Department of Electronics and Communication Engineering, National Institute of Technology, Silchar presented a paper on the topic 'Role of MEMS and NEMS in Future Prospects of 5G/6G' and Dr Shahid Mehraj Shah, Assistant Professor, Department of Electronics and Communication Engineering, National Institute of Technology Srinagar spoke on 'Artificial Intelligence Base Resource Allocation in 5G Interference Network'. Dr J Krishnamoorthi, Honorary Secretary, Coimbatore Local Centre, IEI proposed the vote of thanks while concluding the event.

## Faridabad

Faridabad Local Centre, IEI organized World Engineering Day for Sustainable Development on 12 March 2022 in virtual mode on the theme 'Build Back Wiser Engineering the Future'. Er Sandeep Handa, Chairman, Faridabad Local Centre, IEI while delivering the opening remarks, stated that the world is trying to rebuild the new normal after the disruption that Covid-19 has brought into.



He added manufacturing and construction industries require more sustainable practices as these were badly affected due to slow transition of raw materials during this phase. Three eminent panellists namely Er Rtn J P Malhotra, FIE, Past Chairman, Faridabad Local Centre and CEO, Bhartiya Valves (P) Ltd, Faridabad, Er Sameer Kumar, Innovator and TED speaker and Dr Pradeep Kumar, Professor and Chairperson, J C Bose University of Science and Technology, YMCA Faridabad graced the event and shared their views. Er Malhotra deliberated that engineering is the practice of solving issues related to

survival of humanity with the help of science and management. He said engineering is able to solve global issues like climate change, energy crisis and environmental pollution and thus serves economy and society. Er Sameer Kumar highlighted the fast changing technologies and cited the achievements of biomedical engineering towards developing standardized products for artificial knee and joints. Dr Pradeep Kumar, Professor & Chairperson, Electronics Engineering, JC Bose University of Science and Technology, YMCA stated three interlinked elements in the Brundtland Commission's Sustainable Development Equation are: environment, economy and society. He briefed sustainable development encompasses innovation, implementation, knowledge and learning. Er Pradeep Mallah, IEI, Faridabad Local Centre Committee Member & CEO, Technopan Industries, Faridabad moderated the session and concluded that World Engineering Day for Sustainable Development is a brilliant option to inspire the next generation of future engineers. Er K R Gupta, Honorary Secretary, Faridabad Local Centre, IEI proposed the vote of thanks.

## Gwalior

Gwalior Local Centre, IEI organized a seminar on the occasion of World Engineering Day for Sustainable Development on 04 March 2022 on the theme 'Build Back Wiser Engineering - the Future'. Er Prabhat Bhargawa, Chairman, Gwalior Local Centre, IEI welcomed all the august gathering. Prof Ramesh Kumar Batra, IPS College of Technology and Management, Gwalior, spoke on the expectation from engineer in developing strategic frameworks and best practices for engineering solutions for sustainable development around the world. He discussed the sustainable goals like no poverty, zero hunger, good health, quality education, gender equality, clean water, sanitation, affordable and clean energy and industrial and economic growth etc. Er Rajendra Singh Bhadoria, former Chief Engineer, Public Health Engineering Department, Government of MP highlighted the role of engineers in modern life to mitigate the impact of climate change and advance sustainable development. Col A S Bais (Retd), Indian Army, ME (VEH), MPM explained the meaning of 'build back wiser' as managing economies, environment and society in accordance to available of resources on our planet. He mentioned that the forests and phytoplankton, diatoms, algae and sea vegetation in oceans absorbs the greenhouse gases and reduce global warming. Dr S K Agarwal, former Professor and Head of the Department, Motilal Nehru National Institute of Technology, Allahabad explained the technologies which are addressing climate change and building carbon free economy. Er U S Pandey, former Senior Engineer, Public Health Engineering Department, Government of MP deliberated on the contribution of engineers to find out sustainable engineering solutions considering environmental impacts. Er Ranvir Singh, former Chief Engineer, Madhya Pradesh Electricity Board spoke of the natural resources in brief. Mr P Y Khanvilkar, former Chief Engineer, NHPC Ltd., Ministry of Power, Gol elaborated on basic needs for a healthy life and the current issues faced by the world. Er P Y Khanvilkar, Honorary Secretary, Gwalior Local Centre, IEI proposed the vote of thanks.



He mentioned that the forests and phytoplankton, diatoms, algae and sea vegetation in oceans absorbs the greenhouse gases and reduce global warming. Dr S K Agarwal, former Professor and Head of the Department, Motilal Nehru National Institute of Technology, Allahabad explained the technologies which are addressing climate change and building carbon free economy. Er U S Pandey, former Senior Engineer, Public Health Engineering Department, Government of MP deliberated on the contribution of engineers to find out sustainable engineering solutions considering environmental impacts. Er Ranvir Singh, former Chief Engineer, Madhya Pradesh Electricity Board spoke of the natural resources in brief. Mr P Y Khanvilkar, former Chief Engineer, NHPC Ltd., Ministry of Power, Gol elaborated on basic needs for a healthy life and the current issues faced by the world. Er P Y Khanvilkar, Honorary Secretary, Gwalior Local Centre, IEI proposed the vote of thanks.

## Indore

Indore Local Centre, IEI celebrated World Engineering Day for Sustainable Development on 04 March 2022 on the theme 'Build Back Wiser Engineering the Future' in virtual mode. Dr R P Gautam, Chairman, Indore Local Centre, IEI felicitated Mr Yogendra Gangrade, Incharge Officer, Trenching Ground, Indore Municipal Corporation and Mr Ram Gupta, Assistant Engineer, Indore Municipal Corporation, welcomed all the dignitaries, guests and members. Dr Gautam deliberated on the technologies being used at the Govardhan plant to watch how various plants were being effectively utilized and Indore remains on top for cleanliness parameter in the country. He also talked about the process of wet and dry waste disposal and recycling in





the trenching ground. Ms Pratibha Pal, Municipal Corporation Commissioner touched upon cleanliness campaign run by the corporation in the city and solid waste management and production of Bio-CNG gas from wet waste. Mr Sandeep Soni, Additional Commissioner, mentioned about the inspection in trenching ground at Devguradia by The Institution of Engineers (India), Indore Local Centre, and process of wet and dry waste collection from door to door in the city, its disposal and utilization by generating Bio-CNG gas. Mr Gangade and Mr Ram Gupta appreciated the effort of the entire engineers, team who has converted the trenching ground at Devguradia, which used to be a heap of garbage in a green place.

### Jamshedpur

Jamshedpur Local Centre, IEI organized World Engineering Day for Sustainable Development on 04 March 2022 on the theme 'Build Back Wiser Engineering the Future'. Mr Vinit Kumar Sah, Chief of Manufacturing, Long Products TATA Steel Ltd, Jamshedpur delivered the welcome address. Prof (Dr) Anil Kumar Choudhary, Department of Civil Engineering, National Institute of Technology, Jamshedpur was the key speaker of the event. He spoke on engineering achievements to build the world and for improving the modern life for sustainable development. Dr Choudhury talked about mitigation of climate change, carbon free economy and seventeen sustainable development goals. Er Shanti Das Bhattacharjee, Honorary Secretary, Jamshedpur Local Centre, IEI proposed the vote of thanks.

### Kadapa

Kadapa Local Centre, IEI organized a Seminar on World Engineering Day for Sustainable Development on 09 March 2022 on the theme 'Build Back Wiser Engineering - the Future'. Er N Jashuva, Head of Department and Associate Professor of Mechanical Engineering, M J R College of Engineering & Technology, Pileru delivered a lecture on the above theme. He said that the engineers have a key role in inventing advanced technologies in the fields of artificial intelligence, space exploration, automation, robotics, medicine, energy harvesting and transportation. Er Jashuva said that deployment and usage of scientific knowledge over time establishes immediate relevance to societal needs. He emphasized on sustainable engineering solutions for various problems faced by the world at present. Er N Brahmananda, Chairman, Kadapa Local State Centre, IEI was present during the event and addressed the gathering.



