



# IEI NEWS

January 2021

35<sup>th</sup> Indian Engineering Congress

01-08

Concept on Safety and Sustainability in Indian Mining Industries - A Modern Outlook

09

Role of Renewable Energy for Reducing Green House Gas Emissions

10

Achieving Sustainable Development Goals by the Local Governments - Quality Management guided by ISO 18091

11

Celebration of Energy Conservation Day

12

A CENTURY OF SERVICE TO THE NATION

Volume 27

Number 10

*IEI wishes its Members a Happy New Year*

## 35<sup>th</sup> Indian Engineering Congress

### Engineering for Self Reliance and Sustainable Goals

The 35<sup>th</sup> Indian Engineering Congress of The Institution of Engineers (India) was organized on virtual platform during 18-20 December, 2020 on the theme **Engineering for Self Reliance and Sustainable Goals**. Dr Harsh Vardhan, Hon'ble Union Minister for Health and



Dr Harsh Vardhan

Family Welfare, Science and Technology and Earth Sciences, Government of India graced the function as Chief Guest (in absentia) and Prof D P Agrawal, Former Chairman, Union Public Service Commission as Guest of Honour. On this occasion, Prof Ashutosh Sharma, Secretary, Department of Science and Technology, Government of India delivered the Keynote Address and enlightened the august audience with his thought provoking lecture. Er Narendra Singh, President, IEI presided over the function and delivered the welcome address, acknowledged the contribution of engineering fraternity to combat COVID 19 and explained the significance to achieve sustainable goals and self reliance.

Prof Ashutosh Sharma, the Keynote speaker during the function outlined the association of self reliance and sustainable goals with human well being, fulfillment of basic needs for the poor, welfare of future generations and preservations of environment and environmental resources and mentioned that to achieve sustainable economic development, all stakeholders in science, technology and society need to work together for shared purpose and commitment and of course, technology is the key factor to meet societal development and its uniform distribution among mankind. He felt that this is the right time to maintain balance between economic growth and sustainability and the technology should be self-reliant, which should match the need and

Contd on page 2

## The Institution of Engineers (India)

8 Gokhale Road, Kolkata 700 020

21 January 2021

To

All Corporate Members of IEI

The 101<sup>st</sup> Annual General Meeting of The Institution of Engineers (India) will be held at **IEI Uttarakhand State Centre, ENGINEERS BHAWAN, Near ISBT Flyover, Saharanpur Road, Dehradun 248002 on 28 February 2021 at 1130 hrs.**

#### AGENDA

1. To confirm the Minutes of the 100<sup>th</sup> Annual General Meeting held on 29 December 2019 at Hyderabad, already circulated in March 2020 issue of IEI News, Vol. 26, No. 12.
2. To receive the Annual Report of the Council and the Audited Accounts of IEI for the year ended on 31 March 2020.
3. To receive the Report on the composition of the IEI Council for the Session 2020-2021.
4. To appoint the Auditors for the year 2020-2021 and to fix their remuneration.

Dr H R P Yadav  
Secretary and Director General

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



Autonomous technologies are able to enhance significantly the organizational productivity by substantial improvement of overall equipment effectiveness, cost reduction and safety measures. Application of autonomous technologies refers to automating the basic functions of the system to reduce defects and streamline process control to implement sound decision making process that imitate natural human reflex with intelligent telematics to help address concerns around human error and reaction times. The word 'Autonomous' comes from the Greek wordings 'having its 'own laws'. An autonomous system define the system probabilities and obtain reason based decisions in the context of structured data input and differs from an automatic system by means of principle of application, which usually follows a set of rules that define its' behavior regardless of the changes in the context. Technological disruption, transformation and widespread application of digital and allied technologies including ICT, Machine Learning, Artificial Intelligence, Internet of Things, etc. results further impetus to the autonomous technologies.

Autonomous vehicles are able to apply information generated during vehicle to vehicle (V2V) communications, which result exchange of information regarding vehicle speed, navigation, relative position of surrounding vehicles, that helps to avert accident, ease traffic congestion and increase environmental sustainability; and vehicle to infrastructure (V2I), that refers to the communication framework that enables vehicles to share information with variety of devices supporting the highway system. Enabled by a network of hardware, software, and firmware, the V2I technology is wireless and bi-directional, when information from infrastructure devices is easily transmitted to the vehicle through an ad-hoc network and vice versa.

Autonomous technologies further can help address safety challenges due to human error through industrial collaborative robots. Autonomous surface vehicles aimed towards high level autonomous navigation and obstacle avoidance to fulfill a defined mission. Bio-inspired autonomous robots are

Contd on page 9

## Engineering for Self Reliance and Sustainable Goals

Contd from page 1

priorities based on societal demand. Prof Sharma emphasized that innovation plays a critical role in enhancing the performance of goods and services and indeed the global supply chain management and logistics in a holistic manner through ensuring availability, accessibility and affordability of services. He further mentioned about nurturing rich demographic dividend of the country to harness the energy and skill of young workforce, that accelerate more start ups and innovations and generation of resources in science and technology. The Keynote speaker stressed the significance of industry-academia interaction, role of industry in knowledge creation and leveraging scientific infrastructure and creation of opportunities for realignment in design, manufacturing in post covid situation, generation of knowledge in defined direction through research publications and industrial communications and so on. The Secretary, DST recommended quantum jump in economy through deeper resource planning, strong linkage between science and society and so on. Prof Sharma concluded his address with deep focus on self reliance based on self confidence, self respect, logical and positive self thinking and self interest.



**Prof Ashutosh Sharma**

Prof D P Agrawal, Former Chairman, UPSC in his Lecture stated that self reliance and sustainable development are the key factors for human well being, fulfillment of basic needs of the poor, prospects of future generations and preservation of environmental resources and mentioned the key imperatives to achieve the sustainable goals, namely the need to identify internally and adopt realistic indicators of sustainability to steer and guide the development and the urgent need for institutional reforms. Prof Agrawal emphasized on the reforms of engineering education, which should be flexible, relevant, inclusive and able to establish a sustainable ecosystem to nurture talent and innovative thinking to create more job opportunities and felt that engineers today are job creators rather than job seekers. Prof Agrawal deliberated on the recommendations of National Education Policy 2020 and explained the significance of robust ecosystem of research in the realm of climate change, population dynamics, increased application of Artificial Intelligence, Machine Learning, etc. He mentioned engineers as social reformers, who are tackling complex issues like eradication of poverty, inequality, disaster recovery, climate change, etc and opined that engineers should be driven by the considerations of social impact and political feasibility to develop smart, long lasting sustainable solutions.



**Prof D P Agrawal**

The Chief Guest during the function, Dr Harsh Vardhan, Hon'ble Union Minister for Health and Family Welfare, Science and Technology and Earth Sciences, Government of India in his Message, read out by Mr Sunnel Grover, Chairman, BOG, National Skill Development Forum, IEI mentioned the crucial role of engineers to mitigate different challenges during this unprecedented pandemic by working in synergy with all the Covid warriors and are thus contributing relentlessly to eliminate the crisis through innovative solutions. Dr H R P Yadav, Secretary & Director General summed up the session and proposed the vote of thanks on the occasion. The Inaugural Session was well attended by the galaxy of Technocrats, Corporate Members and others.

The Inaugural Session was followed by eight Memorial Lectures and seven Visionary Talks delivered by distinguished techno-bureaucrats and renowned academicians. The eminent speakers include Directors of IITs, Vice Chancellor of leading Universities, Chairman & CEO, Railway Board, Secretary, Ministry of Defence, Government of India, President WFEO and so on.

