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A CENTURY OF SERVICE TO THE NATION

Volume 27

Number 9

IEI Technical Webinar

Renewable Energy Projects: Management and Challenges

The Institution of Engineers (India) organized Technical Webinar on the theme **Renewable Energy Projects: Management and Challenges** under the aegis of the Electrical Engineering Division Board (ELDB) of the Institution on November 3, 2020. More than 400 people attended the Webinar in a quest for contemporary information regarding Renewable Energy Projects implemented in India and abroad. Mr P Rajamani, Chairman, Electrical Engineering Division Board, IEI delivered the welcome address and presented the brief overview on the theme of the webinar. Er Narendra Singh, President, IEI graced the occasion and addressed the participants. President, IEI mentioned about the heritage of the century old Institution and shared his experience in hydroelectricity generation projects in northern India. He mentioned that though in our country fossil fuels are the main source of electricity production, it accounts for huge carbon footprint. Therefore, renewable resources are the only sustainable options for energy production to meet the increasing energy demand to curb carbon emission and mitigate the climate change, he opined. Er Singh gave a brief



Mr Rajeev Prabhakar Supekar

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IEI Technical Webinar

Strategies for Meeting the Steel Demand under 'Atmanirbhar Bharat' Vision

The Metallurgical & Materials Engineering Division Board (MMDB) of the Institution organized Technical Webinar on the topic, **Strategies for Meeting the Steel Demand under 'Atmanirbhar Bharat' Vision** on November 6, 2020. Eminent Panelists, namely, Mr Arun Kumar Agarwal, Director (Technical), MECON Limited; Mr Sushim Banerjee, Former Director General, Institute for Steel Development and Growth (INSAG); Dr A S Firoz, Former Chief Economist, Economic Research Unit, Joint Plant Committee were present during the discussion. Moderator during the session, Mr K K Mehrotra, Former Chairman & Managing Director, MECON Limited & Chairman, MMDB, IEI introduced the Panelists. Mr Arun Kumar Agarwal while delivering his lucid presentation on the theme, briefly explained the global steel scenario as well as the present situation of Indian steel scenario and highlighted the effects of COVID-19 particularly in Indian steel sector. Mr Agarwal focused on the steel consumption in the country



Mr Arun Kumar Agarwal



Mr Sushim Banerjee

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From the President's Desk.....

With the objective to broaden the scope of interaction, dissemination and transfusion of knowledge, to enlighten and highlight the professional competence of the experts in different technological domains, the National Council of The Institution of Engineers (India) decided in its 529th Meeting at Mumbai, (erstwhile Bombay) on June 1985 to set afloat the concept of organizing Indian Engineering Congress every year, where the noted engineers and technologists of eminence will be invited to elucidate their accomplishments in tackling different engineering assignments during their illustrious professional carrier. The principal concept of Indian engineering Congress involves fruitful deliberation over a centralized theme and associated sub theme, which include subsequent storming of brains, broadening and enlightening the views of elite academicians, researchers, industry professionals from different professional fields to explore new technological domains and concepts. Thus the objective of Indian Engineering Congress is the horizontal and vertical transfer of knowledge and expertise obtained through technical discourse, that leads to the emanation of recommendations resulted from technical deliberation for further dissemination and application.



The First Indian Engineering Congress was organized in January 1987 on the theme 'Mapping Technovation through Multi-Goal Synthesis' at Kolkata (erstwhile Calcutta). Honorable Prime Minister of India, Shri Rajiv Gandhi inaugurated the mega event of the Institution in Netaji Indoor Stadium, Kolkata on January 10, 1987 and called upon the engineers and scientists to fulfill the rising expectations of the people and urged industry to come out of the cocoon of protection and be competitive in its home ground. Shri K C Pant, Union Minister of Steel and Mines, Prof Nurul Hasan, Honorable Governor of West Bengal, Shri Jyoti Basu, Honorable Chief Minister of West Bengal, Shri Ajit Kumar Panja, Union Minister of Information and Broadcasting and Shri Priya Ranjan Das Munshi, Union Minister of State for Commerce graced the occasion with their august presence.

Till date of that glorious event, the rich technological legacy of the Institution through deliberation around a centralized theme continues through organizing Indian Engineering Congress every year at different locations of the country. When the devastating effect of pandemic results economic and social disruptions and the organizations are formulating the resilience strategy to survive, IEI came forward to render more effective and flexible services to its' members through digital platforms and organizing 35th Indian Engineering Congress through virtual platform, where erudite speakers enlighten the audience by sharing their views and expertise.

Renewable Energy Projects: Management and Challenges

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account of electricity production through non-conventional sources and felt that awareness regarding advantages of renewable resources among the common people and favorable government policies will help India to realise the dream of becoming carbon negative country. Dr Nilanjan Sengupta, Director (Technical), IEI moderated the session and introduced the Panelists.

Panelist during the session, Mr Rajeev Prabhakar Supekar, Vice President (Projects), Influx Inc, Tokyo, Japan, International Professional Engineer (IntPE) of The Institution of Engineers (India), while commencing the talk, recalled the natural disaster of extremely large scale earthquake on 11 March 2011 caused tsunami in northeast Japan resulting in Fukushima nuclear power plant accident, casting shadow on several nuclear power stations spread across the country and supplying almost one third of electric power. He mentioned that after an energy policy revival, the nation turned to renewable energy that dramatically changed the landscape and resulted in aiding reduction of emissions, propelling economic growth. In a span of just 6 years (2012-18), the renewable power share in Japan grew over 3.1 times, the most as compared to the EU, UK and rest of the world, Mr Supekar added after briefly discussing the background of inception of renewable energy projects in Japan. Further he commented that this field will attract more talent and investment as the recently announced goal of making the country carbon-neutral by year 2050.

Mr Supekar explained that as an Organisation for Economic Co-operation and Development (OECD), when nation guaranteeing an attractive tariff for 20 years, various projects were planned and executed under safe construction and keeping the local stakeholders in confidence. He mentioned that the regulator reduced tariff gradually to less than one third of the original while the consumers, from domestic to business arena, all agree to pay an additional tariff to cover part of projects cost indirectly when the investment rush turned speculative. Mr Supekar further explained categorization of renewable energy projects including solar, wind (onshore, offshore), biomass, hydro-power etc. among which he focused on solar and wind energy projects.

The speaker explained that in spite of liberal revenue, availability of low interest capital for project funding, the real challenges were in identification of land for utility scale projects and converting it in line with project development. Japan, with 70% of land classified as mountainous and proximity to long seashore made the projects development difficult, he further added. Mr Supekar substantiated this point with the facts and figures of two large projects where he was directly involved. He said, in one project, 2.4 million of soil was cut from hills and equally filled in valley, in accordance with local regulation prohibiting soil transfer from project area to make it suitable for mounting solar panels and in the second one, a waste-land, earlier used for salt production that was below sea level at places and a part used for bird-breeding. He also informed that to overcome these challenges, a barrier was erected to prevent high tide rushing in and a pump-house to evacuate

speedily in case of contingency while a part of project area was cordoned-off to facilitate bird breeding and keep the environment intact.

Mr Supekar mentioned that for these projects, engineering and design aspects were viewed briefly, managing the challenges of topography survey by drones instead of conventional way, cutting down time and money. He gave a brief account of stake-holders in the project, land-owners, investors and bankers, EPC companies, lawyers, component suppliers and integrators, regular and most important the Project Management Office (PMO) who play important roles. The speaker elaborated on the communication aspects at macro-level were also discussed along with the project life cycle that starts with inception continues with project development and construction, interconnection (commissioning) and finally Operations and Maintenance. The presentation was substantiated with photographs, sketches and website credentials for the use of viewers.