### Kanpur

Kanpur Local Centre, IEI celebrated World Engineering Day for Sustainable Development on 04 March 2022 on the theme 'Build Back Wiser Engineering- the Future' in virtual mode. Dr Santosh Kumar, Managing Director, Vam Consulting Engineers and Architects Pvt Ltd, Kanpur and Md Haseen Akhtar, Research Scholar, Department of Design, Indian Institute of Technology, Kanpur were the Guest Speakers on the occasion. Er Vivek Asthana, Chairman, Kanpur Local Centre, IEI welcomed the delegates and the participants. Prof J Ramkumar, Immediate Past Chairman and Prof Pradeep Kumar, Past Chairman, Kanpur Local Centre, IEI gave the introduction of Guest Speakers. Dr Santosh Kumar expressed his concern over the alarming situation the world is facing at present like expanding industrial activity, increasing demand of fossil fuels by automobiles and industries, huge production of synthetic polymers and chemicals for use in pharmaceuticals and paint industries, rising waste on land, pollution in water, air, etc which

are threatening the survival of different species on earth. He said engineers have their primary responsibility to innovative technologies that will reduce the negative human impact on the nature. Dr Kumar touched upon



green technologies, green computing, automation based on nano-science and information technologies, development of new eco-friendly materials and ensuring carbon neutrality etc as the

tools for making sustainable development a reality. Md Haseen Akhtar briefly narrated that the necessity of sustainable engineering solutions as well as a plan of action that is linked with the sustainable development goals. He said engineers must create smarter ways to actually build back wiser to adapt and change. Er Rama Kant Yadav, Honorary Secretary, Kanpur Local Centre, IEI proposed the vote of thanks.

### Madurai

Madurai Local Centre, IEI organized World Engineering Day for Sustainable Development on 12 March 2022 on the theme 'Build Back Wiser Engineering the Future'. Dr N Sivasubramanian, Chairman, Madurai Local Centre, IEI delivered the welcome address. Er K P Sathyamurthy, Superintending Engineer, Tamilnadu Public Works Department, Madurai graced the event as Chief Guest. He opined that sustainable development is the only time-tested way to provide better life so that the theme of the day can be justified. Er Sathyamurthy said there is a steady decrease in forest cover around the world due to domestic, industrial and agricultural expansion, fumes, etc which contribute to pollution and climate change. He emphasised on use of alternate energies for industries and homes, non-polluting vehicles, self-sufficient buildings, etc. with an attempt to reduce carbon footprint. Prof P Udhayakumar, Honorary Secretary, Madurai Local Centre, IEI proposed the vote of thanks at the end.



### Meerut

Meerut Local Centre, IEI celebrated World Engineering Day for Sustainable Development on 04 March 2022 on the theme 'Build Back Wiser Engineering- the Future' in virtual mode. Er M L Jain, Chairman, Meerut Local Centre, IEI welcomed the delegates. Prof Niraj Singhal, Director, Sir Chhotu Ram Institute of Engineering & Technology, Meerut was the Chief Guest of the occasion and shared his views in favour of sustainable development goals. Er Nitika Vats, Assistant Professor, Modern Institute of Engineering & Technology, Meerut and Er Ashutosh Mishra, Assistant Professor, Sir Chhotu Ram Institute of Engineering & Technology, Meerut graced the event as the speakers. Er Nitika Vats explained seventeen sustainable development goals related to human development. She spoke on sustainability in higher education and contribution of higher education institutes and academic network in



responding to the educational inequalities faced by the students during pandemic. Er Ashutosh Mishra mentioned about increasing requirement of agricultural products in recent time, which involve development of new techniques, machines and the application non-conventional energy sources particularly solar energy for operating agricultural machinery. Er R P Agrawal, Honorary Secretary, Meerut Local Centre, IEI proposed the vote of thanks.

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# 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

#### Bihar



Bihar State Centre, IEI, Patna celebrated World Water Day on 22 March 2022. Mr B N Singh, Chairman, Bihar State Centre, IEI welcomed the delegates. Prof (Dr) Kamini Sinha, Associate Professor, National Institute of Technology, Patna graced the event as keynote speaker. She focused on the importance of the day and stated that almost 1.8 billion people will suffer from absolute water crisis in different parts of the world by 2025. Prof Sinha insisted on efforts to be initiated for integrated water resource management on a global scale. She stated that ground water scenario has become precarious due to over extraction and stressed on strong measures for water conservation and artificial replenishment of underground aquifers by rain water harvesting. She also stated that Patna city is facing deep aquifer declines due to unregulated construction of deep wells because of unplanned urbanization. Dr Arun Kumar Shrivastava, Council Member, IEI was present during the occasion. Er D K Jha, Honorary Secretary, Bihar State Centre, IEI proposed the vote of thanks.



was the Guest of Honour. Dr P G Patil, Honourable Vice-Chancellor, Mahatma Phule Krishi Vidyapeeth, presided over the function. Dr A K Singh, in his keynote address, stated that the groundwater is utilized for farming and animal

husbandry has resulted in the excessive production of methane gas in the air, which resulted in erratic behaviour of the weather. He opined that proper management of the groundwater is the only solution for sustenance of farming and for security of human life. Dr Z P Patel highlighted the need of changing the cropping pattern and production of crops that consume minimum water. Dr P G Patil emphasized on economical use of water. He stressed on the involvement of all for saving humanity from water scarcity, presented the background of the World Water Day and introduced the theme. Earlier, Er M M Anekar, Chairman, IEI, Ahmednagar Local Centre delivered the welcome address and Dr D D Pawar and Dr S D Gorantiwar, Conveners, shared their views on the topic. Dr M G Shinde, Co-Convenor and Dr A A Atre, Joint Organising Secretary were present during the event. Dr S B Nandgude, Organising Secretary, proposed the vote of thanks. The function was well attended by faculty members and students in large number.

#### Tripura

Tripura State Centre, IEI organised a Seminar to celebrate World Water Day on 22 March 2022 on the topic 'Groundwater: Making the Invisible Visible' jointly with Public Works Department (PWD), Drinking Water & Sanitation (DWS), Government of Tripura; Public Works Department Water Resources (WR), Government of Tripura and Tripura Jal Board. At the onset, Dr Subhadeep Bhattacharjee, Honorary Secretary, Tripura State Centre, IEI delivered the welcome address. Mr Sushanta Chowdhury, Honourable Minister, PWD (DWS), Tripura inaugurated the event as the Chief Guest. Er Shyamlal Bhowmik, Chief Engineer, Tripura Jal Board and Er Rajib Majumder, Director, Water and Sanitation Support Organization, PWD (DWS), Government of Tripura graced the occasion as Special Guests. Ms Ritu K Oraon, Scientist B and OIC, Central Ground Water Board, State Unit Office, Agartala; Er Biswajit Saha, Executive Engineer, PWD (WR), Government of Tripura and Dr John Devadas Dakey, Groundwater Expert, State Project Management Unit, Jal Jeevan Mission, DWS Agartala shared their views on the topic as Special Speakers. Er R K Majumder, Past Chairman, Tripura State Centre IEI, presided over the programme.



#### Angul

Angul Local Centre celebrated World Water Day on 22 March 2022. Er S K Samantaray, Chairman, Angul Local Centre welcomed all the dignitaries present and introduced the topic 'Groundwater: Making the invisible visible'. Er Siba Ram Panda, Honorary Secretary, Angul Local Centre, IEI introduced the Chief Guest and Chief Speaker to the august gathering. Er A P Panda, Executive Director, S & P Complex, NALCO graced the programme as the Chief Guest. Dr Dipti Ranjan Mohanty, Ex-Executive Engineer, Central Water Commission, Bhubaneswar was the Chief Speaker of this day and deliberated on the subject matter lucidly to the audience. He also deliberated on the issue of visibility of invisible Groundwater. Er Sibaram Panda, Honorary Secretary, Angul Local Centre, IEI proposed the vote of thanks. Er S P Kar, former General Manager, Captive Power Plant, NALCO; Er P K Mohanty, Group General Manager, (T&C), S&P Complex, NALCO; Er Satyananda Sahu, Group General Manager (H&A), S&P Complex, NALCO and many other senior committee members of Angul Local Centre were present during the event.