On the first day of 35<sup>th</sup> Indian Engineering Congress, there were eight parallel Technical Sessions, conducted on virtual mode. Out of 230 papers received,

192 papers were accepted after review. During the technical sessions, 155 papers were presented from industry, academia and R&D and the technical sessions were attended by more than 2000 participants and delegates all over the country and abroad. Papers were presented from esteemed institutions abroad, which include International Institute for Carbon Neutral Energy Research, Japan and Department of Oceanography, University of Dhaka, Bangladesh. Technical session further glorified by huge participations from the industry, which include Bharat Electronics Limited, Geotechnical Engineering Consulting, Engineers India Limited, TATA Consulting Engineers Limited, L&T Construction, Hindustan Petroleum Corporation Limited and so on. Papers were presented from reputed R&D institutions of the country including Central Research Institute for Jute and Allied Fibres, Kolkata, Central Research Institute for Dryland Agriculture, Hyderabad, National Council for Cement and Building Materials, Haryana, BARC, Mumbai, National Academy of Construction, Hyderabad, Centre for Water Resources Development and Management, Kerala, R&D Centre for Iron and Steel, SAIL Ranchi, CSIR – Central Institute of Mining and Fuel Research, Textile Design Department, NIFT Hyderabad, ICAR - National Institute of Natural Fibre Engineering and Technology, Kolkata, Centre for Applied Research and Development - NLC India Limited and so on. Papers were presented during the session from different Government departments, which include CPWD, Kolkata, Department of Transport and Communications, Mumbai Metropolitan Region Development Authority, Department of Irrigation, Government of UP; Narmada, Water Resources, Water Supply and Kalpsar Department:- Government of Gujarat; Public Health Engineering Department, Government of West Bengal; Dy Chief Mechanical Engineer, Northern Railways, Lucknow, Office of Development Commissioner (MSME), Ministry of MSME, Government of India, Department of Industries and Commerce, Government of Tamilnadu etc. Papers were presented from reputed technical institutions including IITs and NITs. Further, Best Papers of the engineering divisions and Interdisciplinary Coordination Committee (ICC) were awarded with IEI Centenary Certificates.

Further, during the momentous occasion, the Centenary Publications and Annual Technical Volumes of the Engineering Divisions ICC were released in the august presence of Er Narendra Singh, President, IEI, Prof K Venkatasubbaiah, Vice president, IEI, Prof (Dr) Swapan Bhaumik, Chairman, Committee for Advance of Technology and Engineering (CATE), Chairmen of the Division Boards and ICC and Mr Suneel Grover, Chairman, BOG, NSDF, IEI, which include the 100-year Presidential Address Commemorative Volume, Special Centenary issue under the aegis of Interdisciplinary Coordination Committee and Civil Engineering Division Board, Compilation of Memorial Lectures delivered during Indian Engineering Congress and National Conventions. Dr H R P Yadav, Secretary and Director General, IEI, co-ordinated with the dignitaries during release of Centenary Publications.

On the occasion, Scroll of Honours were presented to the illustrious Past Presidents, Council Members, Chairmen and Honorary Secretaries of the Institution.

On the occasion, the Best Technician's Chapter Award for the session 2019-2020 was presented to Jharkhand Technicians Chapter. Among engineering colleges for the session 2019-2020, the Best Students Chapter was awarded to the Department of Electronics and Telecommunication Engineering, AISSMS College of Engineering, Pune; The Second Best Student Chapter Award to the Department of Mechanical Engineering, Pune Marathwada Mitra Mondal College of Engineering, Pune and the Third Best Students Chapter Award to the Department of Computer Science and Engineering, Mepco Schlenk Engineering College, Sivakasi. For polytechnic colleges for the session 2019-2020, the Best Student Chapter Award was received by Thiagarajar Polytechnic College, Salem; the Second Best Student Chapter was awarded to the PAC Ramasamy Raja Polytechnic College, Rajapalayam and the Third Best Students Chapter Award to Arasan Ganesan Polytechnic College, Sivakasi.

Contd on page 8



## Memorial Lectures

The following Memorial Lectures, instituted by the Institution in memory of stalwarts in the engineering profession, are a salient feature of the Indian Engineering Congress organized annually by The Institution of Engineers (India). During the Thirty-fifth Indian Engineering Congress, these lectures were delivered by leading experts from diverse fields. Following are some excerpts of the lectures.

### The 63<sup>rd</sup> Sir M Visvesvaraya Memorial Lecture

**Mr V K Yadav, Chairman and Chief Executive Officer, Railway Board, Ministry of Railways and Ex-officio Principal Secretary to the Government of India**

Sir Mokshagundam Visvesvaraya Memorial Lecture was instituted in the year 1957-58 in the memory of Late Sir M Visvesvaraya, the doyen of Indian engineering. The 63<sup>rd</sup> Sir M Visvesvaraya Memorial Lecture was delivered by Mr V K Yadav, Chairman and Chief Executive Officer, Railway Board, Chairman and Chief Executive Officer, Railway Board, Ministry of Railways and Ex-officio Principal Secretary to the Government of India on the topic 'Railway Vision for Atmanirbhar Bharat'. Er Narendra Singh, President, IEI chaired over the session and delivered the welcome address. Prof K Venkatasubbaiah, Vice President, IEI graced the occasion as session Co-chair. Dr H R P Yadav, Secretary and Director General, IEI introduced the distinguished speaker by reading out his life sketch. The Chairman & CEO, Railway Board in his address explained the objectives of Indian Railways in providing nationwide logistics at reduced cost and faster speed through the diversified railway network spread all over the country and focused on enhancing capacity development in terms of infrastructure and modernization of network to meet the growing demand of freight and passenger traffic in such a way that capacity get enhanced beyond demand. Mr Yadav considered infrastructure of Indian Railways as the lifeline of the country and elaborated the mission of National Rail Plan 2030, that envisages the capacity development beyond demand with the objective to increase the nodal share to enhance freight operation. He further recommended the revamp of signaling system and associated safety measures including automatic train protection system, which results increase in train speed and less transit time. While deliberated on system modernization, Mr Yadav mentioned the application of highly utilized network all over the country by providing more tracks and thus enhance the network capacity, deployment of technology and modernization, taken into account the safety situation all over. The speaker also focused on environmental issues and mentioned that the entire rail network is being electrified with more applications in solar energy. The erudite speaker lucidly explained about real time train information system, monitoring the movements of locomotives through GPS applications and emphasized further on organizational reforms to achieve self reliance. Finally, Dr H R P Yadav, SDG, IEI, proposed the vote of thanks.



### The 55<sup>th</sup> Nidhu Bhushan Memorial Lecture

**Prof Narendra S Chaudhari, Vice Chancellor, Uttarakhand Technical University, Dehradun**

Nidhu Bhushan Memorial Lecture was instituted in the year 1966 in the memory of late Nidhu Bhushan Chatterjee, a social worker. The 55<sup>th</sup> Nidhu Bhushan Memorial Lecture was delivered by Prof Narendra S Chaudhari, Vice Chancellor, Uttarakhand Technical University, Dehradun and Professor of Computer Science and Engineering, IIT Indore on the topic 'Education, Technology, Research and Innovation'. Er Narendra Singh, President, IEI chaired the session and Prof K Venkatasubbaiah, Vice President, IEI was session Co-chair. Dr H R P Yadav, Secretary and Director General, IEI introduced the distinguished speaker by reading out his life sketch. Prof Chaudhari, in his address deliberated on the chronicles of different learning stages, accreditation of engineering education, different educational tools and algorithms, etymology of education, significant aspects of Bloom's Taxonomy, Graduate Attributes framework etc. Prof Chaudhari, in his address outlined different stages of learning starting from schooling, practice of rules, disciplines, norms, remembering the learning content and subsequent memorization, moving forward towards self exploration and maturity, which results the capability of a student to analyse-evaluate-create at higher education level. The speaker explained the application of six stage Bloom's Taxonomy for setting learning objectives and cognitive development of the students at different levels, which include Create-Evaluate-Analyse-Apply-Understand-Remember. The speaker explained further about Graduate Attribute framework to recognize the skills, mindsets, set of attributes of the students and expected to reach their highest potential through applying knowledge, analysis of problems, design and development of potential solutions for the problems, investigation of complex problems through data interpretation and analysis, synthesis of information, application of modern research tools including appropriate software, assessment of contribution to the society, understanding the impact of environment and sustainability, commitment to professional ethics, effective team work and communications in all directions etc. Vice Chancellor, UTU, Dehradun also deliberated on instructional effectiveness of learning through use of multimedia, critical thinking, multisensory delivery, promoting R&D by means of novelty, simplicity and universality. He explained innovation as the summation of creativity and commercialization, when creativity contains basic skills, namely domain skills, creative thinking and intrinsic motivation. Finally, Dr H R P Yadav, SDG, IEI, proposed the vote of thanks.