The second speaker of the session, Mr Abhilakh Singh, Honorary Senior Associate, National Solar Energy Federation of India, drew a clear picture on renewable energy scenario in India with current data and facts. He spoke on India's Intended Nationally Determined Contribution, which aims to reduce the carbon emission by 33 to 35% of its GDP by 2030 with respect to 2005; to achieve about 40 percent cumulative electric power installed capacity from non-fossil fuel based energy resources, with the help of transfer of technology and low cost international finance, including from Green Climate Fund and to create an additional carbon sink of 2.5 to 3 billion tons of CO₂ equivalent through additional forest and tree cover by 2030. He presented the growth enablers for renewable energy like Comprehensive Resource Assessment (Wind Atlas/Solar Radiation Mapping); Enabling Legislations & Regulations such as National Action Plan on Climate Change, Preferential Tariffs/GBI/ RE certificate, 15% Renewable Obligations by 2020; RE classified as infrastructure sector and 100% FDI by Automatic Route permitted. Mr Singh touched upon various project management issues like Preconstruction Activities, Project Construction Management and Post Commissioning Management. He outlined on stakeholders of the projects, funding requirements, financing options and legal & institutional framework etc which are the key parameters for project management. Subsequently he explained the parameters affecting the growth of SPV in India such as land, design standards, regulatory clearances, evacuation systems, impact of GST and other factors impacting costs and commercialization. Mr Singh concluded the session with a brief on solar rooftop panels which has huge potential in India for generating huge amount of electricity at lower tariff and can be a reliable alternative to intermittent electricity from the grid.



Mr Abhilakh Singh

A lively question-answer session was held, when pertinent questions were raised, that led to fruitful deliberations. Mr Suneel Grover, Chairman, National Skill Development Forum (NSDF), IEI delivered the concluding remarks while summing up the session and proposed the vote of thanks.

Important Notice

It has been observed that there are many Corporate Members of IEI whose mobile number/email id is not registered with IEI till date. Non availability of the mobile numbers and email ids precludes us not only from providing our full range of services but also from participation in the Online Election Process.

The Corporate Members whose mobile number/email id is not registered with IEI are therefore requested to kindly communicate their mobile no. and email id along with membership number to datamemb@ieindia.org by 10 January 2021.

For any further clarification, one may feel free to speak to us at (033)40106248/ 246/ 269/ 299.

Dr H R P Yadav
Secretary and Director General-I/C

Nano-Engineering, Vaccination and Diagnosis in Combating Corona: The Recent Trends

West Bengal State Centre of the Institution organized Technical Webinar on the theme **Nano-Engineering, Vaccination and Diagnosis in Combating Corona: The Recent Trends** under the aegis of Chemical Engineering Division Board (CHDB), IEI on November 25, 2020. Eminent Panelists, namely, Padma Shri Prof Ajoy Kumar Ray, Director, JIS Group, Kolkata and Former Director, Indian Institute of Engineering Science & Technology Shibpur; Dr Debashis Bhattacharjee, Director, Global Safety Assurance, England, UK; Dr Sandra Helena Alves Bonon, Biologist & Collaborator Professor, Faculty of Medical Sciences & Researcher, Coordinator of the Laboratory of Virology & Diagnostic of Infectious Diseases by Molecular Methods, Faculty of Medical Sciences, State University of Campinas, São Paulo, Brazil and Prof Nitosh Kumar Brahma, Visiting Professor, Institute of Genetic Engineering, Kolkata were present during the discussion. Dr



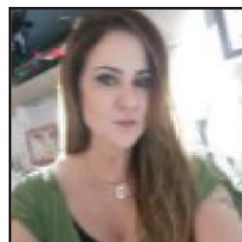
Prof Ajoy Kumar Ray

Debashis Bhattacharjee as an experienced Doctor by profession, recognized the essentialities of community intelligence in combating corona and nicely explained the possible approach in fighting corona, namely distancing sanitization, hand wash and masking. Dr Bhattacharjee emphasized on the importance of global marketing of vaccine at low cost and highlighted the fairness of the community in fighting Covid-19. He presented the affairs of Covid-19 on medico marketing, pharmaco-vigilance, drug safety, in-depth scientific knowledge and digital health entrepreneurship in a comprehensive and holistic way to care the people through Indo-UK collaboration. Padma Shri Prof Ajoy Kumar Ray delivered his talk on the topic 'Corona and Sensor based Protection' and described elaborately the genesis and origin of Corona and their diversities. Starting since 2003, how Corona has been segregated to SARS (Severe Acute respiratory Syndrome), MERS (Middle East Respiratory Syndrome), Common Flue and Corona (Covid-19) as originated from Wuhan Fish market, China highlighted by him. He also explained the original concept of rapid diagnosis process



Dr Debashis Bhattacharjee

with Corona with viral droplets. Dr Sandra Helena Alves Bonon described RT PCR (Real Time Polymerase Chain reaction) with graphs and diagnosis



Dr Sandra Helena Alves Bonon

method and its model to expedite the process. She explained different phases of clinical trials and test procedures in PCR and also described the comparison between RT PCR and Rapid test through serological test process. The differentiation of protocols for SARS-CoV-2 by RT PCR in several countries has been shown by Dr Bonon. Prof N K Brahma emphasized the basic concept of vaccine, and explained, how viruses are attacking the lung alveoli. The comparative analysis of infective



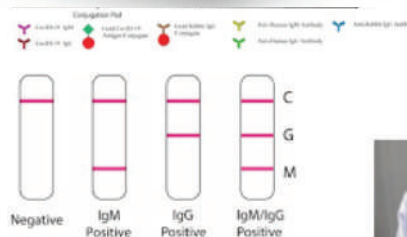
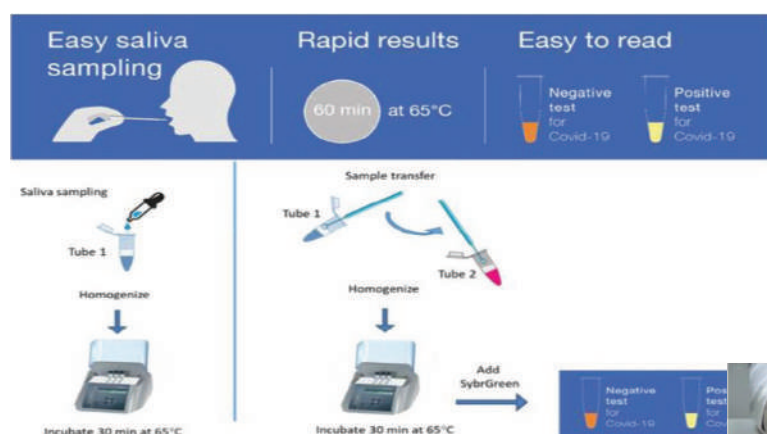
Prof Nitosh Kumar Brahma

mode of HIV, Corona and mode of nanoparticle deposition on lung alveoli was delivered by him. He also showed the CT (Computer Tomography) and SEM (Scanning Electron Microscopy) for discussing the deposition of nanoparticles / elements and emphasized on the types of pure nanometals, Au (Gold), Ag (Silver), Cu (Copper) and hybrid nanoparticles along with their side effects on lung alveoli and their immunological responses. He highlighted the attitude of Corona from other viral infections. Due to different spike proteins on the surface of membrane protein of Corona and their fusing nature in support of ACE (Anfeotensin Converting Enzyme- I and II), Corona can inject their SS (Single Stranded) RNA into the lung alveoli cells to transcribe & translate immediately to a new viral particle (Virion) as explained by Prof

Brahma. Earlier, Mr Sandip Kumar Deb, Chairman, West Bengal State Centre welcomed the Panelists and participants. Mr S Rajagopal, Chairman, CHDB, IEI also addressed the audience. Mr Anirban Datta, Manager, Mechanical & Piping, Richard Design Services India Private Limited was the Moderator during the session. Mr Kali Pada Das, Honorary Secretary, West Bengal State Centre proposed the vote of thanks.