### LOCAL CENTRES

#### Ahmednagar

Ahmednagar Local Centre, IEI, celebrated World Water Day on 28 March 2022 jointly with Mahatma Phule Agricultural University, Rahuri. Dr A K Singh, Vice President, National Academy of Agricultural Sciences, Pusa, New Delhi graced the function as the Chief Guest and also delivered keynote address on the theme 'Groundwater: Making the Invisible Visible'. Dr Z P Patel, Honourable Vice Chancellor, Navsari Agricultural University, Gujarat

#### Bathinda

Bathinda Local Centre, IEI, celebrated World Water Day on 22 March 2022 in virtual mode. Mr Vijay Kant Goyal, General Manager, National Fertilizer Limited, Bathinda was present as the Chief Guest on this occasion and addressed the audience. Prof (Dr) Jagtar Singh Sivia, Chairman, Bathinda Local Centre, IEI welcomed the dignitaries. Dr Adarash Pal Vig, Chairman, Punjab Pollution Control Board (PPCB) and Professor, Botanical and Environmental Sciences at Guru Nanak Dev University, Amritsar graced the function as key speaker and Er Gagandeep Kaur, Assistant Professor, Electronics and Communication Engineering Department, Yadavindra



College of Engineering, Talwandi Sabo was the moderator during the session. Dr Adarash Pal Vig narrated that the main source of water income (receipt of pure water) is from rainfall and water banks. He further explained that the duty of every person is to save water from pollution and to increase the recharging capacity of water bodies. Dr Vig also described the functioning of hydrological cycle and storage of purest form of water in the groundwater.

### Belagavi

Belagavi Local Centre, IEI organized a Technical Talk to celebrate World Water Day on 22 March 2022 on the theme 'Groundwater: Making the Invisible Visible'. Er Chandrashekar M Masaguppi, former Senior Engineer and Coordinator, Jal Jeevan Mission, Govt of Karnataka, graced the event as the Chief Guest and delivered the keynote address. Er Ramesh T Jangal, Chairman, Belagavi Local Centre, IEI welcomed the participants. Prof (Dr) Veeranna D K, Honorary Secretary, Belagavi Local Centre, IEI introduced the keynote speaker. Er Masaguppi highlighted the need for preserving the water and judicious utilization of the ground water with statistical information of water coverage on earth, which clearly depicted the severity of the situation. He touched upon the technology involved in the Jal Jeevan Mission along with the process, materials, State and Central governments funding and implementation of the project. The speaker mentioned that even with small hurdles, the program will be successful in the country. Prof (Dr) Veeranna D. K, Honorary Secretary, Belagavi Local Centre, IEI proposed the vote of thanks to the dignitaries and participants.

### Bhimavaram

Bhimavaram Local Centre, IEI celebrated World Water Day in virtual mode on 22 March 2022 on the theme 'Groundwater: Making the Invisible Visible'. Chief Guest Dr M Sita Rami Reddy, former Professor, SRKR Engineering College, Bhimavaram delivered an invited lecture on the importance of World Water Day and elaborated on the theme of the day. The Corporate Members of the IEI and other participants attended this programme. The webinar commenced with the opening remarks by Dr V K Viswanadha Raju, Chairman and Dr K Suresh Babu, Honorary Secretary of Bhimavaram Local Centre, IEI. The importance of the day was briefly explained by Dr K Brahma Raju, Council Member, IEI. Mr I Ajit Kumar, Committee Member of Bhimavaram Local Centre, IEI proposed the vote of thanks.

### Bokaro Steel City

Bokaro Steel City Local Centre, IEI, celebrated World Water Day on 22 March 2022. Mr Sanjay Kumar acting Executive Director (Works), Steel Authority of India Ltd, Bokaro Steel Plant was the Chief Guest and inaugurated the function. In his inaugural address he mentioned the significance of ground water and its precarious condition prevailing throughout the world. He



informed that SAIL has drastically reduced the consumption of water per ton of steel making by adopting various measures and technology. Guest of Honour Mr Sharad Gupta,

General Manager (Utilities), Steel Authority of India Ltd, Bokaro Steel Plant mentioned that groundwater is hidden treasure which enriches our lives and it needs to be protected with various available means. At the onset, Mr N P Srivastava, Chairman, Bokaro Steel City Local Centre, IEI and General Manager (Environment) SAIL-Bokaro Steel Plant welcomed the dignitaries and members and mentioned about the importance of World Water Day and impact of climate change on groundwater. Two technical papers were presented by Mr Lambodar Upadhyay, General Manager (Water Management), Steel Authority of India Limited, Bokaro Steel Plant and Mr Nitesh Ranjan, Assistant General Manager (Environment), Steel Authority of India Limited, Bokaro Steel Plant which were quite informative and useful. Mr Y N Singh, Immediate Past Chairman, Bokaro Steel City Local Centre, IEI proposed the vote of thanks.

### Durgapur

Durgapur Local Centre, IEI, celebrated the World Water Day on 22 March 2022. Prof Kalyan Adhikari, Professor, Earth and Environment Studies, National Institute of Technology Durgapur was the Guest of Honour and Keynote Speaker. Mr Safikul Islam, Chairman, Durgapur Local Centre, IEI welcomed the guest and participants. He mentioned that groundwater is being over-used in many areas of the world, where more water is extracted from



aquifers without recharging those. Mr Islam narrated that continuous overuse of groundwater may lead to depletion of this resource and threaten the basic water supply, agricultural production, climate

resilience and food security. Mr M Majumder, Honorary Secretary, Durgapur Local Centre, IEI explained the importance of freshwater and mentioned that population growth, rapid urbanization and economic development are the factors behind the increased demand for water, energy and food. Prof Kalyan Adhikari, Guest of Honour and Keynote Speaker lucidly deliberated on the topic and focused on three topics: (i) the invisible ingredient in food, (ii) a resource without borders and (iii) a finite supply. He informed the participants that globally there are 36 groundwater regions, which can be further classified into 4 hydro-geological settings, viz., Basement, Sedimentary Basins, High Relief Folded Mountains and Volcanic Regions. The programme was concluded with the vote of thanks proposed by Mr M Majumder, Honorary Secretary, Durgapur Local Centre, IEI.

### Faridabad

Faridabad Local Centre celebrated World Water Day on 26 March 2022 in virtual mode. Er Sandeep Handa, Chairman, Faridabad Local Centre welcomed the delegates. Er Sunil Kumar, Chairman, Central Ground Water Board graced the event as Chief Guest. Er



Vipul Khandelwal, Director, Gaurang Environmental Solutions Pvt Ltd explained that the groundwater is a vital resource that provides almost half of all drinking water worldwide and it is the important factor for climate change adaption process and is often a solution for people without access to safe water. He also cautioned about the misuse of water which causes reduced surface water supplies, water quantity and nitrates in drinking water. Dr Sarita Sachdeva, Professor, Biotechnology, Executive Director and Dean Research, Manav Rachna International Institute of Research and Studies, Faridabad emphasized that minimum quantity of about 20 litres of water should be assured for everyone to take care of basic hygiene needs as well for drinking. Er O S Maurya, former General Manager, THDC India Ltd stated that it is the time to spread awareness about importance of groundwater and possibility to meet the current ecological, social and economic needs without compromising future needs. Er Sunil Kumar mentioned that the ground water available in aquifers are natural geological units that can transmit water and there are two broad groups of aquifers systems namely soft rock formation and hard rock formation comprising of 30% and 70% of ground water potential respectively. He highlighted the geogenic contamination of groundwater with arsenic, fluoride, and iron and anthropogenic contamination with nitrates, phosphates and heavy metals are beyond BIS limits. Er Inderdeep Singh Oberoi, Director, A D Global Synergies Pvt Ltd, and Committee Member, Faridabad Local Centre opined that ground water needs to be used carefully and thoroughly explored, analyzed and monitored. Er K R Gupta, Honorary Secretary, Faridabad Local Centre proposed the vote of thanks at the end.



## Indore

Indore Local Centre, IEI, celebrated World Water Day on 26 March 2022. Er R P Gautam, Chairman, Indore Local Centre, IEI welcomed all the dignitaries. Dr Rakesh Saxena, Director, Shri G. S. Institute of Technology and Science,



Indore was the Guest of Honour of the programme. He explained about the various human habits which can be adopted in day-to-day life for controlling the wastage of water. Er P Joshi, Superintending

Engineer, Water Resources Department, Indore Circle explained that water crisis has been developed due to improper use of water and wastage of water continues, it will be very hard to survive. Mr Sudhindra Sharma, Director, S S Exploration Enterprises explained that how the groundwater is getting depleted rapidly due to excessive boring and also elucidated in detail about the various methods of groundwater enrichment. Mr Susmit Vyas, M/s The Susmit SV, briefed about the various techniques used in landscaping projects for increasing ground water level. He enlightens the role of trees and flowers in the water conversation and explained the use of water on 3 R principles i.e., Reduce, Recycle and Reuse. On this occasion, Ms Prabha Rai, Young Scientist was felicitated by IE(I) for her contribution in the field of Agriculture. Er Ajay Shankar Joshi, Convener of the programme, proposed the vote of thanks.