### The 46<sup>th</sup> Bhaikaka Memorial Lecture

**Prof Raghunath K Shevgaonkar, Vice Chancellor, Bennett University, Greater Noida**



Bhaikaka Memorial Lecture was instituted in the year 1976 in the memory of Late Bhailal Bhai Patel, popularly known as Bhaikaka, an eminent engineer, administrator and educationist. The 46<sup>th</sup> Bhaikaka Memorial Lecture was delivered by Prof R K Shevgaonkar, Vice Chancellor, Bennett University, Greater Noida. Prof K Venkatasubbaiah, Vice President, IEI chaired the session and delivered the opening remarks. Er Narendra Singh, President, IEI graced the occasion with his august presence. Dr H R P Yadav, Secretary and Director General, IEI introduced the distinguished speaker by reading out his life sketch. Prof Shevgaonkar, in his address mentioned that technology, for the last couple of decades, is dominating every part of our life, which include ICT, e-governance, IoT, smart cities, AI, e-learning etc and thus technology has created an integrated inclusive platform all over the world, that privileged people from different walks of life. He further stated that during the pandemic, technological excellence has been overemphasized, which results continuation of all major activities without much disruption. The speaker focused on the advancement of transportation and information technology for the last thirty to forty years, that transformed the society and explained the significant role of communication technology in societal

reforms. The speaker lucidly explained the application of optical fibre technology, that provides the support to wireless mobile technology, which is able to create a wide communication network at optical frequency with large bandwidth. The speaker explained the application of 5G network technology including machine to machine communication, faster network speed, enhancement of band width and operational frequency in many folds, advancement of optical fibre network etc. The speaker further explained the application of Laser technology, transformation of electronic signal to optical signals, Wavelength Division Multiplexing (WDM), Mode Division Multiplexing (MDM), Space Division Multiplexing (SDM) in optical fibre etc. Prof Shevgaonkar concluded by explaining the impact of optical fibre network in human to machine as well as machine to machine communication. Finally, Dr H R P Yadav, SDG, IEI, proposed the vote of thanks.

## The 42<sup>nd</sup> Sir Rajendra Nath Mookerjee Memorial Lecture

**Prof Saikat Maitra, Vice Chancellor, Maulana Abul Kalam Azad University of Technology, West Bengal (MAKAUT)**



Sir R N Mookerjee Memorial Lecture was instituted in the year 1980 in the memory of Late Sir Rajendra Nath Mookerjee, the first President of The Institution of Engineers (India) with Indian origin. The 42<sup>nd</sup> Sir R N Mookerjee was delivered by Prof Saikat Maitra, Vice Chancellor, Maulana Abul Kalam Azad University of Technology (MAKAUT), West Bengal. Prof K Venkatasubbaiah, Vice President, IEI chaired the session and delivered his opening remarks. Er Narendra Singh, President, IEI was present during the session and addressed the audience. Dr H R P Yadav, Secretary and Director General, IEI introduced the distinguished speaker by reading out his life sketch. Prof Maitra, while delivered his Lecture on the topic 'Engineering Education from 1.0 to 4.0', focused on the transformation in education system over the period of time and explained the global higher education scenario. Prof Maitra stated the features of Education 1.0, a personalized teaching method in ancient and middle age with utter prominence in religious and spiritual education and without or almost no use of technology, when the student was the passive recipient in the teacher centric system. While explaining Higher Education 2.0, Prof Maitra mentioned that books became the verticals in knowledge dissemination and the knowledge transmission dimension changed from one-to-one to one-to-many. The speaker mentioned that industrialization was introduced at this stage, when machine was operated by human labour and application of fossil fuel introduced. During this stage, focus was on memorizing and retrieving information and examination based learning approach. The speaker further explained that Higher Education 3.0 was based on information technology, when digital education system, uniformity and standardization of teaching methodology with limited customization and personalization, more interactive teaching-learning system, introduction of soft skills etc were principally focused. Prof Maitra explained Higher Education 4.0 as learner centric and outcome based teaching learning process, which is easily accessible from anywhere. The speaker further deliberated on the preparedness of the Universities towards Education 4.0 beyond boundaries, which can be accessed from anywhere with the objective to eradicate the distance between culture and society. Prof Maitra recommended on strengthening the analytical skills, inclusion of 'right brain' stimulating activities, introduction of foundational education in creative thinking, rebuilding the course curriculum to prepare more world aware, creative individuals, who is keen in continuous learning process to get themselves ready for the next stage. Finally, Dr H R P Yadav, SDG, IEI, proposed the vote of thanks.

## The 33<sup>rd</sup> Dr Ajudhia Nath Khosla Memorial Lecture

**Prof Ajit Kumar Chaturvedi, Director, Indian Institute of Technology Roorkee**



Dr A N Khosla Memorial Lecture was instituted in the year 1988 in the memory of Late Dr Ajudhia Nath Khosla, an outstanding Engineer-Administrator and the Past President of The Institution of Engineers (India). The 33<sup>rd</sup> Dr A N Khosla Memorial Lecture was delivered by Prof Ajit Kumar Chaturvedi, Director, IIT Roorkee. Er Narendra Singh, President, IEI and Prof K Venkatasubbaiah, Vice President, IEI were Session Chairman and Co-Chairman respectively during the session. Dr H R P Yadav, Secretary and Director General, IEI introduced the distinguished speaker by reading out his life sketch. Prof Chaturvedi started his address mentioning the close association of Dr A N Khosla with IIT Roorkee and focused the scientific methodologies to visualize India as a developed nation. Prof Chaturvedi emphasized on inculcating the practice of innovations and subsequent recognition by promoting intellectual property rights and thus percolating the culture of recognition of innovation and its subsequent commercialization for the benefit of mankind and felt that engineers today should take the pledge to come forward to make engineering profession more prominent and transform the Hon'ble Prime Minister of India's vision about \$5 trillion economy and achieving self reliance into reality. Prof Chaturvedi explained that more innovations results institution of more technology driven organizations, which is able to increase the size of Indian economy, generate more employment and enhance revenue. In his address, Prof Chaturvedi further recommended strong relevance between science and engineering & technology and felt that both are the part of same ecosystem, objective and goal, whereas flair for science leads engineers to inculcate more for innovations, R&D etc. The speaker concluded with the request to consider the recommendations that would be emanated from three-day deliberation, and submission of the same to implementing agency for consideration to prepare the roadmap for better tomorrow, when engineers will play a very pragmatic role for nation building. Finally, Dr H R P Yadav, SDG, IEI, proposed the vote of thanks.

## The 29<sup>th</sup> Dr Amitabha Bhattacharyya Memorial Lecture

**Dr Ajay Kumar, IAS, Defence Secretary, Ministry of Defence, Government of India**



Dr Amitabha Bhattacharyya Memorial Lecture was instituted in the year 1992 in the memory of Late Dr Amitabha Bhattacharyya, an eminent engineer-teacher and Past President of the Institution. The 29<sup>th</sup> Dr Amitabha Bhattacharyya Memorial Lecture was delivered by Dr Ajay Kumar, IAS, Secretary to the Government of India, Ministry of Defence on the topic 'Leading with Tech in the coming Decade'. Er Narendra Singh, President, IEI and Prof K Venkatasubbaiah, Vice President, IEI were Session Chairman and Co-chairman respectively. After introduction of the distinguished speaker by Dr H R P Yadav, Secretary and Director General, IEI, Dr Kumar, delivered his address mentioning that engineers have the potential to transform the nation and stated that the pandemic indeed has taken the nation to an unprecedented level of strength and resilience. Dr Kumar in his address stressed on more innovations, transformation of knowledge, more focus on mental fortitude during crisis, endurance, more innovations, practicing discipline in body and mind to achieve the goal. Dr Kumar focused on more technological innovations for the coming decade and felt that engineers are the integral part of reconstructive technology, taking into consideration uncertainty and unpredictability. Finally, Dr H R P Yadav, SDG, IEI, summed up the proceedings of the session and proposed the vote of thanks.