Mr Anirban Datta



Enhancing Skill and Employability of Civil Engineers

Meerut Local Centre of the Institution organized Technical Webinar on the theme **Enhancing Skill and Employability of Civil Engineers** on November 22, 2020 under the aegis of Civil Engineering Division Board (CVDB) of the Institution. Mr Rajneesh Kumar, Chairman, Meerut Local Centre, IEI delivered the welcome address. Er Narendra Singh, President, IEI graced the function and delivered the Presidential Address.



Mr S K Kumar

Moderator during the session, Mr P S Singhal, Retd S E, UP Irrigation introduced the speakers of the webinar, Mr S K Kumar, Retd C E, UP Irrigation, Dr Gaurav Rastogi, Managing Director, Ethereal Engineers Private Limited, Meerut and Proprietor, Gaurav & Associates and Dr Devendra Kumar Sharma, Professor & Dean, Meerut Institute of Engineering and Technology. Mr S.K Kumar started his presentation

with explaining the gap between academia and industry. Mr Kumar highlighted that while the academic curriculum imparts technical knowhow of all disciplines of Civil Engineering, but during employment, specific skills are required which vary from job to job and emphasized on practical and job oriented professional development in this complicated era of professionalism and corporate work culture. The speaker mentioned that there are different skill development programmes which cover a large gamut of Civil Engineering assignments, like Project Engineer, Planning Engineer, Project Manager, Construction Manager, Billing Engineer & Supervisor etc. These programmes provide a professional, necessary industry relevant training that matches the aptitude and talent of fresh passed out Civil Engineers. Such training and development offers Civil Engineering students fresh employment prospects in construction industry, operation and maintenance, R&D, teaching, HR etc and ultimately employability training should be job specific, Mr Kumar opined.

Dr Gaurav Rastogi in his address mentioned that construction industry is



Dr Gaurav Rastogi

the second largest industry in India after agriculture and contributes for 9% share in country's GDP. Dr Rastogi highlighted that construction industry, consists of Real Estate, Infrastructure, Industrial construction and Urban development provides employment to a large number of professionals and fresh Civil Engineers require more practical knowledge, communication and software skills. Dr Rastogi recommended that the academic institutions should emphasize on interaction with industry experts, adopt the latest technologies apart from following conventional curriculum, enhance collaboration with industries, organize more conferences & workshops, leadership and professional development programmes, group discussions, practical application training with prominence to team work, problem based experimental activities in Civil Engineering, which will help them to enhance employability skills, organizing and team building skills.



Dr Devendra Kumar Sharma

Dr Devendra Kumar Sharma deliberated upon different skills, which should be developed amongst the engineering students to improve their employability. Dr Sharma mentioned that employment is a matter of demand and supply ratio and rapid growth of engineering institutions has adversely affected the employment and Governments have important role to play in this. He further emphasized on wide extensive study for the engineering students in both theory and practical and development of communication skills and felt that parents should guide, motivate and monitor their wards.

The speaker further opined that engineering institutions should motivate the students to strengthen their reading skills, technical skills, analytical and critical thinking capability, problem solving skills, soft skills, leadership skills, self assessment skills, mathematical skills and organisational skills. Prof (Dr) Swapan Bhaumik, Chairman, CATE, IEI graced the occasion with his brief on the event and concluding remarks. Mr Mohan Lal Jain, Honorary Secretary, Meerut Local Centre proposed the vote of thanks.



Mr P S Singhal

Strategies for Meeting the Steel Demand under 'Atmanirbhar Bharat' Vision

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and its demand for high growth in the near future. Apart from that he also discussed the government policies for making the market as self reliance. Accordingly, Mr Agarwal explained the major import components with its break up for the current financial year. Subsequently, he briefly elaborated the Atma Nirbhar approach in iron and steel adopted by MECON and also highlighted the future scenario of Indian steel capacity up to the FY: 2030-



Dr A S Firoz

31. Mr Sushim Banerjee focused on various aspects of National Steel Policy and deliberated on the steel consumption in the current scenario of demand. The utilization of steel in real estate as well as in other market was also elaborated by Mr Banerjee. The speaker briefly discussed on the future plan of steel growth along the usage of prefab technologies and focused on the infrastructure investment trust, which has become quite pertinent in the market. The skill intensive program is required to be implemented in the construction onsite so that the scarcity of proper labours

may be optimized. Dr A S Firoz highlighted the survey of usages of steel in the market and also explained his analysis of steel demand at length. Dr Firoz emphasized on the promotion of steel at various sectors like real estate and other domestic purposes and focused on the recycling of scrap steel based on the market demand. He further emphasized on the quality of steel, which needs to be improved for meeting the market demand. At the end of deliberations, Mr K K Mehrotra deliberated on the cost implication of steel with respect to the present situation of market. After completion of the presentations, a questionnaire session was held. The queries were asked by the participants from different zones on various issues related to steel demand. Earlier, Mr K K Mehrotra, Chairman, MMDB, IEI welcomed the participants and Panelists on behalf of MMDB and introduced the theme of the webinar. After successful completion of the session, Dr Nilanjan Sengupta, Director (Technical), IEI proposed the vote of thanks.



Mr K K Mehrotra

Management Development Programme on 'Getting More at Less: Value Engineering/Value Analysis (VA/VE) Way'

West Bengal State Centre of the Institution organized Technical Webinar on the theme **Management Development Programme on 'Getting More at Less: value Engineering/Value Analysis (VA/VE) Way'** on November 28, 2020 under the aegis of Production Engineering Division Board (PRDB), IEI. The objective of the webinar was to highlight the importance of Value Engineering-Value Analysis related tools and techniques in the current industrial scenario. Mr Kali Pada Das, Honorary Secretary, West Bengal State Centre IEI in his opening remarks, welcomed the Panelists during the session, Prof (Dr) Pradip Kumar Ray, Dean, Vinod Gupta School of Management & Professor, Department of Industrial and Systems Engineering, IIT Kharagpur, Dr Goutam Sengupta, Vice Chancellor, Techno India University, West Bengal and Dr Pradipta Bose, Professor, Management Department, Techno India University, West Bengal and also welcomed the participants attending the webinar. Moderator of the session, Dr Gautam Sengupta briefed the audience regarding the theme, aims and objectives of the webinar and introduced the Panelists.



Prof (Dr) Pradip Kumar Ray

Prof Pradip Kumar Ray in his address presented a brief overview on the theme of the webinar and delivered his address on the topic 'Value Engineering/Value Analysis – Basic Concepts and Related issues. In his address, Prof Ray explained that as a whole, value engineering and value analysis refers to an systemic organized study of the function of materials, components, products or service with the goal of yielding value improvement through the ability to accomplish the desired function at the lowest cost without degradation of quality, when the principle objective is to apply the substitution of material. Prof Ray explained value as the ratio of function and cost, which can be enhanced by increasing the product utility, decreasing the cost for the same function while specifying the purpose of the product. Prof Ray explained value engineering job plan, different factors responsible to achieve the success in implementing value engineering program, generic framework for value engineering implementation, application of Boothroyd's Principle and mentioned that value engineering and value analysis need to be compatible with the design aspects. The speaker concluded with deliberation on

different components of Toyota Production System (TPS) including job and process design, job standardization, determination of economic lot size and accelerated set up times, JIT, Autonomation, KANBAN, Jidoka/and-on, Yo-i-don and also deliberated on different value added and non value added activities.