## Jammu

Jammu Local Centre, IEI celebrated World Water Day on 22 March 2022. On this occasion, Er Inderjit Singh, Former Chief Engineer (Hydraulic), Government of Jammu & Kashmir was the Chief Guest and Mr M L Angurala, Regional Director, Central Ground Water Board, Jammu was the Guest of Honour. At the outset, Dr Sanjay Khar, Chairman, Jammu Local Centre, IEI delivered the welcome address. Mr M L Angurala elaborated on various aspects of groundwater with powerpoint presentation. Er Inderjit Singh urged the people to start valuing water by using the conventional methods of ancient times and club them with present technologies to conserve and preserve water for future generations. Seven technical papers on the theme were presented on this occasion embracing the theme of the day. Er C P Sharma, Honorary Secretary proposed the vote of thanks.

## Kalaburagi

Kalaburagi Local Centre, IEI organized a Seminar to celebrate World Water Day on 22 March 2022. Mr Jayprakash Kshirasagar, Assistant Professor, PDA College, Kalaburagi graced the occasion as panellist and addressed the gathering. Er Subhash Sugoora, Chairman, Kalaburagi Local Centre, IEI presided the session and Mr Hanmayya Belure, Honorary Secretary, Kalaburagi Local Centre, IEI proposed the vote of thanks.

## Kalpakkam

Kalpakkam Local Centre celebrated World Water Day on 28 March 2022 jointly with Indira Gandhi Centre for Atomic Research, and Association of Atomic Research Centre Officers, Kalpakkam. Dr N Sivaraman, Outstanding Scientist, Director (MC & MFFCH), Indira Gandhi Centre for Atomic Research presided over the function. Er M Shanmuga Sundaram, Chairman, Kalpakkam Local Centre, IEI welcomed the gathering. Dr Janakarajan, renowned



economist delivered a lecture on 'Biosphere and Water Futures: Pathways for Sustainable Development', in which, he highlighted the theme 'Groundwater: making the Invisible

Visible'. He narrated that groundwater is invisible, but its impact is visible everywhere. Dr Janakarajan said that the liquid freshwater in the world

is groundwater and due to the climate change it has become a critical resource. He advocated for zero wastage of water by storing the rainwater in lakes, ponds, reservoirs, and dams.

## Kanpur

Kanpur Local Centre, IEI celebrated World Water Day on 22 March 2022 in virtual mode. Dr Rajiv Ganguly, Associate Professor, Department of Civil Engineering, Harcourt Butler Technical University, Kanpur was the Speaker on this occasion. Er Vivek Asthana, Chairman, Kanpur Local Centre, IEI welcomed the speaker and the participants. Prof Pradeep Kumar, Convenor and Past Chairman, Kanpur Local Centre, IEI introduced the speaker. Dr Ganguly explained that groundwater comprises of water found beneath the ground in the saturated zone. He said that with increased population, globalization and urbanization, it has become imperative for sustainable management of groundwater. He further briefed that recent scientific studies have shown depletion of groundwater sources which lead to decrease in stream flows, drying of wetlands, decrease in water levels in wells and land subsidence. Dr Ganguly mentioned that contamination of groundwater decreases its utility and raises severe human and environmental health concern. The presentation by the speaker focused on specific pollutants in groundwater and their appropriate remediation techniques. The programme ended with the vote of thanks proposed by Er Rama Kant Yadav, Honorary Secretary, Kanpur Local Centre.

## Kochi

Kochi Local Centre organized a webinar on the theme 'Groundwater: Invisible Treasure' on 22 March 2022 in virtual mode on the occasion of World Water Day 2022. Er P A Salahudheen, Chairman, Kochi Local Centre, IEI stated in



his opening remark about the importance of preservation of freshwater and controlled use of Groundwater. Dr G Madhu, Technical Activity Convener introduced the speaker Er S Haris, former Chief Engineer, Kerala Water Authority. Er S Haris in his deliberation reiterated the importance of keeping our aquifers in a clean and in natural environment. He also explained salient points on National and International water policy for achieving SDG No.6. Er K S Babu, Honorary Secretary, Kochi Local Centre, IEI proposed the vote of thanks.

## Kollam

Kollam Local Centre celebrated World Water Day on 23 March 2022 jointly with Baseli Mathews II College of Engineering, Kollam in virtual mode. Er Sreekumar R, Committee Member, Kollam Local Centre welcomed the dignitaries. Dr Shammim Ibrahim, Head, Department of Mechanical Engineering, Baseli Mathews II College of Engineering, Kollam addressed the gathering. Er K Rajan, Chairman, Kollam Local Centre, IEI delivered Inaugural speech. Dr E Shaji, Head, Geology Department, Kerala University graced the event as the Chief Guest and delivered a lecture on 'Water Resources and Disaster'. Many students and faculty members participated in the event from various engineering colleges of Kollam.

## Muzaffarpur

Muzaffarpur Local Centre, IEI celebrated World Water Day on 22 March 2022 in virtual mode. Er Anjani Kumar Srivastava, Chairman, Muzaffarpur Local Centre, IEI delivered welcome address and mentioned that the main



objective to celebrate World Water Day is to increase awareness of the importance of water. The Chief Guest was Dr Anil Kumar Sharma, Assistant Professor, Civil Engineering Department, NIT Patna who stressed upon the need to recharge the ground water and said that efforts should be made to eliminate the contamination of ground water due to presence of Arsenic, Fluoride, and Nitrate, etc which causes health issues for the people. Mr Anjani Kumar Mishra, Past Chairman, Muzaffarpur Local Centre, IEI; Prof Vijay Kumar; Er P R Bhardwaj; Er Rahul Kumar; Er Krishna Kanhai; Er Akash Kumar, Mr Gopal Sinha; and other engineers presented papers on this occasion. Dr C B Mahto, Principal, Muzaffarpur Institute of Technology has sent greetings and best wishes for the success of the event. Er Lok Ranjan, Joint Secretary, Muzaffarpur Local Centre, IEI proposed the vote of thanks.

### Palghat

Palghat Local Centre, IEI, celebrated World Water Day on 22 March 2022. Dr Drissia T K, Senior Scientist & TPA, Co-ordinator for Subcentres, ED's Secretariat, Hydrology and Climatology Research Group, Centre for Water Resources Development and Management (CWRDM), Kozhikode was the Keynote Speaker of the day. She focused on the global water crisis and mentioned that groundwater provides almost half of all drinking water worldwide, about 40% water for irrigation and about 1/3 of water supply required for industry. Dr Drissia told that groundwater is important for sustaining ecosystems, maintaining base flow of rivers, preventing land subsidence and seawater intrusion. She opined that groundwater is an important part of climate change adaptation and is often a solution for people without access to safe water. The presentation also covered conserving water, harvesting rainwater, and reusing water through proper treatment. Er K Madhana Mohan, Chairman, Palghat Local Centre, IEI welcomed the keynote speaker and participants and said that a few decades ago people would not have bothered about safe drinking water but today water is a scarce commodity. He expressed his concern over groundwater, which is not getting recharged adequately leading to rapid depletion of the resource due to unplanned urbanization, climate change, deforestation and large scale constructions. He stressed on the remedial measures to be exercised at almost all levels for the groundwater 'making the invisible visible'. Dr C Pradip, Honorary Secretary, Palghat Local Centre proposed the vote of thanks.

### Roorkee



Roorkee Local Centre, IEI celebrated World Water Day on 26 March 2022. Prof Ashish Pandey, Chairman, Roorkee Local Centre, IEI welcomed the gathering and explained the importance of

World Water Day. Dr Nandakumaran P, former Chairman, Central Ground Water Board delivered a lecture on 'Groundwater: Making the Invisible Visible'. He narrated that the groundwater is vital for India's water security and economic development and Indiscriminate human activities, without proper attention to the recharging capacities of aquifers and environmental considerations, have resulted in large-scale depletion and contamination of this vital resource in many parts of the country. He said climate change has deteriorated the situation in the recent past, which resulted in drying up of productive aquifers and increasing groundwater contamination leading to various adverse environmental impacts, threatening India's food security. Er Vineet Kumar Saini, Honorary Secretary, Roorkee Local Centre, IEI proposed the vote of thanks.