## 35<sup>th</sup> Indian Engineering Congress

### The 10<sup>th</sup> Prof C S Jha Memorial Lecture

**Prof V Ramgopal Rao, Director, Indian Institute of Technology Delhi**

Prof C S Jha Memorial Lecture was instituted in the year 2011, in the memory of Late Professor Chandra Sekhar Jha, an eminent engineer and educationist. The 10<sup>th</sup> Prof C S Jha Memorial Lecture was delivered by Prof V Ramgopal Rao, Director, IIT Delhi on the topic 'NEP 2020 and its Implication for Engineering Education in India'. Prof K Venkatasubbaiah, Vice President, IEI chaired the session. Er Narendra Singh, President, IEI was present during the occasion. Dr H R P Yadav, Secretary and Director General, IEI introduced the distinguished speaker by reading out his life sketch. Prof Rao, in his address deliberated at a length the status of research and development in India in terms of global ranking, share and growth of scientific publications and stressed on the need to focus the translation of knowledge to wealth. Prof Rao discussed on the functions of R&D funding agencies and proper utilization of knowledge base to provide meaningful solutions of research oriented problems. The speaker deliberated on the benefits to implement the National Education Policy including introduction of fragmented higher education system to multidisciplinary universities, subcritical research funding with optimum resource allocation and 'Problem First' approach, transformation of Research and Development (R&D) to Relevance and Delivery, more autonomy to the higher educational institutions (HEI), increasing gross enrollment ratio, consolidation of the regulatory bodies for better control of universities, transformation from study to learning through flexible curriculum. Prof Rao in his address, further explained about the applications of five principle technological platforms for this decade, namely Information Technology, Bio Technology, Nano Technology, Cognitive Technology and Quantum Technology. Finally, Dr H R P Yadav, SDG, IEI, summed up the proceedings of the session and proposed the vote of thanks.



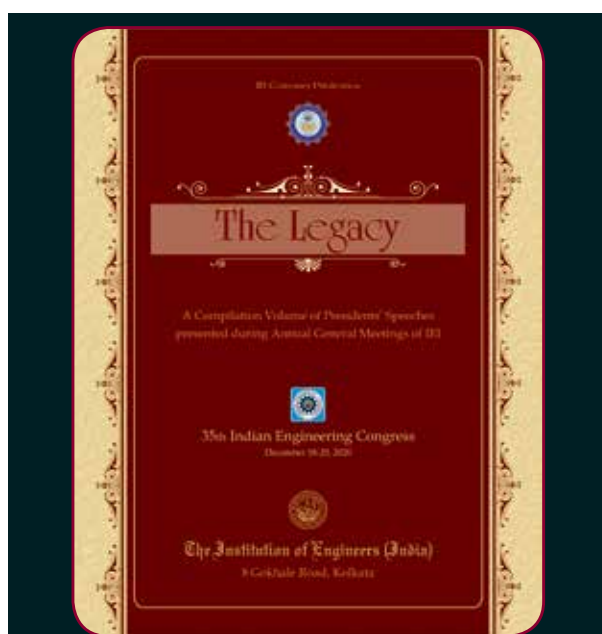
### The 6<sup>th</sup> Dr K L Rao Memorial Lecture

**Prof Sandip Sancheti, Vice Chancellor, SRM Institute of Science and Technology, Chennai**

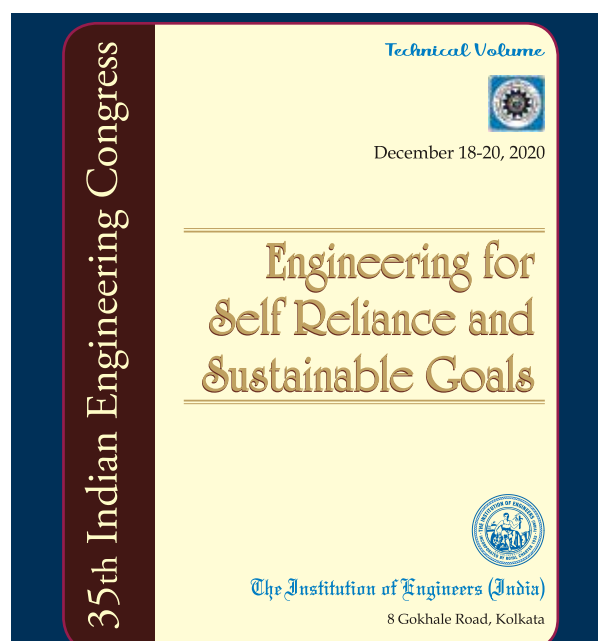
Dr K L Rao Memorial Lecture was instituted in the year 2015, in the memory of late Dr Kanuru Lakshmana Rao, an eminent Civil Engineer, former Union Minister of Government of India and Past President of The Institution of Engineers (India). The 6<sup>th</sup> Dr K L Rao Memorial Lecture was delivered by Prof Sandip Sancheti, Vice Chancellor, SRM Institute of Science and Technology, Chennai. Prof K Venkatasubbaiah, Vice President, IEI chaired the session. Er Narendra Singh, President, IEI graced the function with his august presence. Dr H R P Yadav, Secretary and Director General, IEI introduced the distinguished speaker by reading out his life sketch. Prof Sancheti, in his address deliberated at a length about the advancement in engineering education and its relevance to self reliance and sustainability. In his address, Prof Sancheti mentioned that engineers constitute the right interface to recreate the world, when the environment and ecosystem does not need to be protected by special drive, rather should happen naturally. The speaker mentioned that self reliance should include simplicity, when the technology adopted protect the natural environment to satisfy basic human needs; responsibilities for developmental decisions and actions; respect of social cultural reforms and traditions; commitment for basic needs and economic security and creativity through the change in planning and implementation in the development process including new and innovative solutions. Prof Sancheti further explained sustainable education framework with new boundary less teaching-learning paradigm, generation of knowledge rather than dissemination and assimilation, flexibility of learning beyond the curriculum etc, which results reshaping of engineering education through educational transformation, which will be more student centric and interest oriented. The speaker further deliberated on application of Academic Bank of Credit (ABC) Building Blocks in National Education Policy and emphasized on technology driven future learning platform that include smart classrooms, social networking, biometric eye tracking, text to speech and vice versa. Prof Sancheti further visualized new educational paradigm for the next decade, which include 5G and cloud technologies, Game based learning, flexible display LCD desks, Augmented and Virtual Reality, wearable electronic devices and holographic presence instead of physical presence. He opined that traditional sources of development and growth are getting depleted gradually and sustainable development has put the onus on educators and policy makers to come forward. He concluded with emphasis on accepting new education methodology, which would be the order of the day. Finally, Dr H R P Yadav, SDG, IEI, summed up the proceedings of the session and proposed the vote of thanks.



### Release of Centenary Publication



### Release of Technical Volume







## Visionary Talk

**Dr Chuah Hean Teik, Emeritus Professor and Former President, Universiti Tunku Abdul Rehman, Malaysia**

### Prof GONG Ke, President, World Federation of Engineering Organizations (WFEO)

The first Visionary Talk was delivered by Prof GONG Ke, President, World Federation of Engineering Organizations (WFEO), on the topic 'Three Musts in Engineering for SDGs'. Er Narendra Singh, President IEI chaired the session and Prof K Venkatasubbaiah, Vice President, IEI was session Co-chair. After introduction of the distinguished Visionary Talk speaker by Dr H R P Yadav, Secretary and Director General, IEI, the illustrious speaker delivered his address and stressed in facing unprecedented challenges during the global pandemic to meet the sustainable development goals (SDGs) and thus make the world more resilient while looking forward for a brighter future and felt that, to achieve SDGs, the engineering fraternity should think globally and act locally and the engineering solution to achieve SDGs need partnership in both interdisciplinary and international level. The erudite speaker highlighted the 2030 Agenda of Sustainable Development to transform the world on to a sustainable and resilient path, when engineering transform itself by adopting a new mindset and new paradigm of practice. Prof GONG Ke emphasized on three most significant factors for sustainable development, namely international partnership, interdisciplinary partnership and social responsibilities of engineers and engineering community. While deliberating on those key factors, he mentioned climate change as a potential irreversible threat to human society and planet and discussed different aspects of Paris Climate Accord and effect of green house gas emissions on global population. Based on the inherent requirement of SDGs, the speaker felt that engineering profession needs to revisit its' principles of practices, including research and development, education and professional development in order to provide and implement multidisciplinary solutions. President WFEO explained that engineering profession required worldwide industrialization and interdisciplinary engineering practices to achieve the sustainable goals. The speaker further discussed on Building Information Modeling (BIM), Geospatial Engineering, principle of Circular Economy etc. The speaker recommended the requirement of a new paradigm of engineering based on the understanding of the interconnected nature of SDGs and an awareness of the impact of engineering on the society and environment with the mission to build a sustainable, resilient and equitable world for all. Finally, Dr H R P Yadav, SDG, IEI, proposed the vote of thanks.