Dr Gautam Sengupta, discussed on the topic 'Covid 19 Impacting Purchasing and Spend Practices: Getting More or Less' and deliberated at a length



Dr Gautam Sengupta

the research findings about the supply source disruptions due to unforeseen and unprecedented pandemic and impact of Covid 19 on purchase and expenditure practices and associated solutions and opportunities. The speaker in his address explained the impact of the crisis on different industry segments including materials, energy, utilities, healthcare etc, change in consumer demand and behavior during the pandemic era, different aspects of waste management and value engineering, eight major wastes required to be eliminated to enhance value of product, which are defects, Over production, waiting, transportation, inventory, motion, over processing and latent skills. Dr Sengupta in his address further explained value enhancement methodology and different aspects of Value Gap and Value Index and application of Function Analysis System Technique (FAST).

Dr Pradipta Bose conducted an interactive session on the topic 'Games on Waste Management' and undertaken different simulation exercises in industries regarding waste and value added & non value added activities.



Dr Pradipta Bose

An interactive Question and Answer (Q&A) Session was held based on the fruitful deliberation by the eminent Panelists, when there had been a large number of highly relevant queries and suggestions from the participants, indicative of a very close and effective interaction between the Panelists and participants. It was concluded that the relevance of VA/VE in today's industrial context has been well communicated to and understood by participants.



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IEI Celebrates World Habitat Day

Theme Housing for All: A Better Urban Future

The World Habitat Day was celebrated by the Institution on October 5, 2020. Brief accounts of celebration as received from various Centres are reported hereunder.

STATE CENTRES

Punjab & Chandigarh

Celebrated World Habitat Day on October 05, 2020 through online platform. Mr Balkar Singh, Former Joint Director, Punjab Energy Development Agency, Chandigarh was the Keynote Speaker of the event. Mr Singh opined that safe and affordable housing always remained as a key area of concern for the policy makers, builders and Architects. Earlier, Mr Sukhviri Singh Mundi, Chairman, Punjab & Chandigarh State Centre and Council Member, IEI, welcomed the participants. Dr Baljit Singh, Honorary Secretary, Punjab & Chandigarh State Centre proposed the vote of thanks.

Tamil Nadu

Tamil Nadu State Centre jointly with Madurai Local Centre and Kattankulathur Local Centre, IEI observed World Habitat Day on October 5, 2020 through online mode. Chief Guest, Mr Nagesh Puttasamy, Zonal Head – White Topping, Urtra Tech Cement Limited delivered the thematic address. At the outset, Mr S Rajagopal, Chairman Madurai Local Centre and Council Member, IEI welcomed the audience. Mr R Ramdoss, Chairman, Tamil Nadu State Centre and Council Member, IEI explained about the theme. Prof (Dr) P T Ravichandran, Chairman, Kattankulathur Local Centre introduced the Chief Guest. Mr S Kannan, Honorary Secretary, Tamil Nadu State Centre proposed the vote of thanks.

LOCAL CENTRES

Neyveli

Neyveli Local Centre, IEI observed World Habitat Day on October 5, 2020 at Neyveli. Chief Guest during the function, Smt. U Sathi Devi, Advisor (Retired Executive Director), NLC India Limited was delivered Lecture on the theme of the day through online platform. In her lecture, the urbanization trends prevailing in the Globe was explained with specific emphasis on the socio-economic imbalances in the society. Earlier, Mr A Sekar, Honorary Secretary, Neyveli Local Centre introduced the Chief Guest and at the end of the programme, proposed the vote of thanks.

North Bengal

North Bengal Local Centre, IEI observed World Habitat Day on October 5, 2020 through online platform. Mr Samir Das, and Dr Arghadeep Biswas, Assistant Professors, Department of Civil Engineering, Jalpaiguri Government Engineering College deliberated over the theme. Earlier, welcome address was delivered by Mr Santanu Das, Honorary Secretary, North Bengal Local Centre and at the end of the session, proposed the vote of thanks.

Palghat

Palghat Local Centre, IEI observed World Habitat Day on October 5, 2020 on virtual mode. Speaker of the day, Dr Prasad Varma Thampan C K, Professor of Civil Engineering, Amal Jyothi College of Engineering, Kottayam and Professor & HoD (Retired), NSS College of Engineering, Palakkad delivered Lecture on the theme of the day. Earlier, Mr K Unni Krishnan, Chairman, Palghat Local Centre delivered the welcome address. Mr A Ramesh,

Honorary Secretary, Palghat Local Centre introduced the speaker and delivered vote of thanks.

Roorkee

Roorkee Local Centre, IEI in association with Indian Concrete Institute, Uttarakhand Centre organized a Webinar to observe World Habitat Day on October 5, 2020. Speakers on the occasion were Ar Habeeb Khan, President, Council of Architecture and Mr Sanjay Prakash, Principal Consultant, SHiFt, New Delhi. Mr Khan in his lecture emphasized upon the need to design and construct simple, sustainable environmental friendly and traditional architecture. Mr Prakash narrated the importance of bamboo as the main structural element and associated mechanical treatments applicable for bamboo. Earlier, Prof (Dr) Achal Kumar Mittal, Chairman, Roorkee Local Centre welcomed the speakers. Dr Mohd Asraf Iqbal, Honorary Secretary, Roorkee Local Centre proposed the vote of thanks.

Saurashtra

Saurashtra Local Centre, IEI observed World Habitat Day on October 5, 2020 in association with Vyavsayi Vidhya Pratishthan (VVP) Engineering College, Rajkot on virtual mode. Speaker, Mr B V Harsoda, Civil and Structural Engineer, Rajkot delivered presentation on the theme of the occasion. At the beginning of the session, Dr Ashit Sureshchandra Pandya, Chairman, Saurashtra Local Centre welcomed all present in the function. Mr Ranchhod Kanjibhai Babaria, Honorary Secretary, Saurashtra Local Centre proposed the vote of thanks.

Tirunelveli

Tirunelveli Local Centre of the Institution observed World Habitat Day on October 16, 2020 on virtual mode. Mr M K Basheer Ahamed, Assistant Professor, PET Engineering College, Vallioor was the resource person and delivered Lecture on the theme of the day. Earlier, Dr S Baburengarajan, Chairman, Tirunelveli Local Centre delivered welcome address. Dr R Velayutham, Honorary Secretary, Tirunelveli Local Centre proposed the vote of thanks.

Tiruchirappalli

Tiruchirappalli Local Centre jointly with Tamil Nadu State Centre has celebrated World Habitat Day 2020 on October 6, 2020 through virtual mode. Dr N Lakshmi Thilagam, Professor & Director, Kalasalingam School of Architecture, K L U, Krishnankoil, Tamilnadu delivered the theme address and mentioned that housing is one of the most essential needs for any civilization. Earlier, Dr N Kumaresan, Chairman, Tiruchirappalli Local Centre & Council Member, IEI welcomed the audience. Mr R Selvaraj, Past Chairman, Tiruchirappalli Local centre introduced the speaker.

Udaipur

Udaipur Local Centre, IEI organised World Habitat Day on October 5, 2020 through online platform. The Keynote Speaker during the function was Mr Ashok Chaudhary, Project Director, Rajasthan Urban Drinking Water,

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IEI Celebrates World Standards Day

Theme

Protecting the Planet with Standards

The World Standards Day was celebrated by the Institution on October 14, 2020. Brief accounts of celebration as received from various Centres are reported hereunder.