### Rourkela

Rourkela Local Centre, IEI, celebrated World Water Day on 22 March 2022. In the beginning, Mr Ajay Kumar Goswami, Chairman, Rourkela Local Centre, IEI welcomed members and guests. Dr R C Pradhan, Honorary Secretary, Rourkela Local Centre, IEI briefly spoke about the World Water Day on the theme 'Ground water: Making the Invisible Visible' and also presented a brief bio-data of the speaker Dr Rakhee Das, Assistant Professor, Department

of Civil Engineering, National Institute of Technology, Rourkela. Dr Rakhee Das delivered a lecture on the topic 'Sustainable Urban Water Supply Management: The Case of South-West Guwahati Water Supply Project' and said that Urban Local Bodies (ULBs) look after the domestic water sufficiency of urban population. She said that acute problem in water supply is being faced due to exponential increase of infrastructural expansions and urban population and explained measures to mitigate the issue. Dr R C Pradhan, Honorary Secretary, Rourkela Local Centre, IEI proposed the vote of thanks.

### South Gujarat

South Gujarat Local Centre, IEI, celebrated World Water Day on 30 March 2022 on the theme 'Groundwater: making the Invisible Visible'. Dr Vaghasia Jignesh Gobarbhai, Chairman, South Gujarat Local Centre delivered the welcome address. Prof K D Panchal, Honorary Secretary gave brief introduction about the theme and set the tone of the event. The keynote



speaker Mr Mayur Harsora, Process Engineer (Environment), Envision Enviro Technologies Pvt Ltd delivered a lecture on the theme of the day. He stated that ground water is vital

resource that provided almost half of the drinking water worldwide. He said that it sustains ecosystems, maintains the base flow of rivers, prevents land subsidence and seawater intrusion. Prof K D Panchal proposed the vote of thanks at the end.

### Trichur

Trichur Local Centre, IEI celebrated World Water Day on 22 March 2022 on the theme 'Groundwater: Making the Invisible Visible'. Ms Ancy Joseph, Director, Kerala State Ground Water Department, Thiruvananthapuram was the guest speaker who deliberated that increasing population, rapid urbanization has resulted in increasing use of ground water resources over the last few decades in the State. She apprised that Central Ground Water Board (CGWB) jointly with State Ground Water Department and other Central Government as well as State Government agencies have been the mainstay for meeting the domestic needs of more than 80% of rural and 50% of urban population besides, fulfilling the irrigation needs of around 50% of irrigated agriculture. Ms Joseph emphasized on three aspects which need attention for sustainable use of groundwater which are resource assessment, augmentation or recharge of groundwater and effective regulation for groundwater extraction. Prof (Dr) Sunil Kumar C P, Chairman, Trichur Local Centre, IEI mentioned that groundwater resources are depleting and stressed the need to initiate immediate steps for augmenting the precious resource. Prof (Dr) E K Kurien, Honorary Secretary, Trichur Local Centre, IEI focussed on the groundwater potential, drastic reduction of the groundwater level, and drying up of well during the summer months in many parts of Kerala. He also proposed the vote of thanks at the end.

### Visakhapatnam

Visakhapatnam Local Centre, IEI organized World Water Day on 22 March, 2022. Mr Kompella Subbaraya Sastry, Joint Director, Command Area Development Authority (CADA) under AP Integrated Irrigation & Agriculture Transformation Project (World Bank Project) was the speaker of the day. Dr Botta Venkataramana, Chairman, Visakhapatnam Local Centre, IEI presided over the Programme and explained the theme of the Day. Earlier, Er K V Rama Mohan Rao, Honorary Secretary, Visakhapatnam Local Centre, IEI welcomed the gathering. Er R Nageswara Rao, Convener of the Programme and Committee Member, Visakhapatnam Local Centre, IEI introduced the speaker to the audience. While delivering Lecture, Mr Sastry deliberated that all of the liquid freshwater in the world is ground water which supports the drinking water supplies, sanitation systems, farming, industry, and entire ecosystems. We must dispose only harmless biodegradable products on the soil and use water as efficiently as possible. Groundwater crosses borders and plays a critical role in adapting to climate change and we must protect



and explore groundwater, balancing the needs of people and the planet. The speaker explained that the water audit usually exists in the form of a worksheet or spreadsheet that details the variety of consumption and losses that exist in a community water system. The water balance summarizes the components and provides accountability, as all of the water placed into a distribution system should theoretically equal all the water taken out of the distribution system. Prof Dr K Venkatasubbaiah, and Dr G Padmavathi, Council Members, IEI; Senior Engineers and Corporate Members of Visakhapatnam Local Centre, IEI participated in the programme.

#### Varanasi

Varanasi Local Centre, IEI celebrated World Water Day on 01 April 2022 on the theme 'Ground Water: Making the Invisible Visible'. Er R S P Gupta, Chairman, Varanasi Local Centre, IEI delivered the welcome address and Prof S N Upadhyay, Convener, Ex-Director, IIT-BHU and Immediate Past Chairman, Varanasi Local Centre, IEI gave introduction of World Water Day. Dr S P Rai, Associate Professor, Centre of Advanced Study in Geology, Institute of Science, Banaras Hindu University was the guest speaker and he delivered a lecture on 'Isotopes: Tools for Unraveling Aquifer Dynamics and Sustainable Groundwater Management'. Er Gaurav Pathak, Junior Telecom Officer, BSNL, Varanasi and Committee Member, Varanasi Local

Centre, Prof S B Dwivedi, Dean (Academic Affairs), IIT-BHU and Dr Rajesh Rai, Associate Professor, Department of Mining Engineering, IIT-BHU and Committee Member, Varanasi Local Centre also shared their views. Dr Saurabh Pratap, Honorary Secretary proposed the vote of thanks.

#### Water Management Forum

Water Management Forum (WMF), IEI, Ahmedabad celebrated World Water Day during 22-23 March 2022. An exhibition was organised by WMF on the theme 'Save Water' at Adani Institute of Infrastructure Engineering, Shantigram, Ahmedabad which on this occasion. Er Vijay Solanki, Deputy



Director, Water Management Forum, IEI explained the importance of water, particularly groundwater to the students and faculties. Prof Anupam Kumar Singh, Principal, Adani Institute of

Infrastructure Engineering, Ahmedabad; Prof V M Patel, Civil & Infrastructure Engineering Department, Adani Institute of Infrastructure Engineering, Ahmedabad and Prof H R Varia, Head, Civil & Infrastructure Engineering Department, Adani Institute of Infrastructure Engineering, Ahmedabad was present in the exhibition.

## IEI Celebrates World Engineering Day for Sustainable Development 2022

Contd. from page 10

#### Roorkee

Roorkee Local Centre, IEI, celebrated World Engineering Day for Sustainable Development on 04 March 2022 on the theme 'Build Back Wiser Engineering the Future'. Prof Ashish Pandey, Chairman, Roorkee Local Centre, IEI explained the importance of the day and highlighted that sustainable engineering solutions are required to address various challenges and sustainable goals.



Speaker, Prof M L Kansal, former Head, Department of Water Resources Development & Management, Indian Institute of Technology, Roorkee delivered a lecture on the topic 'Sustainable Urban Water Management in Secondary Cities of India'. He briefed that water is vital and key ingredient for the sustainable life of humans and ecosystem as well as vital for social and economic growth. Er Vineet Kumar Saini, Honorary Secretary, Roorkee Local Centre, IEI proposed the vote of thanks.

#### Tirunelveli

Tirunelveli Local Centre, IEI organized World Engineering Day for Sustainable Development in virtual mode on 17 March 2022. Dr S Baburengarajan, Professor and Head, Department of Computer Science Engineering, PET Engineering College, Valliyur, Tamil Nadu delivered a lecture on 'Build Back Wiser Engineering - the Future'. He explained the role of engineers in sustainable development of the world and also encouraged the budding engineers to participate in the movement which will enable them to face the real world problems. Dr R Velayutham, Chairman, Tirunelveli Local Centre, IEI inaugurated the session and Mr Jimmy Carten, Honorary Secretary, Tirunelveli Local Centre, IEI delivered the vote of thanks.