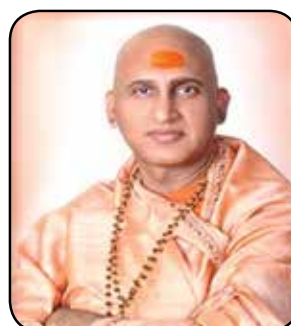


The third Visionary Talk was delivered by Dr Chuah Hean Teik, Emeritus Professor and Former President, Universiti Tunku Abdul Rehman, Malaysia on behalf of Prof (Dr) Huang Wei, President, Federation of Engineering Institutions of Asia and Pacific (FEIAP) on the topic 'Paths towards a Shared Future for the Engineering Community – FEIAP's Effort'. Er Narendra Singh, President IEI chaired the session and Prof K Venkatasubbaiah, Vice President, IEI was session Co-chair. Dr H R P Yadav, Secretary and Director General, IEI introduced the Visionary Talk speaker by reading out his life sketch. In his address, Dr Teik briefed the vision, objective, function and responsibilities of FEIAP towards engineering education and production of skilled manpower through training and development. Dr Teik explained the FEIAP guidelines for mentorship training, promoting mutual recognition of engineering education programs, contribution to the regional prosperity in global platform etc. The speaker further explained the long term goals of FEIAP including promoting mutual recognition of engineering programs to achieve a shared future for the engineering community. Finally, Dr H R P Yadav, SDG, IEI, proposed the vote of thanks.



### Swami Avdheshanand Giri Maharaj, Acharya Mahamandaleshwar of the Juna Akhara

The fourth Visionary Talk was delivered by Swami Avdheshanand Giri Maharaj, Acharya Mahamandaleshwar of the Juna Akhara. Er Narendra Singh, President IEI chaired the session and Prof K Venkatasubbaiah, Vice President, IEI was session Co-chair. Dr H R P Yadav, Secretary and Director General, IEI introduced the Visionary Talk speaker by reading out his life sketch. Swamiji, in his spiritual lecture, deliberated at a length the existence and transformation of life, based on five principal elements, namely earth, water, fire, wind and space. He explained the existence and practice of supernatural power, ancient heritage and legacy of India, consciousness, completeness, sensitivity of life, benefits of Yoga, meditation and spiritual practice, which leads to eternal peace, bliss, positive energy and vitality. Finally, Dr H R P Yadav, SDG, IEI, proposed the vote of thanks.



### Dr Chinmay Pandya, Pro Vice Chancellor, Dev Sanskriti Vishwavidyalaya, Haridwar, Uttarakhand

The second Visionary talk was delivered by Dr Chinmay Pandya, Pro Vice Chancellor, Dev Sanskriti Vishwavidyalaya, Haridwar, Uttarakhand. Er Narendra Singh, President IEI chaired the session and Prof K Venkatasubbaiah, Vice President, IEI was session Co-chair. Dr H R P Yadav, Secretary and Director General, IEI introduced the Visionary Talk speaker by reading out his life sketch. Dr Pandya, through his thoughtful spiritual deliberation, enlighten the audience with the life and principle of Swami Vivekananda and explained the art of living in a better manner. He discussed at a length the rich cultural heritage and legacy of ancient India and explained the merits of ancient conventional education system in our country, the spiritual power that can reduce the distress and agony in human life and subsequently motivate and emphasize the human desire and aspirations in the right way. Dr Pandya explained the key factors to achieve a better, sustainable human life and mentioned it as a divine possibility, that should be raised to the highest possible pinnacle. Finally, Dr H R P Yadav, SDG, IEI, proposed the vote of thanks.



### Swami Ramdev

The fifth Visionary Talk was delivered by Swami Ramdev. Er Narendra Singh, President, IEI chaired the function and welcomed the esteemed personality and the august audience. Prof K Venkatasubbaiah, Vice President, IEI co chaired the function. Dr H R P Yadav, Secretary and Director General, IEI introduced the Visionary Talk speaker by reading out his life sketch. Swami Ramdev, in his address explained the effect of yoga on body, mind and soul and mentioned that yoga is the only way for self improvement through the physical, mental and spiritual practices, which he termed as inner engineering practice, that facilitate precise applications of engineering skills, knowledge and expertise in practical field. Ramdevji emphasized on regular practice on yoga to improve self esteem and mentioned that yoga is the only way to relieve stress to achieve peace and prosperity. He also stated that positive mental and physical health results individual work efficiency, sincerity and integrity, which results achievement of organizational goal within the defined time. Swami Ramdev also deliberated on prevention of genetic and environmental diseases through regular yoga practice with balanced diet at home as well as workplace to achieve a healthy working life and opined that



## 35<sup>th</sup> Indian Engineering Congress

human health is of paramount importance for national prosperity. Finally, Dr H R P Yadav, SDG, IEI, proposed the vote of thanks.

### Mr Nand Lal Sharma, Chairman and Managing Director, Satluj Jal Vidyut Nigam Limited (SJVNL) Shimla

The sixth Visionary Talk was delivered by Mr N L Sharma, Chairman and Managing Director, SJVNL, HP. Prof K Venkatasubbaiah, Vice President, IEI chaired over the function. Er Narendra Singh, President, IEI graced the function with his august presence. Dr H R P Yadav, Secretary and Director General, IEI introduced the Visionary Talk speaker by reading out his life sketch. Mr Sharma in his address visualized self reliance from different perspectives and stressed on development of self generating and self sustaining technologies to improve overall system efficiency and resilience, that leads to make the country technologically independent, revived economy and mitigate hardships, which are being faced by the people during the epidemic. Mr Sharma emphasized on self reliant national capacity building and improvement of the living standards of the people including provision of clean water, clean energy, improvement in healthcare standard, food security etc. The speaker also stressed on application of more renewable energy resources for power generation including solar and geothermal energy to sustain a green environment. Finally, Dr H R P Yadav, SDG, IEI, proposed the vote of thanks.



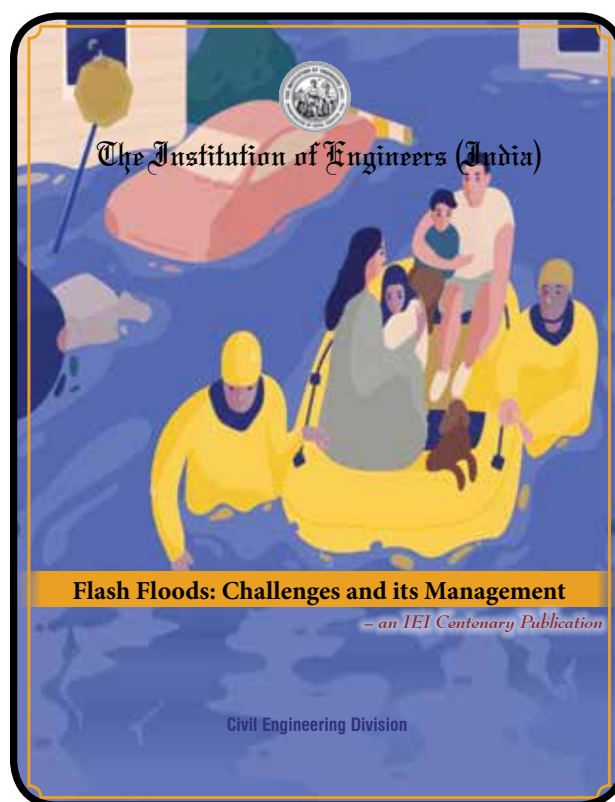
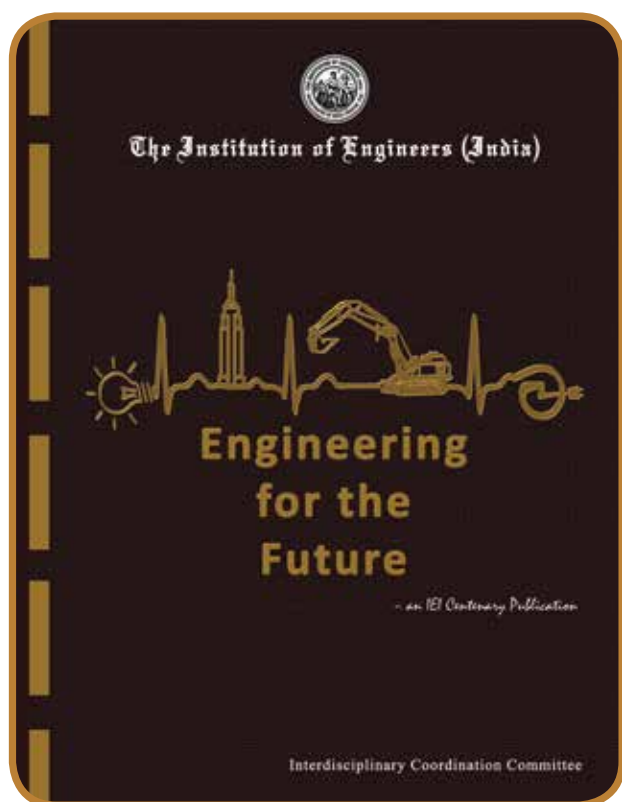
### Dr Anand K Joshi, Advisor, International Skill Development Corporation, London