STATE CENTRES

Punjab & Chandigarh

Punjab & Chandigarh State Centre observed World Standards Day on October 14, 2020 through online platform. Dr A S Balgir, IOFS (Retd), Additional General Manager (SAG), Indian Ordnance Factories, Department of Defence Production, Ministry of Defence, Government of India was the Keynote Speaker and delivered Lecture on the theme of the day. He discussed about the relevance of standards and mentioned how standards contribute safe and proactive changes to our world and raise awareness on the importance of standardization to the world economy and also the environment and consumers worldwide. Mr G S Bachhal, Past Chairman, Punjab & Chandigarh State Centre and Ex-Vice President, IEI was the Chief Guest. Earlier, Mr Sukhvir Singh, Chairman, Punjab & Chandigarh State Centre welcomed the participants. Dr Baljit Singh Honorary Secretary, Punjab & Chandigarh State Centre proposed the vote of thanks.

Tamil Nadu

Tamil Nadu State Centre jointly with Tiruchirappalli and Madurai Local Centre, IEI observed World Standards Day on 13 October 2020 through online mode. Chief Guest during the function, Dr G Raja Singh Thangadurai, Scientist 'G', Project Director, BRAHMOS, DRDL delivered the thematic address and focussed on the principal tasks of Standards, namely Interoperability/Compatibility, Quality, Variety reduction/Optimization and Information/Measurement. Mr S Rajagopal, Chairman, Madurai Local Centre and Council Member, IEI welcome the gathering. Mr R Ramdoss, Chairman, Tamilnadu State Centre and Council Member, IEI explained about the importance of the day. Mr S Kannan, Honorary Secretary, Tamil Nadu State Centre proposed the vote of thanks.

LOCAL CENTRES

Kanyakumari

Kanyakumari Local Centre, IEI observed World Standards Day on 14 October, 2020 through online mode. Dr N M Jothi Swaroopan, Professor, Electronics and Instrumentation Engineering, RMK Engineering College, Chennai delivered the Keynote address on this occasion. Dr M Marsaline Beno, Vice Principal, St. Xavier's Catholic College of Engineering, Nagercoil was present during the function and addressed the audience. Mr V Sivathanu Pillai, Chairman, Kanyakumari Local Centre delivered the welcome address. Mr V Muthum Perumal, Honorary Secretary, Kanyakumari Local Centre also addressed the audience.

Kalpakkam

Kalpakkam Local Centre observed World Standard Day on 14 October, 2020 at Kalpakkam. Speaker of the day, Mr T V Maran, Head of Section, Zonal Workshop, Indira Gandhi Centre for Atomic Research, Kalpakkam delivered address on the topic 'Recent Trends in Manufacturing Technology' on virtual mode. Mr M Shanmuga Sundaram, Honorary Secretary, Kalpakkam Local Centre welcomed the gathering and also proposed vote of thanks at the end of the programme.

Kollam

Kollam Local Centre, IEI observed World Standards Day on 14 October, 2020 and a webinar was organised on the theme of the day. Mrs Femina A, Associate Professor (Head of the Department), Department of Chemical Engineering, TKM College of Engineering, Kollam was the Chief Guest during the session and Keynote speech was delivered by Dr Venugopal S, Joint General Manager, HLL Life Care Limited. Mr K Sivadasan, Chairman, Kollam Local Centre delivered welcome address. Mr K Rajan, Honorary Secretary, Kollam Local Centre proposed the vote of thanks.

Meerut

World Standards Day was observed by Meerut Local Centre, IEI on 14 October 2020 by organizing a webinar on cloud mode. The Chief Guest and Keynote Speaker on the occasion, Mr P Rajesh, Scientist E, Food and Agriculture, Bureau of Indian Standards, New Delhi deliberated Lecture on the theme of the day. Earlier, Mr Rajneesh Kumar, Chairman, Meerut Local Centre welcomed the guests and participants and highlighted the importance of the day. The programme was concluded with vote of thanks by Mr Mohan Lal Jain, Honorary Secretary, Meerut Local Centre.

Palghat

Palghat Local Centre, IEI observed World Standard Day on 14 October, 2020 through organising a webinar. Ms Meenakshi Ganesan, Scientist-F and Head, Bureau of Indian Standards, Coimbatore Branch was the speaker of the day. Earlier, Mr K Unni Krishnan, Chairman, Palghat Local Centre delivered the welcome address. Mr A Ramesh, Honorary Secretary, Palghat Local Centre proposed vote of thanks.

Roorkee & Aligarh

Roorkee Local Centre jointly with Aligarh Local Centre of the Institution organized a Webinar on the occasion of World Standard Day on 14 October 2020. Keynote Speaker during the function, Prof (Dr) Nadeem Khalil, Department of Civil Engineering, Aligarh Muslim University and Honorary Secretary, Aligarh Local Centre explained the significance of standards to control the environmental and water pollution. Earlier, Prof (Dr) Achal Kumar Mittal, Chairman, Roorkee Local Centre welcomed all. Dr Mohd Ashraf Iqbal, Honorary Secretary, Roorkee Local Centre proposed vote of thanks.

Saurashtra

Saurashtra Local Centre, IEI observed World Standards Day on 14 October, 2020. Speaker during the function, Dr Chirag Thaker, Professor & HoD, Computer Engineering Department, Government Engineering College, Rajkot presented a Lecture on the theme of the day. Earlier Mr Ranchhod Kanjibhai Babaria, Honorary Secretary of the centre welcomed all participants.

Trichur

Observed World Standard Day on October 29, 2020. Prof (Dr) C P Sunil Kumar, Former Professor & Head of Mechanical Engineering Department & Dean, Government Engineering College, Thrissur was the Chief Guest during the function. Earlier, Mr V G Sankaranarayanan, Chairman, Trichur Local Centre, IEI welcomed the audience. Mr Sasidharan Achari M N, Honorary Secretary, Trichur Local Centre. proposed vote of thanks.

Tuticorin

Tuticorin Local Centre, IEI celebrated World Standards Day on 14 October, 2020 and organized a programme on the occasion. Chief Guest during the function, Mr I Maria Michael Raj deliberated a lecture on the theme of the day. Mr Gajendran, Assistant Engineer, Tuticorin Thermal Power Station

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Workshop on Value Engineering and Value Analysis

West Bengal State Centre of the Institution organized **Workshop on Value Engineering and Value Analysis** through Technical Webinar Session on November 29, 2020 under the aegis of Production Engineering Division Board (PRDB), IEI. The Workshop was organized to build up knowledge-base and competence among the participants through hands on exercises



Prof (Dr) Pradip Kumar Ray

and demonstration of application of VA and VE approaches for different kinds of products, processes and systems in industries. The workshop was organized with large participation from different organizations, industries, institutes and universities and designed in three modules. The first workshop session focused on development of Functional Matrices, Value Gap and Value Index using Function Analysis

Systems Technique (FAST) and Value Engineering Potential Summarization; second session dealt with development of Evaluation Template through paired comparison and the third session highlighted development of alternate proposals and application of Decision matrix to determine Value Engineered Solution.

Mr Kali Pada Das, Honorary Secretary, West Bengal State Centre in his welcome address, introduced the Resource Persons of the workshop session, Prof (Dr) Pradip Kumar Ray, Dean, Vinod Gupta School of Management & Professor, Department of Industrial and Systems Engineering, IIT Kharagpur, Dr Goutam Sengupta, Vice Chancellor, Techno India University, West Bengal and Dr Pradipta Bose, Professor, Management Department, Techno India University, West Bengal and Mr D Rajasekar, Deputy Manager, Supply Chain Management, American Axle Manufacturing Company. Moderator during the workshop session, Dr Gautam Sengupta briefed the audience about the aims, objectives and structure of the workshop.