#### Tuticorin

Tuticorin Local Centre, IEI organized 'World Engineering Day for Sustainable Development' on 04 March 2022 on the theme 'Build Back Wiser Engineering the Future'. Dr S Richard, Principal, Grace College of Engineering, Tuticorin welcomed the delegates. Er I Maria Michael Raj, former Scientific Officer, Heavy Water Board, Tuticorin and Past Chairman, Tuticorin Local Centre felicitated the Keynote Speaker Dr Kirubhakaran, Director and Professor, Department of Computer Science and Engineering, Grace College of Engineering, Tuticorin. He said that the day gives an opportunity to promote engineering as a career and highlight how engineering can change the world for better. Dr Kirubhakaran briefed UN Sustainable Development Goals in the context of developing countries to ensure that everyone has access to clean water, sanitation, reliable energy and other basic human needs. He further touched upon the issues like climate change, environmental impact, urbanisation and emerging technologies like artificial intelligence while concluding his speech.

#### Udaipur

Udaipur Local Centre, IEI celebrated World Engineering Day for Sustainable Development on 04 March 2022 on the theme 'Build Back Wiser Engineering the Future'. Er Y K Bolia, Chairman, Udaipur Local Centre, IEI welcomed the delegates. Er Rajkumar Singh Chouhan, Additional Chief Engineer, PWD, Udaipur & Dr Chittaranjan Agrawal, Associate Professor, Department of Mechanical Engineering, DDO & Administrative Officer, College of Technology and Engineering, Maharana Pratap University of Agriculture and Technology, Udaipur graced the occasion as Chief Guest and Guest Speaker respectively.



Er Rajkumar Singh Chauhan, Additional Chief Engineer, PWD Udaipur called upon all the engineers to continue research as per the requirements, develop and implement environment-protective engineering processes to make the earth habitable. Dr Agrawal mentioned that cyclic and eco-friendly systems minimizes the waste and should be adopted for and sustainable development. Er C P Jain, Honorary Secretary, Udaipur Local Centre, IEI proposed the vote of thanks.



# News-in-Brief

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

## STATE CENTRES

### Andhra Pradesh

Organised a programme on the topic 'Wonders of the Cosmos' jointly with The Institution of Electronics and Telecommunication Engineers, Vijayawada Centre on 17 April 2021. The speaker of the session, Dr Sarita Vig, Professor, Astronomy & Astrophysics Group, Department of Earth & Space Sciences, Indian Institute of Space Science & Technology (IIST), Thiruvananthapuram, Kerala explained the gravitational waves are invisible ripples in the fabric of space time which are caused by some of the most violent and energetic events in the universe including collision of black holes, collapsing stellar core and merging neutron stars/white dwarf stars, etc. She elaborated that these waves travel at the speed of light. Dr Vig also mentioned the Einstein's General Theory of Relativity. Dr K Hemachandra Reddy, Chairman, Andhra Pradesh State Centre, IEI addressed the gathering and Dr C V Sriram, Honorary Secretary, Andhra Pradesh State Centre, IEI proposed the vote of thanks.

Organised Engineers' Day at Andhra Loyola Institute of Engineering & Technology on 15 September 2021. Dr K Hemachandra Reddy, Chairman, Andhra Pradesh State Centre, IEI talked about IEI and its activities. Dr C V Sriram, Honorary Secretary, Andhra Pradesh State Centre, IEI expressed his concern over the pandemic situation and the role of engineers to face this situation. Mr D Ramakrishna, Managing Director, Efftronics Systems Pvt Ltd graced the occasion as Chief Guest. He informed about the latest technologies in IT industry. Mr Ramakrishna elaborated on algorithm designs which can be expressed in many kinds of notation, including natural languages or control tables (processed by interpreters), pseudocode, flowcharts and Drakon charts whereas programming languages, which are primarily intended for expressing algorithms in a form that can be executed by a computer. Rev Fr Dr A Francis Xavier, S J, Director, Andhra Loyola Institute of Engineering and Technology, Vijayawada addressed the gathering. Dr O Mahesh, Principal, Andhra Loyola Institute of Engineering and Technology, Vijayawada discussed about the scope of the budding engineers and their responsibilities towards the nation. Dr C V Sriram, Honorary Secretary, Andhra Pradesh State Centre, IEI proposed the vote of thanks.

Organised World Habitat Day on the topic 'Applications of Artificial Intelligence in Civil Engineering' on 04 October 2021 jointly with V R Siddhartha Engineering College, Vijayawada. On this occasion, Dr P Dilip Kumar, Ecole Centrale School of Engineering, Mahindra University, Hyderabad graced the event as the speaker. He elaborated on robots that can exhibit a degree of autonomy Sense-Plan-Act (SPA) paradigm while moving. Dr Kumar explained the complex structure of sensors used to capture the data to build up the semantic net. He illustrated the natural language processing, approach to voice synthesis, dynamic voice generation, phonemes (sound units into which human speech can be categorized) and recorded speech (large collection of words recorded digitally and individual words are selected to make up a message) in detail.

Organised Energy Conservation Day jointly with PSCMR College of Engineering & Technology, Vijayawada on 20 December 2021. Mr AVLK Jagannadha Sarma, Deputy Executive Engineer, Andhra Pradesh Eastern Power Distribution Company Limited was the speaker who discussed the methods for saving energy that might save the expenses in daily life with examples like turning the refrigerator off, using energy efficient light

bulbs, replacement of air filters, air drying of dishes and clothes, baking with glass or ceramic pans by setting the oven's temperature 25 degrees, cooking with right sized burner and cutting down air leaks in air cooler, etc. Dr K Hemachandra Reddy, Chairman, Andhra Pradesh State Centre, IEI discussed about the career prospect of engineering students which will help in sustainable development of the nation. Dr C V Sriram, Honorary Secretary, Andhra Pradesh State Centre, IEI proposed the vote of thanks.

### Gujarat

Organized Technical Talk on 'Short Panelled Concrete Pavement – Need of the Day: Design, Construction Practices and Economics' under Civil Engineering Division of IEI on 18 February 2022. Mr P M Chaudhary, Chairman, Gujarat State Centre, IEI delivered welcome address. He explained concrete pavement design, construction and performance evaluation. Mr Vijay Solanki, Deputy Director, Water Management Forum, IEI welcomed the dignitaries and the participants. Chief Guest Er S B Vasva, Council Member, IEI and Secretary, Roads & Building Department, Government of Gujarat in his message wished success of the event. Er Ujjval J Solanki, Associate Professor, Department of Civil Engineering, Darshan University, School of Engineering, Rajkot touched upon alternative concrete pavement solutions, optimum performance and behavioural parameters, appropriate concrete materials, mixture proportions, design fundamentals and highway pavement design etc. He also explained pavement classification, construction practices of joints, short panelled and white topping pavement with case studies and illustration. Dr D O Nakrani, Honorary Secretary, Gujarat State Centre, IEI proposed the vote of thanks.

### Karnataka

Organized a Webinar on 'Polymer Matrix Composites, Materials, Process & Applications' for two days on 20 January 2022 and 03 February 2022. Dr Dinesh Rangappa, Convenor of the programme introduced the speaker Dr Shama Rao, Principal Consultant, Infosys Ltd, Bangalore. He described polymer matrix composites, raw materials, process and its applications. Earlier Inaugural Address was delivered by Er M Lakshmana, Chairman, Karnataka State Centre, IEI. Dr Enti Ranga Reddy, Honorary Secretary of Karnataka State Centre, IEI elaborated on the topic and proposed the vote of thanks.

Organized a Webinar for Prof B R Narayana Iyengar Memorial Lecture on the topic '21st Century Engineers Challenges and Opportunities' on 29 January 2022. Prof R M Vasagam, Dr MGR Educational and Research Institute (Deemed University), Chennai and Past Chairman, Karnataka State Centre and NDRF, IEI was the speaker on this occasion. Er M Lakshmana, Chairman and Dr Enti Ranga Reddy, Honorary Secretary, Karnataka State Centre, IEI were present during the session.