The seventh Visionary Talk was delivered by Dr Anand K Joshi, Advisor, International Skill Development Corporation, London. Prof K Venkatasubbaiah, Vice President, IEI chaired over the function. Er Narendra Singh, President, IEI was present during the occasion. Dr H R P Yadav, Secretary and Director General, IEI introduced the Visionary Talk speaker by reading out his life sketch. Dr Joshi delivered his address on the topic 'New Workforce Strategy:

Skills, Change, Nurture Human Capabilities for Industry 4.0' and explained the significance of skills in human resource development. Dr Joshi mentioned that increased man-machine interface, rapid automation, transformation of physical assets to intellectual assets, transformation of physical attributes to intellectual attributes results increased personalization and customization of products and services. He explained that in new normal, diversity of knowledge, experience, verticals in functionality are the principal skills and adaptability to these skills leads to meeting the challenges to change. Dr Joshi deliberated at a length about the obsolescence of old jobs and subsequent creation of new job avenues by adopting reorientation of skills and emphasized on collaboration of human capital, strategy, technology and nurturing human skills. The speaker further explained that focus of global skill is related to the basic ability, cognitive ability, physical ability and social, technical, resource management, content development, process and system skills. He explained the global skill reorientation through reinvention of total HR process, application of data science and analysis, introduction of digital intelligence, power of communication, flexibility of working atmosphere and opined for life long learning by the employees. The speaker mentioned the inherent capabilities of the employees in an organization as imagination, empathy, curiosity, resilience and creativity, which indicates degree of human endurance and non physical traits of an individual. Dr Joshi mentioned that interaction with the colleagues, social intelligence and interpersonal dynamics, human interrelations, adaptive thinking etc are the key factors for development of human skills. The speaker concluded with mentioning the importance of top ten skills as recommended by World Economic Forum, which include Analytical thinking and innovation; Active learning and learning strategies; Complex problem solving; Critical thinking and analysis; Creativity, originality and initiatives; Leadership and social influence; Technology use, monitoring and control; Technology design and programming; Resilience, stress tolerance and productivity; and Reasoning, problem solving and ideation. Finally, Dr H R P Yadav, SDG, IEI, proposed the vote of thanks.



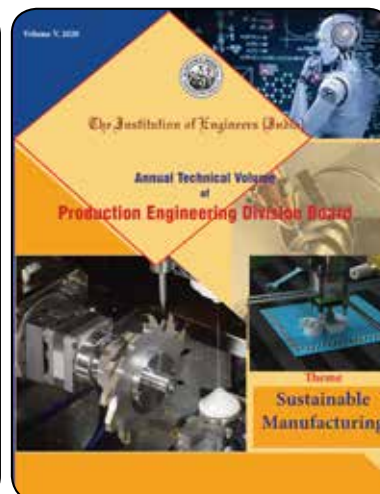
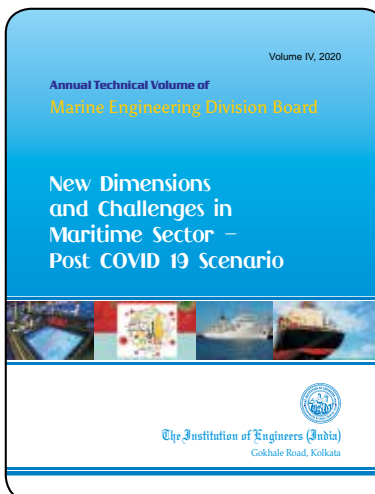
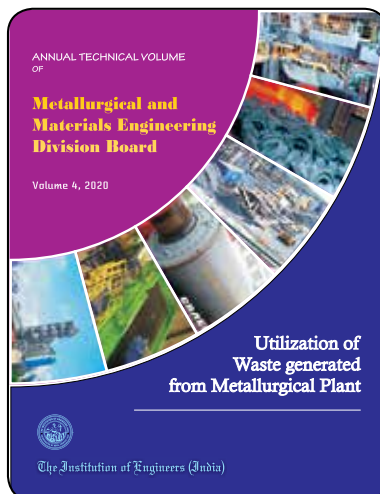
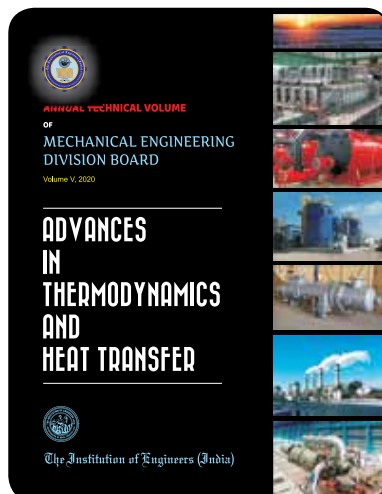
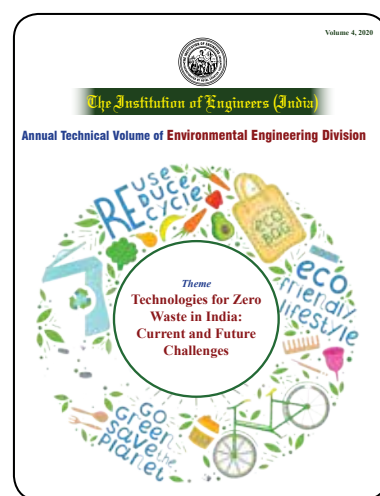
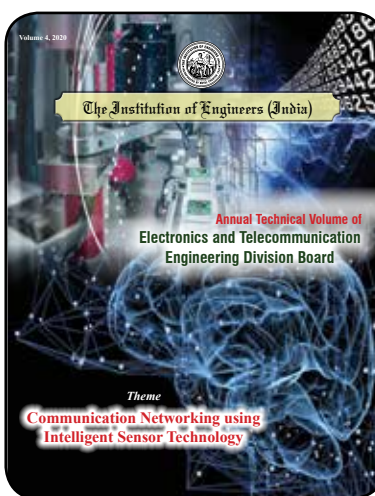
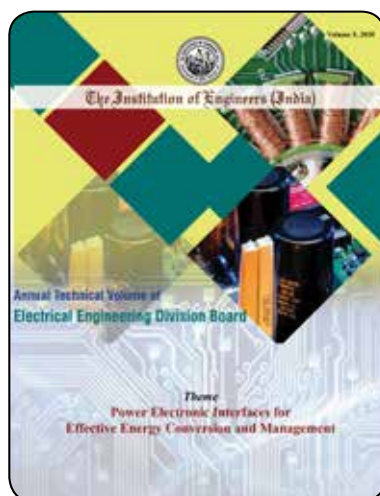
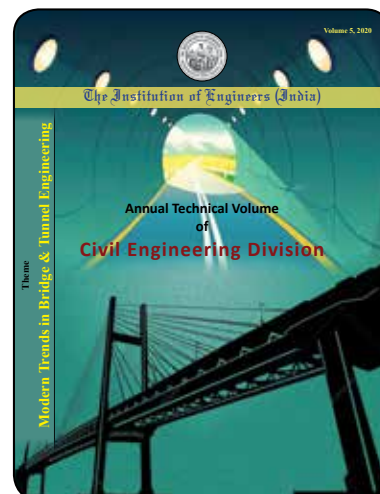
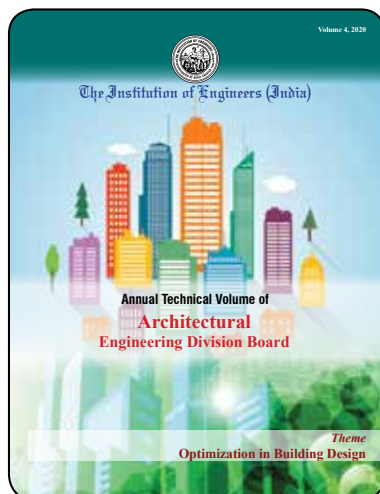
## Release of Centenary Publication