Dr Pradipta Bose, in his lecture initiated value engineering exercise through different case studies in manufacturing organizations, that represented any one of eight Lean wastes, value added and non value added essential activities and the participants were requested to identify the correct



Dr Goutam Sengupta

parameter associated with the situation. Dr Bose in his deliberation



Dr Pradipta Bose

explained the impact of waste on total productivity and output, analyzed value engineering potential summarization of product assembly, development of alternative solutions by the value engineering team through brain storming based on value index and value engineering potential computation. The speaker further explained different value analysis methodologies including evaluation phase, preparation of paired comparison matrix, ranking of decision criteria, preparation of decision matrix based on the determined ranking of criteria, computation of value engineers' score and based on highest score, execution of value engineering. Dr Bose, in another presentation explained the applications of Value Stream Mapping (VSM) for a consumer electronics plant, explained future state VSM production and manpower planning and deliberated on different Quality Management Tools to reduce the lead time, processing time, first pass yield etc.

Mr D Rajasekar, in his lecture explained value engineering exercise with case studies for products as well as service and explained the implementation of value engineering plan through evaluation, ranking of criteria, formulation of decision matrix and determination of highest score.

During the interactive session, there were large number of highly relevant queries and suggestions from the participants indicative of a very close and effective interaction between the panellists and participants. Dr Gautam Sengupta and Prof (Dr) Pradip Kumar Ray explained different methods and solutions for application of value engineering and value analysis in product and process design, significance of customer requirement based quality of performance of product and service, transformation of voice of customers to the worth. The workshop was very effective in imparting knowledge and confidence in applying the concepts of VA/VE in different problem areas of industrial plants and workplaces frequently come across.

The workshop session was concluded with vote of thanks by Mr Kali Pada Das, Honorary Secretary, West Bengal State Centre, IEI.



Mr D Rajasekar

IEI Celebrates World Habitat Day

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Sewerage and Infrastructure Corporation Limited (RUDISCO) Earlier, Mr Yawanti Kumar Bolia, Chairman, Udaipur Local Centre welcomed all the participants and explained the importance of the day. Mr Chandra Prakash Jain, Honorary Secretary, Udaipur Local Centre also shared his views and proposed the vote of thanks.

Upper Assam

Upper Assam Local Centre, IEI observed World Habitat Day on October 5, 2020 through organising a Webinar. Mr Devanga Gaurav Borah, Assistant Manager (Production), Assam Petrochemicals Limited presented Lecture on the topic "Houses of the Future" and Miss Mayuri Deka, Safety Officer, Assam Petrochemicals Limited on the topic, 'A Better Urban Future'. Welcome address given by Mr Rajendra Singha, Past Honorary Secretary, Upper Assam Local Centre. Vote of thanks proposed by Mr Diganta Goswami, Honorary Secretary, Upper Assam Local Centre.

IEI Celebrates World Standards Day

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graced the occasion as Guest of Honour. Mr T Retnavel, Past Chairman, Tuticorin Local Centre delivered the welcome address. Mr Manappa Talwar, Senior Engineer, Heavy Water Plant, Department of Atomic Energy proposed the vote of thanks.

Udaipur

Udaipur Local Centre, IEI observed World Standard Day on October 14, 2020 through online platform. The Keynote Speaker of the day, Mr Sudhir Mathur, Chief Executive Officer, M/s Shrestha, The Building Services Consultant, mentioned that standards are necessary to maintain uniformity in safety and environmental protection. Mr R L Tayalia, Former Chairman, Udaipur Local Centre, IEI & Past General Manager (M.S), Hindustan Zinc Limited in his speech explained the importance of standards, and constitution of global institution of standardization. Earlier, Mr Yawanti Kumar Bolia, Chairman, Udaipur Local Centre welcomed all participated in the webinar. Mr Chandra Prakash Jain, Honorary Secretary, Udaipur Local Centre proposed the vote of thanks.

News-in-Brief

The following is a brief account of Technical Activities organised by various Centres and Fora of the Institution.

STATE CENTRES

Andhra Pradesh

Celebrated GIS Day on November 20, 2020 through online platform. Chief Guest Dr Suresh Ramaswamy Reddy, Indian Institute of Science presented lecture on 'GIS and its Application to Natural Resources Management'.

Rajasthan

53rd Engineers' Day was celebrated on September 15, 2020 through online platform. Hon'ble Governor of Rajasthan, Mr Kalraj Mishra graced the function as Chief Guest. Dr T M Gunaraja, Immediate Past President, IEI and Mr Sisir Kumar Banerji, Past President, IEI were the Guest of Honour during the occasion. On this momentous occasion, noted academicians, industrialists, consulting engineers and organisations were conferred with Eminent Engineers Award 2020, which are as follows.

Prof H D Charan, Vice Chancellor, Bikaner Technical University – Visionary Leader of the Year Award 2020; Dr Manish Kumar Goyal, Associate Professor, Department of Civil Engineering, IIT Indore - Best Researcher of the Year Award 2020; Brig (Dr) Surjit Singh Pabla, Chairman-All India Board of Vocational Education, AICTE - Change Maker of the Year Award 2020; Prof (Dr) Shamsher Bahadur Singh, Civil Engineering Department, BITS Pilani, - Best Academician of the Year Award 2020; Mr Pradeep Singh Gour, Director Principal, Lawrence and Mayo Public School - Exemplary Academic Leader of the Year Award 2020; Prof D Manjunath, Department of Electrical Engineering, IIT Bombay - Outstanding Engineering Services to Society Award 2020; Mr Devi Narayan Pareek, Advisor, Vigyan Bharti - Outstanding Engineering Services to Society Award 2020; Dr Sobhagya Mal Seth, Chairman (Emeritus), Poornima Group, Jaipur - Outstanding Engineering Services to Society Award 2020; President, M/s Global Foundation for Skill Development and Entrepreneurship - Outstanding Engineering Services to Society Award 2020; Dr Dinesh Yadav, Assistant Professor, Department of Electronics and Communication Engineering, Manipal University Jaipur – Young Researcher Award 2020; Mr Nitin Jagad, Branch Head – Rajasthan, Adfactors PR Private Limited – Innovative Industries Award 2020; Mr Divyanshu Shrivastava, Segment Manager, M/s Ebara Machinery India Private Limited – Innovative Industries Award 2020; Mr Manoj Agarwal, Unit Head, Hindustan Zinc Limited – Innovative Industries Award 2020; Dr Ramesh Mittal, Director NIAM, SNV Innovatives Private Limited – Promising Startups Award 2020; Mr K Goutam Kumar Pradhan, Managing Director, Greenklin Home Appliances Private Limited - Promising Startups Award 2020; Prof G K Prabhu, President, Manipal University, Jaipur – Best University in Rajasthan and Mr N K Jain, Chairman, Rajasthan College of Skill and Rural Development Best Institute at Rajasthan.

Telangana

Celebrated 4th Telangana Irrigation Day jointly with Government of Telangana on November 14, 2020 on the occasion of 81st Birthday of Late R Vidya Sagar Rao, Advisor, Irrigation, Government of Telangana. Mr G Jagadish Reddy, Hon'ble Energy Minister, Government of Telangana graced the function as Chief Guest. Dr Rajat Kumar, IAS, Principal Secretary to Government, I & CAD Department, Government of Telangana graced the function as Special Guest. Mr C Muralidhar, Engineer-in-Chief (Irrigation), I & CAD Department, Government of Telangana, Hyderabad and Mr B Hari Ram, Engineer-in-Chief, Kaleswaram Project, Government of Telangana, Kaleswaram graced the function as Guest of Honour.