### Tamilnadu

Organized a Lecture Meeting in National Language on the topic 'Engineering in Thirukkural' on 13 January 2022. Er S Kannan, Chairman, Tamilnadu State Centre, IEI welcomed the gathering. Er P S Kumar, Managing Director, ETA Smart Pvt Ltd, Chennai was the speaker who addressed the audience. Er D Gokul, Joint Honorary Secretary, Tamilnadu State Centre, IEI introduced the guest speaker. Er K N Sivaraju, Honorary Secretary, Tamilnadu State Centre, IEI proposed the vote of thanks.

### Uttar Pradesh

Organized Technical Talk on the theme 'Innovative Approaches for Agri-production Engineering, Entrepreneurship and Value Addition' under the aegis of Agricultural Engineering Division Board on 17 February 2022. Dr Bangali Baboo, former National Director, (NIAP-World Bank), Indian Agricultural Research Institute, New Delhi was the Chief Guest and Keynote Speaker on this occasion. He identified the complexities affecting food production for two decades, which was affecting profitability and rural employment etc due to lack of research work in the field. Dr Baboo explained the difference between



research and innovation with case studies and proposed to establish an Engineering Innovation Forum at the UP State Centre to identify, recognize, and promote innovation in eco-system in the State. Earlier Er R K Trivedi, Immediate Past Chairman, UP State Centre welcomed the Chief Guest and the participants. Dr Jaswant Singh, Honorary Secretary, UP State Centre introduced the Chief Guest. Dr R C Maheshwari, former Vice Chancellor, Sardarkrushinagar Dantiwada Agricultural University, Gujarat attended the event online from San Francisco and offered encouraging comments. Er V B Singh, Vice President, IEI; Er (Dr) Nutan Kumar Dash, Special Invitee, Agricultural Engineering Division Board, IEI, Er R R Tanwar, Council Member, IEI; Er Sudhir Gupta, Chairman, Bareilly Local Centre, and IEI Er S K Verma, Managing Director, Uttar Pradesh Power Corporation Limited attended the event alongwith other Committee Members of the host Centre.

## LOCAL CENTRES

### Ananthapuram

Celebrated World Standards Day 2021 on 14 October 2021. Prof E Keshava Reddy, Director of Evaluation, JNT University, Ananthapuram was the Chief Guest on this occasion. He elaborated that 17 Sustainable goals set by UN which are vital for healthy planet. He said standards contain valuable information and guidelines that can help member countries to achieve the ambitious goals. Prof Reddy further updated International Standards are available in each of the areas which must be used to achieve sustainable development goals in a meaningful way. Prof M L S Deva Kumar, Chairman, Ananthapuram Local Centre, IEI briefly described the importance of this day and urged to recognize and honour the contributions of various standards-setting experts. Earlier Prof G Mamatha, Committee Member of Ananthapuram Local Centre welcomed all the guests. Prof C Sasidhar, Past Chairman, Ananthapuram Local Centre proposed the vote of thanks.

Celebrated Energy Conservation Day 2021 on 14 December 2021. Prof C Shoba Bindu, Honorary Secretary, Ananthapuram Local Centre welcomed the guests and informed in details about the work, being carried out by IEI. Dr V Sankar, former Professor of Electrical and Electronics Engineering Department, JNT University, Ananthapuram stressed the need of energy conservation. He expressed his concerns over the misuse of energy and lack of awareness of people on misuse of fans, bulbs, submersible pumps and heaters, etc. Dr Sankar opined that renewable sources are the only way to replace non-renewable sources of energy and stressed on using natural light as far as possible. Prof M L S Deva Kumar, Chairman, Ananthapuram Local Centre, IEI proposed the vote of thanks.

### Coimbatore

Organized a Technical Webinar on the topic 'Green Construction Strategies in Building Construction' under Civil Engineering Division on 03 February 2022. Dr J S Sudarsan, Assistant Professor, School of Construction Management, National Institute of Construction Management and Research, Pune was the Guest Speaker, who explained on green construction strategies and advanced materials. He briefed about e-waste management in building construction. Dr S Shanmugam, Chairman, Coimbatore Local Centre, IEI welcomed the gathering. Dr G Anusha, Professor and Head, Department of Civil Engineering, KPR Institute of Engineering & Technology, Coimbatore presided over the event. Dr J Krishnamoorthi, Honorary Secretary, Coimbatore Local Centre, IEI proposed the vote of thanks.

Organized a Technical Webinar on the topic 'Advances in Smart Environment Monitoring System using IoT & Sensors' under Electronics and Telecommunication Engineering Division on 22 February 2022. Dr S Shanmugam, Chairman, Coimbatore Local Centre, IEI welcomed the dignitaries. Dr K Sivasankari, Principal, Akshaya College of Engineering and Technology, Coimbatore presided over the event. Mr Ebin Ephrem Elavanthinal, General Manager, BITS BIRAC BIONEST, BITS, Goa was the speaker, who explained about the Internet of Things, which are employed in WSNs for effective waste management, vehicle marking, temperature

control, crop damage assessment and pollution control. Mr Elavanthinal also illustrated application of IoT, WSNs and sensors in smart environment monitoring systems. Mrs K Nimisha, Assistant Professor, Department of Electronics and Communication Engineering, Akshya College of Engineering & Technology, Coimbatore was facilitated at the event. Dr J Krishnamoorthi, Honorary Secretary, Coimbatore Local Centre, IEI proposed the vote of thanks.

Organized a Webinar on the topic 'Recent Trends in Communication and Applications' under Electronics and Telecommunication Engineering Division on 25 February 2022. Dr B Satheesh Monikandan, Assistant Professor, Faculty of Electronic and Communication Engineering, Indian Naval Academy, Ezhimala Indian Navy, Ministry of Defence, Government of India was the Guest Speaker. He explained the broad classification of communication systems in both wired and wireless systems and the latest developments in the communication systems combined with applications of artificial intelligence. Dr Monikandan further touched upon core applications of mine detection, mine countermeasure systems and tactical assessment links with VHF radio systems in equipment of military systems. Earlier Dr J Shanmugam, Chairman, Coimbatore Local Centre, IEI welcomed the gathering. Dr P Vijayalakshmi, Professor and Head, Department of Electronics and Communication Engineering, Hindustan College of Engineering, Coimbatore conducted the event. Dr D Baskar, Assistant Professor, Department of Department of Electronics and Communication Engineering, Hindustan College of Engineering, Coimbatore introduced the Chief Guest. Dr J Krishnamoorthi, Honorary Secretary, Coimbatore Local Centre, IEI proposed the vote of thanks.

Organized a Webinar on the topic 'Current Scenario of Textile Waste Recycling' under Textile Engineering Division on 28 February 2022. Dr T Senthilkumar, Scientist (Textile Manufacture), ICAR – Central Institute of Research on Cotton Technology, Mumbai was the Guest Speaker on this occasion. He explained conversion concepts of fabric to fibre, various current and future recycling technologies, 3R concept, recycling for environment benefit. Dr J Shanmugam, Chairman, Coimbatore Local Centre, IEI welcomed the gathering. Dr V Ramesh Babu, Associate Professor and Head, Department of Textile Technology, Kumaraguru College of Technology presided over the event. Dr M Dhinakaran, Senior Associate Professor, Department of Textile Technology, Kumaraguru College of Technology introduced the Chief Guest. Dr J Krishnamoorthi, Honorary Secretary, Coimbatore Local Centre, IEI proposed the vote of thanks.

### Gorakhpur

Organized a Webinar on 'Recent Trends in Computer Science & Engineering' under Computer Engineering Division on 27 February 2022. Er Dharendra Chaturvedi, Chairman, Gorakhpur Local Centre, IEI welcomed the dignitaries. Prof (Dr) S Dhanalakshmi, Department of Electronics & Communication Engineering, SRM Institute of Science & Technology, Kattankulathur, Tamilnadu was the speaker on this occasion. She described in detail the different aspects of Cloud Computing, Transducer, MQ Telemetry Transport, Robotics Warehouse, Autonomous Car, Semi-immersive Simulation and Underwater Objects Detection and Tracking. She also touched upon non-immersive simulations and virtual reality experience. Er Ved Prakash Gupta, Honorary Secretary, Gorakhpur Local Centre, IEI proposed the vote of thanks.