## Release of Annual Technical Volume of Engineering Divisions



## Engineering for Self Reliance and Sustainable Goals

Contd. from page 2

During the Valedictory Function, Er Narendra Singh, President, IEI graced the function as Chief Guest. In his address, President, IEI opined that it is the time, when IEI should collaborate with industries and academia for strategic policy formulation and mentioned that Sustainable Development Goals (SDGs) can be achieved through the collaborative efforts of the engineering fraternity. Prof K Venkatasubbaiah, Vice President, IEI was present during the function and addressed the audience. Prof (Dr) Swapan Bhaumik, Chairman, CATE, IEI in his address briefed about the technical sessions. Mr Harish Kumar Mittal, Chairman, Architectural Engineering Division Board (ARDB), Dr M Chowde Gowda, Chairman, Agricultural Engineering Division Board (AGDB), Padmashree Prof R Manickavasagam, Chairman, Aerospace Engineering Division Board (ASDB), Mr P Rajamani, Chairman, Electrical engineering Division Board (ETDB), Dr M Velan, Chairman, Environmental Engineering Division Board (ENDB), Prof (Dr) T S Kamal, Chairman, Electronics and Telecommunication Engineering Division Board (ETDB), Mr D V Pichamuthu, Chairman, Mining Engineering Division Board (MNDB), Dr Deb Kumar Tripathy, Chairman, Production Engineering Division Board (PRDB) and Mr Pradeep Chaturvedi, Chairman, ICC were also present during the function. Mr Suneel Grover, Chairman, BOG, National Skill Development Forum (NSDF), IEI delivered the concluding remarks. Dr H R P Yadav, Secretary & Director General, proposed the vote of thanks.



# Concept on Safety and Sustainability in Indian Mining Industries - A Modern Outlook

**West Bengal State Centre** of the Institution organized Technical Webinar on the topic, **Concept on Safety and Sustainability in Indian Mining Industries - A Modern Outlook** under the aegis of Mining Engineering Division Board (MNDB), IEI on 6 December, 2020. The eminent Panelists during the function, namely, Mr Susant Guru, Head, Sustainability Cell, Mines and Minerals, Hindalco Industries Limited and Mr Anupam Bagchi, Head, Safety, Health & Environment, Mines and Minerals, Hindalco Industries Limited enlightened the audience with their thought provoking speech. Mr Guru has given the illuminating lecture on environmental issues, bio-diversity management including how to use waste and manage for the cause of society at large. He deliberated on various sustainable measures with responsible operations to achieve the sustainable business. He discussed at a length on the block chain model development including IoT in connection with modern outlook in respect of sustainability in mines and mineral sector. Mr Bagchi, in his address highlighted on modern concept of safety and health related issues



Mr Susant Guru

and deliberated on modern concept on safety including safety management through Natural language Processing (NLP) issues. Further, he also focused on various kinds of leadership including importance of leadership in the fields of safety, health and environment (SHE). Mr Bagchi highlighted the outlook on safety management plan (SMP) after having detailed discussion on line



Mr Anupam Bagchi

management with their individual responsibility to improve the safety standard in mines and mineral sectors. On this occasion, Prof Indranath Sinha, Department of Mining Engineering, Indian Institute of Engineering Science & Technology (IIST), Shibpur Howrah was also present and enlightened the august audience on safety aspects in mining industry with the help of latest IT enabled technology.

Earlier, Mr Kali Pada

Das, Honorary Secretary, West Bengal State Centre welcomed the participants & panelists and Mr D V Pichamuthu, Chairman, MNDB addressed the participants with his visionary deliberations on the theme. Prof Netai Chandra Dey, former Colliery Manager, CIL-Central Coalfields Limited & Professor, Department of Mining Engineering, IIST, Shibpur was the Moderator during the session. Mr Kali Pada Das, Honorary Secretary, West Bengal State Centre proposed the vote of thanks.



Prof Netai Chandra Dey



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

Contd. from page 1

widely applied in the field of educational robotics. Smart farming or autonomous farming facilitates the applications of autonomous tractors, robotic harvesters, automatic irrigation, seeding robots etc, that leads to make the agricultural firms more efficient and automation of livestock production cycles. Autonomous technologies provide economic benefits to the mining industry by minimizing the exposure of workers to the dangerous underground and surface operations, detection of toxic gases, mining radiation and allied hazards, disseminate data regarding working conditions for decision making and corrective actions etc.

An autonomous network operates with minimal or without human intervention and able to configure, monitor and maintain itself in a independent manner by means of three important layers, namely programmable infrastructure, analytics and intelligence and software control and automation. Implementation of fifth-generation mobile communication system is underway by means of autonomous fiber optic networks, which lead to machine to machine communication with faster data speed and high accuracy. During 35<sup>th</sup> Indian Engineering Congress held through cloud mode last month, laudable speakers while deliberated on the future roadmap of self-reliant India, discussed at a length the application of autonomous systems. I request the State and Local Centres of IEI to organize Technical Webinars on autonomous technology and fifth generation fiber optic network.

Wish you all a very Happy and Prosperous New Year.

Jai Hind

## Role of Renewable Energy for Reducing Green House Gas Emissions

The Institution of Engineers (India), Faridabad Local Centre organised Technical Webinar on the theme **Role of Renewable Energy for Reducing Green House Gas Emissions** on 5 December, 2020 under the aegis of Electrical Engineering Division Board (ELDB). Dr Nilanjan Sengupta, Director (Technical), IEI HQ welcomed the distinguished Panelists, Mr Ankur Mittal, BEE Certified Energy Auditor and Program Leader, Energy Management, National Council for Cement and Building Materials (NCCBM), Faridabad, Dr Rakesh Jain, Former General Manager, Indian Oil Corporation Limited, Faridabad. Mr. Himangshu Saha, General Manager, National Hydroelectric Power Corporation Limited (NHPC), Faridabad and Mr R P Deshpande, Adjunct Faculty, Maharashtra Institute of Technology, Aurangabad and Consultant for



Mr Ankur Mittal

Capacitors and Energy Management, Moderator during the session, Mr Pradeep Mallah, CEO, Technopan Industries, Mr P Rajamani, Chairman, Electrical Engineering Division Board (ELDB), IEI, Mr Sandeep Handa, Chairman, Faridabad Local Centre, IEI, and the audience present during the session. Mr P Rajamani, in his opening remarks stated that, to address climate change, countries adopted Paris agreement at COP 21 in Paris on December 2015. He mentioned the importance of implementation of the Paris agreement to achieve the sustainable development goals, which provides a roadmap for climate action to reduce emissions and build climate resilience. Mr Sandeep Handa, Chairman, Faridabad Local Centre, IEI in his address stated that energy consumption causes green house gas (GHG) emissions, which amounts more than 70% and transportation and electricity together contribute almost 58-60% of green house gas emissions. He explained that greenhouse gas is capable of absorbing infrared radiation, thereby trapping and holding heat in the atmosphere and



Dr Rakesh Jain

with temperature increase, greenhouse gases cause greenhouse effect, which ultimately leads to global warming. During the session, four eminent Panelists graced the event with their extremely enlightening and informative deliberations. Mr Ankur Mittal in his deliberation projected that in between 2010 to 2050, 5.5 times growth is estimated in India's commercial primary energy consumption. He also explained about energy distribution pattern in India with thermal energy contribution 65.8%, nuclear energy 2.4%, hydropower contribution 19.5% and renewable energy contribution 12.3% and mentioned that today's energy challenge leads to growing demand of electricity, which is rising twice; crude oil will last only for 18 years, gas for 26 years and coal will be finished in nearly 200 years. The speaker mentioned the fact that the global average temperature is expected to increase by about 0.2 °C per decade over the next two decades and if warming persists over many centuries, it could lead to complete melting of the Greenland ice sheet, increasing global sea levels by ~ 7 m. It