Observed Foundation Day on November 15, 2020. Dr T H Chowdhury, Former IT Advisor, Government of Andhra Pradesh graced the function as Chief Guest and delivered Lecture on the topic "Engineer to Build a Prosperous, Powerful, Intellectual and Ethical Bharat".

Observed GIS Day on November 18, 2020 in association with Geo Map Society, Hyderabad in online mode. Brig. J S Ahuja, Former Director, Survey of India graced the function as Chief Guest and delivered Keynote address on the topic "GIS-Technology for Accountability, Transparency and Efficiency in Governance".

West Bengal

West Bengal State Centre, IEI organised a webinar on August 22, 2020 under the aegis of Computer Engineering Division on the topic 'Cyber Attacks : How to be Safe'. The Panellists during the Session were Mr Sanjay Kumar Das, Joint Secretary, Department of IT & Electronics, Government of West Bengal; Mr Sushovan Mukherjee, Chairman & CEO, Prim Infoserv LLP; Mr Tathagatha Dutta, Director, Cyber Security, Praxis Business School, Kolkata and Mr Nirupam Sen, Business Head-ER, British Standards Institution. The moderator of the event was Mr Nirmal Das, Chairman, Computer Engineering Divisional Sub-committee, West Bengal State Centre, IEI.

LOCAL CENTRES

Ahmednagar

Organised Lecture Meeting on July 15, 2020 in online mode jointly with SSPM's Imperial College of Engineering, Pune on the topic 'Opportunities in Civil Engineering'. Mr Avinash Kulkarni, Past Chairman, Ahmednagar Local Centre was the speaker during the event.

Brahmapur

Organised Seminar on Under Ground Pipeline Irrigation Network & Other Water Supply Projects on November 21, 2020 at Brahmapur. Mr Bijay Kumar Mishra, Chief Engineer & Basin Manager, RVN Basin Brahmapur was the Chief Guest and Mr Nanda Kumar Mohapatra, Chief Engineer (Retd), Minor Irrigation, Odisha was the Chief Speaker. Dr Buddhadeb Duari was also the Speaker during the session and addressed the audience.

Coimbatore

Organised Lecture Meeting in association with Department of Aeronautical Engineering, Kumarguru College of Technology, Coimbatore on October 31, 2020, Chief Guest during the function, Dr R I Sujith, Institute Chair Professor, Aerospace Engineering, IIT Madras delivered Lecture on the topic 'Heart Attack and Combustion Instability: What is in Common'.

Organised Lecture Meeting in association with Department of Textile Technology, Kumaraguru College of Technology, Coimbatore through online platform on October 20, 2020. Chief Guest, Mr A J Kannan, Consultant, Tortuous Reach, Coimbatore delivered Lecture on the topic "Technical Textiles: High Impact Segment for Driving Economy". Dr V Ramesh Babu, Associate Professor and Head and Dr M Dhinakaran, Senior Associate Professor, Department of Textile Technology, Kumaraguru College of Technology, Coimbatore also addressed the audience. Earlier, Mr P R Natarajan, Chairman, Coimbatore Local Centre and Council Member, IEI delivered the welcome address. Dr H Ram Mohan, Honorary Secretary, Coimbatore Local Centre proposed the vote of thanks.

Durgapur

Durgapur Local Centre organised webinar on September 21, 2020 under the aegis of Civil Engineering Division and Panel Discussion on the topic "Road Construction : Opportunities & Challenges". Panellists during the occasion were Dr Jagat Jyoti Mandal, Professor, Department of Civil Engineering NITTTR, Kolkata; Dr Pritam Saha, Assistant Professor, Department of Civil Engineering, IEST Shibpur and Mr Soumyadip Das, Assistant Professor, Department of Civil Engineering, Dr BC Roy Engineering College.

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Ghaziabad

Organised Lecture Meeting on November 07, 2020 on the topic “Introduction to Reverse Engineering” on virtual mode. Keynote Speaker, Mr Hari Das, Committee Member, Gaziabad Local Centre was the speaker during the session.

Kanpur

Kanpur Local Centre, IEI jointly with Institution of Electronics & Telecommunication Engineers (IETE), Kanpur Centre and The Institution of Electrical and Electronics Engineers, U P Section celebrated 53rd Engineers Day on September 15, 2020 through cloud mode. Prof. (Dr) Ashok Kumar Tiwari, Vice President, Quality & Technical Services, Ultra Tech Cement Limited was the Chief Guest during the function. Prof S N Singh, Department of Electrical Engineering, Indian Institute of Technology Kanpur & Former Vice Chancellor, Madan Mohan Malaviya University of Technology Gorakhpur, the Guest of Honour during the occasion delivered Lecture on the topic “Building Academic Industries in a Sustainable Approach”. Prof Narendra Kumar Kohli, Chairman, IETE, Kanpur Centre presented the life sketch of Bharat Ratna Sir M Visvesvaraya.

Kanpur Local Centre, IEI jointly with The Institution of Electronics and Telecommunication Engineers, Kanpur Centre and IEEE, Uttar Pradesh Section organized Lecture Meeting on the topic ‘Emerging Technologies for Effective Management of the Pandemic’ on November 2, 2020 through virtual mode. Mr Nikhil Riyaz, Founding Director, TSC Technologies Private Limited was the Guest Speaker on the occasion. Prof Narendra Kumar Kohli, Chairman, The Institution of Electronics and Telecommunication Engineers, Kanpur Centre was present during the occasion.

Kanpur Local Centre, IEI organized a Lecture Meeting on November 21, 2020 on the topic ‘How Covid – 19 is Accelerating the Change of the World’. Mr Vyom Sharma, Department of Mechanical Engineering, Indian Institute of Technology Kanpur was the Guest Speaker on the occasion.

Kollam

Observed World Environment day on June 6, 2020 through organising a webinar on the topic ‘Environmental Impact Assessment’. Dr J Ansari, Chief Scientist (CSIR-NIIST), Ministry of Science and Technology, Government of India, Dr J Nazar, Principal, MES Institute of Technology and Management, Chathannoor were the speakers during the session. Mr K Rajan, Honorary Secretary, Kollam Local Centre also deliberated over the theme of the day.

Kota

Organised webinar on the topic “Energy Conservation, Power Saving and Energy Efficiency” on November 7, 2020. Mr K K Mahajan was the Keynote speaker during the session.

Organised webinar on the topic “Construction of PQC Pavement in Highways” on October 27, 2020. Mr M K Jain, General Manager, Lea Associate South Asia Private Limited, Jhalawar was the speaker during the session. Mr Basant Joshi, Regional Head, TS Rajasthan and Mr Vikas Vijay, TTSM, Ultra Tech Cement, Kota were also present in the meeting.

Silchar

Organised Lecture Meeting on November 10, 2020 virtually on the topic “Emerging Technologies: Natural Language Processing & Artificial Intelligence”. Speaker, Dr Partha Pakray, Assistant Professor, Computer Science & Engineering, National Institute of Technology, Silchar delivered lecture on the theme.

Tiruchirappalli

Organised Technical Lecture jointly with Tamil Nadu State Centre, IEI and CSI, Tiruchirappalli on June 30, 2020 through online platform. Speaker, Dr Kirubakaran Velswamy, Post Doctoral Fellow (NSERC), Department of Chemical and Materials Engineering, Donadeo Innovation Centre for

Engineering, University of Alberta, Edmonton, AB, Canada, delivered the technical talk on the topic “Application of AI in the Oil Sands” and shared his research experience on the application of Artificial Intelligence in process control industries.

Tiruchirappalli Local Centre jointly with Tamil Nadu State Centre, IEI and Computer Society of India, Tiruchirappalli Chapter, IEEE Student Branch, NIT Tiruchirappalli organized Technical Lecture through video conferencing mode on September 29, 2020. Mr Rajbarath K R, Global Leader of TCS, IoT Consulting Practice & Business Development for Utilities, TCS, Chennai delivered the talk on “Digital Twins, AI and IoT over Tea”.