### Mangalore

Organized Energy Conservation Day on the topic 'Energy Conservation in Chip Design' on 21 December 2022. The speaker, Er Abhinav Kijan Balakrishna, Engineer, Nvidia, Corp, USA who elaborated on application of Graphic Processing Units which are used to get maximum possible performance with optimisations by the latest cutting edge technology. He mentioned Nvidia made considerable strides in the finished product. Earlier, Er Dr B Manu, Honorary Secretary, Mangalore Local Centre, IEI welcomed



the gathering and introduced the speaker and Dr Sunil B Malegole, Chairman, Mangalore Local Centre, IEI presided over the meeting.

#### North Bengal

Organized a Lecture Meeting on 'Open Distance Learning Amidst COVID 19' under Computer Engineering Division on 21 February 2022. Er Chinmoy Ghosh, Honorary Secretary, North Bengal Local Centre, IEI delivered the welcome address. The speaker of the session Mr Santanu Dam, Deputy Director, Netaji Subhas Open University said Covid-19 posed new challenges to the education systems to maintain continuity of academics through distance learning solutions. He touched upon the advantages of open learning systems like access to distance learning content and coach anytime anywhere, blended learning and home based distance learning delivery technology, etc. Er Chinmoy Ghosh, Honorary Secretary, North Bengal Local Centre, IEI proposed the vote of thanks.

#### Trichur

Organized Technical Meeting under Architectural Engineering Division jointly with Architects & Engineers Association and Thrissur Management Association on 26 February 2022. Chief Guest Er Madhur S Nair, CMD, Cochin Shipyard Limited, shared his views on design and development of India's first indigenous aircraft carrier INS Vikrant at Cochin Shipyard Ltd, challenges faced and experience gained during the project. He further opined that this is the largest shipbuilding project in the nation in terms of value, size, complexity and time frame. Er Nair briefed that the said production started in 2004 and targeted delivery was April 2022. Er Anand Menon, Committee Member, Trichur Local Centre, IEI and President, Architects and Engineers Association, Thrissur introduced the chief guest, welcomed the gathering and gave introductory remarks on the shipbuilding industry and the architecture of vessels. Prof Dr E K Kurien, Honorary Secretary, Trichur Local Centre proposed the vote of thanks.

#### Udaipur

Organized a webinar on the theme 'Trends & Advances in Mechanical Engineering' in association with Mechanical Engineering Department, S S College of Engineering, Udaipur under the aegis of Mechanical Engineering Division Board during 07-11 February 2022. The programme was inaugurated by Dr Prashant Sharma, Principal, S S College of Engineering, Udaipur. There were five expert speakers who delivered lectures on different topics. Dr B L Salvi, Professor and Head, Mechanical Engineering Department, College of Technology and Engineering, Udaipur explained the rapid prototyping technology. Dr Kamlesh Joshi, Associate Professor, Institute of Infrastructure Technology Research and Management, Gandhinagar shared his views on 'Ultra-thin Silicon Wafer Slicing using Wire EDM for Photovoltaic Application'. Er C P Jain, Honorary Secretary, IEI, Udaipur Local Centre delivered a lecture on the topic on 'Productivity: A Life Changing Tool for Industry'; Dr Piyush Kumar Soni, Professor and Vice Principal, Peoples University, Bhopal explained in details on Patents and IPR. Er P K Jain, Secretary, Indian Institution of Industrial Engineering, Udaipur Chapter and Committee Member, Udaipur Local Centre, IEI elaborated on 'Role of Productivity in Manufacturing Industries'. Dr Prashant Sharma proposed the vote of thanks at the end. The event was coordinated by Er Pankaj Patidar, Assistant Professor, Mechanical Engineering Department, S S College of Engineering, Udaipur.

#### Vallabh Vidyanagar

Organized a programme on 'Greenathon: 2022' on 26 February 2022. Dr Sachin Parikh, Joint Director, Directorate of Technical Education, Gandhinagar addressed the gathering as the guest speaker. He advocated for the concept 'Burn Fat not Fuel' as environmental awareness slogan. Dr R D Patel, Chairman and Prof H C Badrakia, Honorary Secretary, Vallabh Vidyanagar Local Centre, IEI were present during the programme.



## 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](http://www.ieindia.org), should be sent through email to [research@ieindia.org](mailto:research@ieindia.org) and one printed copy of the same should reach the following address:

**Director (Technical)**

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

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.





# The Institution of Engineers (India)

## Revised Fee Structure

(Effect from 01 April 2022)

[As per Decision of 713<sup>th</sup> 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)

### IEI YOUNG ENGINEERS AWARD 2022-2023

### Notification

The Institution of Engineers (India) is a multi-disciplinary professional body of engineers with 15 engineering disciplines and over 9,00,000 members in India and abroad. The Institution was established in 1920 and was incorporated by Royal Charter in 1935. It has been in the forefront of engineering profession addressing the socio engineering problems for progress of the country. IEI functions among professional engineers, academicians, research workers to update their professional knowledge through continuous professional development. With its large international linkages and a network of 125 Centres in India and Six Overseas Chapters, the Institution has built up wide reach and large infrastructure to meet its objectives of promoting engineering in all aspects.

With a view to promote the pursuit of excellence in the field of engineering, IEI has instituted 'IEI Young Engineers Award'. The Award consists of a Plaque and a Certificate. The purpose of the Award is to recognize outstanding achievements/contributions made by young engineers in engineering research, excellence in engineering technology development, technology transfer, etc. Any engineer citizen of India not older than 35 years of age as on March 31, 2022 is eligible for the Award. The IEI Young Engineers Award is presented to awardees for all the 15 Engineering Divisions of the IEI during the respective National Conventions. The awardees attending the National Convention will be provided with free accommodation & their traveling expenses (AC-3 Tier train fare by shortest route) will be reimbursed on production of original documents.

The Application Proforma may be downloaded from the link <https://www.ieindia.org/webui/IEI-Activities.aspx#young-engineering-awards>. Soft copy of the filled-in application proforma should be forwarded to [award@ieindia.org](mailto:award@ieindia.org) by **May 31, 2022**. Further, six copies of the duly filled application form, along with all supporting documents, endorsed by appropriate authority should be sent to the below mentioned address so as to reach us latest by **June 10, 2022**:

**Director (Technical)**

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

The envelope containing the application should be superscribed at the top as 'IEI Young Engineers Award 2022-2023' and name of the engineering division under which the applicant desires to be considered for the Award.





## 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 **June 3<sup>rd</sup> and 4<sup>th</sup>, 10<sup>th</sup> & 11<sup>th</sup> 2022**. The relevant material is available in the link <https://www.pma-india.org/brochures>.

**Exam Dates for Level C:** 18, 24-25 June 2022 (0930 – 1730 hrs)

**Exam Dates for Level D:** 18 June 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](http://www.pma-india.org), Email: [info@pma-india.org](mailto:info@pma-india.org) /

## Announcement

# World Environment Day

5 June 2022

## Theme: Only One Earth

World Environment Day is the United Nations' principal vehicle for encouraging worldwide awareness and action for the environment. Held annually since 1974, the Day has also become a vital platform for promoting progress on the environmental dimensions of the Sustainable Development Goals. With the United Nations Environment Programme (UNEP) at the helm, over 150 countries participate each year. Major corporations, non-governmental organizations, communities, governments and celebrities from across the world adopt the World Environment Day brand to champion environmental causes.

World Environment Day takes place every year on 5 June. Over the years, it has grown to be the largest global platform for environmental public outreach and is celebrated by millions of people across the world.

The United Nations General Assembly has declared the years 2021 through 2030 the UN Decade on Ecosystem Restoration. United Nations Environment

Programme (UNEP) and the Food and Agriculture Organization (FAO) of the United Nations together with the support of other partners will lead the event to prevent, halt, and reverse the loss and degradation of ecosystems worldwide. It aims at reviving hundreds of millions of hectares, covering terrestrial as well as aquatic ecosystems. A global call to action, the UN Decade draws together political support, scientific research, and financial muscle to massively scale up restoration.

World Environment Day 2022 will be held under the theme **Only One Earth**, with the focus on "Living Sustainably in Harmony with Nature" highlighting the need to live sustainably in harmony with nature by bringing transformative changes – through policies and our choices – towards cleaner, greener lifestyles. Only One Earth was the motto for the 1972 Stockholm Conference; 50 years on, the motto holds true - this planet is our only home, whose finite resources humanity must safeguard.

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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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