Tiruchirappalli Local Centre, IEI jointly with Indian Institute of Metals, Indian Institute of Welding and Indian Welding Society, Southern Zone organised series of webinars on October 15, 17 & 19, 2020 on the topics “Basics on Electron Microscopy, History & Science Behind”, “Fundamentals & Working Principle of SEM” and “Applications of Advanced Electron Microscopy” respectively. Mr S M Gowtham, FIB-SEM Operator was the resource person during the series..

Tiruchirappalli Local Centre jointly with Tamil Nadu State Centre, IEI organized Technical Lecture on October 20, 2020 through virtual mode. Mr Suren Nadarajah, Technical Director and Partner, Praeter Engineering Limited, UK delivered Lecture on the topic “Post-tensioning Techniques, Design and Construction”.

Tiruchirappalli Local Centre jointly with Tamil Nadu State Centre, IEI; Computer Society of India, Tiruchirappalli Chapter; Indian Institute of Welding, Tiruchirappalli Branch; Indian Institute of Metals, Tiruchirappalli Chapter and Indian Welding Society, Southern Zone organized Technical Lecture on October 27, 2020 through virtual mode. Dr Munish Jindal, Founder & CEO, Hover Robotix, Founding President, MENTORx Global, New Delhi delivered Lecture on the topic “Artificial Intelligence & Robotics : Transforming Academia to Industry”.

Tiruchirappalli Local Centre jointly with Tamil Nadu State Centre, IEI and Computer Society of India, Tiruchirappalli Chapter, Indian Institute of Welding, Tiruchirappalli Branch, Indian Institute of Metals, Tiruchirappalli Chapter and Indian Welding Society, Southern Zone organized a technical lecture through online platform on November 17, 2020. Speaker during the function, Mr M S Santhosh, Senior Manager, Sales, Didactics, Hydac India Private Limited, Bangalore delivered Lecture on the topic “Emerging Trends in Automation Technologies”.

Tiruchirappalli Local Centre, IEI in association with Anna University, University College of Engineering BIT Campus, Tiruchirappalli organised one week Faculty Development Programme on Sustainable Energy Technologies from July 28, 2020 to August 01, 2020 through online platform. Eminent resource persons include: Mr Arun Rebero, Managing Director, Countura Solar India Private Limited, Dr V Kirubakaran, Centre for Rural Energy, The Gandhigram Rural Institute, Dindigul, Mr V.Raghu, Sr DGM (Retd) BHEL Trichy, Dr Kevin Ark Kumar, Deputy Manager, BHEL Trichy, Mr N Dinesh, Co- Founder, Sootless Energy Private Limited, Chennai, Dr.S.Jaisankar, Principal, Star Lion College of Engineering and Technology Thanjavur, Dr. K. Palanisamy, Associate Professor/EEE, VIT and Dr MP Selvan, Associate Professor/EEE, NIT Tiruchirappalli

Tirunelveli

Organised Technical Seminar through online platform on the theme ‘Why Engineers need Creativity and Innovation’ on November 20, 2020. Dr V S Sreebalaji, Professor & Principal, Roever Engineering College, Perambalur was the resource person during the function.

Udaipur

Organised webinar on May 30, 2020 on the topic “Water Crisis Management”. Mr Anurodh Prashant Sharma, Immediate Past Chairman, Udaipur Local Centre was the Keynote speaker and delivered a Lecture on the topic.



Special Issue

Micro and Nano Self Assembly



- ❖ Bio-inspired self-assembly
- ❖ Active self-assembly
- ❖ Heterogeneous integration
- ❖ Directed self-assembly
- ❖ Autonomous movement
- ❖ Controlled self-assembly
- ❖ Energy-dissipating Systems
- ❖ Microsystems, Microfabrication
- ❖ Polymers, Manufacturing
- ❖ Nanofabrication
- ❖ Atomic force microscopy
- ❖ Biosensors
- ❖ Nanostructures
- ❖ High Aspect Ratio, Etch Rate
- ❖ Double-shelled octahedron
- ❖ Scanning Electron Microscope
- ❖ Photocatalysis
- ❖ Sacrificial Layer and other relevant areas
- ❖ Oxidation of saturated CH bonds
- ❖ Quantum Wire

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Special Issue

Wind Tunnel Techniques from Hypersonic to Hypersonic Flows



- ❖ Wind tunnel design and construction
- ❖ Utilization of wind tunnels for aeronautical and non-aeronautical applications
- ❖ Model fabrication
- ❖ Model supports
- ❖ Wind tunnel measurements
- ❖ Use of CFD for improved wind tunnel design
- ❖ Use of computers in wind tunnel operation and testing
- ❖ Validation of CFD results with wind tunnel measurements
- ❖ Balance design and fabrication
- ❖ Integration of EFD / CFD and digital / analogue wind tunnels
- ❖ Use of water tunnels for testing aeronautical and non-aeronautical models
- ❖ Data capture and analysis and case studies

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Special Issue

Creating a Circular Economy: Myth or Reality



- ❖ What are the major issues and challenges of each phase of circular economy (e.g. take, make, distribute, use and recover) within industrial supply chain?
- ❖ Is there any best practice within each phase of circular economy?
- ❖ What innovation could be suggested in each phase to enhance sustainability performance?
- ❖ What role individual organisation, industry consortium, and policymakers should play to adopt circular economy in businesses?
- ❖ Is there any difference and similarity of circular economy adoption in developed and emerging economies?
- ❖ Could we measure circular economy performance and suggest means for improvement?
- ❖ How could technology play major role in adopting circular economy?
- ❖ What are the various measures related to resource and energy efficiency that have been undertaken in order to achieve circular economy?
- ❖ How reduce, reuse and recycle principles have been practiced across the society in order to adopt circular economy?
- ❖ What resources, strategies, and competences are required to implement circular economy?
- ❖ How circular economy is related to sustainable development goals?
- ❖ How social wellbeing and gender equality are related to circular economy?
- ❖ Is there any synergy between physical and mental health wellbeing, and circular economy?
- ❖ Could circular economy help achieve greater sustainability across industries?
- ❖ How effective waste management helps achieve greater sustainability?
- ❖ How is adoption of circular economy facilitated through advanced information and communication technologies (e.g. Industry 4.0, Internet of Things, Block chain, big data and 3D printing)?

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IEI Join Hands with Various Certification Bodies to Nurture Engineers

IEI and The Institute of Cost Accountants of India have signed a MoU on 27 May 2019, Kolkata, to offer a course exclusively for engineers- "Executive Diploma in Cost & Management Accounting for Engineers". Here is a wonderful opportunity for all corporate members of IEI to enhance knowledge in the domain of finance and understand the framework of costing, accounting system etc. in various decision making processes.

IEI also ties up with Project Management Associates (PMA), on 3 Jun 2019, at Chennai, in an exclusive collaboration to build a project mindset through Project Management education "IPMA's level C and D Certification Programme" in the country. The program offers a golden opportunity for project professionals to acquire key knowledge and concepts in Project Management, based on the approach followed by the world's leading authority on competence based Project, Program & Portfolio Management- International Project Management Association (IPMA).

IEI members have the exclusive facility of enrolling in the courses at a discounted fee!

For details, Corporate Members may login to their respective dashboard (<https://www.ieindia.org/WebUI/IEI-Registration.aspx>) and submit their application under Certification --> IPMA.

Please visit www.ieindia.org under Certification for details. For further clarification you may call at: 033-40106304 or Email at certification@ieindia.org

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