Mr Pradeep Mallah

has been estimated that renewables will comprise 49 % of India's power generation by 2040, he opined and felt that, cut down energy losses and utilize technologies to provide a diverse supply of environmentally friendly energy is the need of the hour. Dr Rakesh Jain explained that greenhouse gas is capable to absorb infrared radiation, thereby trapping and holding heat in the atmosphere and increased atmospheric temperature results greenhouse effect that ultimately leads to global warming. Dr Jain mentioned that human civilization since

beginning of the industrial revolution in the year 1750 caused 45% increase in concentration of atmospheric CO<sub>2</sub> despite the uptake of more than half of the emissions by various natural sinks including trees etc and felt that substitution of fossil fuels by renewable sources like solar & wind energy and using hydrogen as fuel etc can only help human survival on planet earth. The speaker further cited that M/s Indian Oil corporation installed 0.5 MW solar plant in their R&D Center, Faridabad, which reduced purchase of 0.5 MW power resulted in financial savings & reduced GHG emissions and also installed 5 Tons per day kitchen/food waste plant to generate 60 to 80 m<sup>3</sup>/T of food for substitution of LPG used for cooking in kitchen of a reputed NGO serving food to the children. He recommended some major initiatives like energy audit on regular basis to save 10-20% cost and GHG emissions. As India has major potential for solar energy applications, so initial cost must be reduced through R&D and mass scale manufacturing of solar plants and simultaneously Hydrogen fuel infrastructure needs major push to conserve energy, he added.

Mr Himangshu Saha in his presentation stated that sustainable development



Mr Himangshu Saha

meets the needs of the present without compromising the ability of future generations to fulfill their own needs and sustainable energy, the integral part of sustainable development is the golden thread that connects economic growth and environment. Mr Saha highlighted that the principal objective of sustainable development is to advance economic development, improve energy security, improve access to energy, and mitigate climate change, where renewable energy plays an important role. He mentioned that NHPC Limited is the strong renewable energy player and the pioneer in the development of hydropower in India. The speaker mentioned further that India is the world's third largest carbon emitter behind China and the United States and India can continue to deploy solar farms, leveraging its leadership of the International Solar Alliance to displace coal and clean up its smog-choked cities. He informed that India is the only country among G-20 Nations that is on track to meet its climate change mitigation commitments under Paris Agreement and India has taken necessary steps to show that economic growth is compatible with low-carbon and climate-resilient pathways. Mr Saha cited that NHPC has adopted new and emerging technologies which includes plans for development of about 1 GW of Floating Solar in Odisha, Telangana and Kerala and felt that such huge developments will create indirect jobs and livelihood opportunities in the regions where the projects will be developed. NHPC believes in inclusive growth of the communities in and around the project areas and has contributed in a huge way through its CSR activities, has a coordinated response in the fight against CO<sub>2</sub> emissions, reduction



Mr R P Deshpande

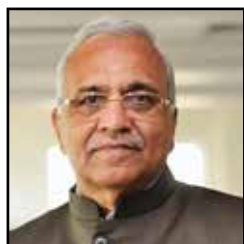
of waste by transitioning into renewable energy technologies and thus contributing its part by developing renewable energy projects on priority thereby saving our planet for the future generations to come, the speaker added. Mr R P Deshpande presented his Lecture on the topic 'Hydrogen Economy' and explained that hydrogen economy refers to the application of hydrogen as a fuel to generate heat, operation of hydrogen vehicles, seasonal energy storage, and long distance transport of energy. Mr Deshpande emphasized that in order to phase out fossil fuels and limit global warming, hydrogen should be introduced, which is usually produced from water or by non-polluting methane pyrolysis, and its combustion only

Contd. on page 16



# Achieving Sustainable Development Goals by the Local Governments - Quality Management guided by ISO 18091

The Interdisciplinary Coordination Committee of the Institution hosted Technical Webinar on **Achieving Sustainable Development Goals by the Local Governments - Quality Management guided by ISO 18091** on 12 November 2020. The webinar was organized to create awareness about the generic provisions of ISO 18091 and its applicability in strategic, tactical-managerial and operational decision making for effective local governance. Eminent Panelists in the form of Dr Girdhar Gyani, Director General, Association of Healthcare Providers India (AHPI) and Mr Madhu Sudan Ray, Managing Director, TCB Cert. Worldwide LLC provided a detailed insight to our virtual audience on the webinar topic. The event commenced with welcome address from Mr Pradeep Chaturvedi, Chairman, Interdisciplinary



Dr Girdhar Gyani

Coordination Committee, IEI who also moderated the entire event. Dr Gyani was the first Panelist of the event who presented an overview of India's standings in terms of Human Development Index which encompasses crucial aspects of healthcare, education and decent living standard imperative for sustainable development pertinent to an emerging economy. He emphasized on the means to improve education index through measures like

(IQ), getting smart and tech savvy people onboard in teaching jobs, implementation of technology infrastructure for education delivery and management, redefine purpose of education; create entrepreneurs,



innovators, artists, scientists, bring in effective de-regulation and make reservation irrelevant. Dr Gyani mentioned that Indian education has to address low employability of graduates, poor quality of teaching, weak governance, insufficient funding, and complex regulatory norms. In spite of a robust education infrastructure, effective education delivery is far from satisfactory which is evident from facts like only a meagre number of Indian universities features among the top 1000, lack of quality research with low citations and very few patentable works added Dr Gyani. He also pointed out the impediments towards effective healthcare which is under duress owing to almost an unbelievably low patient to bed and population to medic ratios. He added that poor access to rural healthcare facilities and poor compliance to regulation & quality have compounded the woes of an already distressed health service of our country. Dr Girdhar Gyani



Mr Pradeep Chaturvedi

also went on to mention that with the advent of private players, we have digressed from our objective of proving an affordable and inclusive

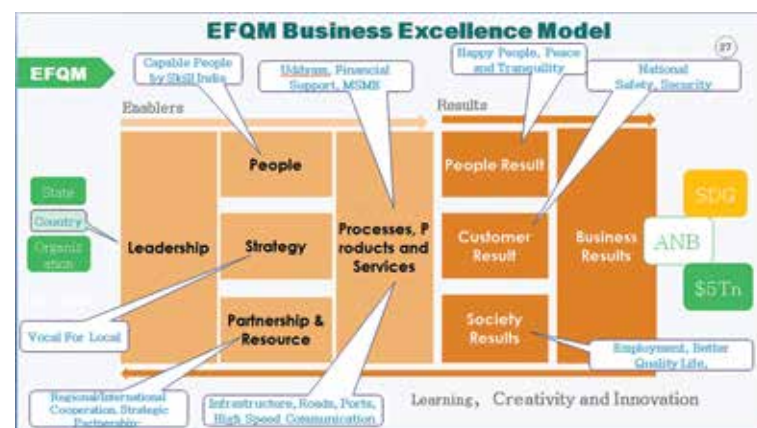
healthcare as evident from our inability to raise our healthcare spending (public + private) more than 5% of GDP, as compared to global average of 9.7%. He touched upon the alarming rate of lead poisoning affecting the children the need to regulate lead content in household items and decorative paints. To expedite economic growth, according to Dr Gyani, we need education & skill based training, lower disease burden, Improve government productivity, restrict population growth rate and capacity building in infrastructure for power, water, road/ transportation and telecommunication. He also dwelt in details the need for ICT adoption, macroeconomic stability, health, skills, healthy product & labour market, sound financial system, growing market size, business dynamism, and innovation capability. He presented an overall picture of our performance and standing with respect to various pertinent sustainable development goals (SDGs). Speaking on the National initiatives that are aligned with SDGs, Dr Gyani elaborated on the schemes like Mahatma Gandhi National Rural Employment Guarantee Program, PM Jan Dhan Yojana, Ayushman Bharat, Beti Bachao Beto Padhao Swachh Bharat Mission, PM Awas Yojana, PM Ujwala Yojana, Soil Health Cards, National Food Security Mission etc. He concluded with a case study involving a pilot project for Quality Governance at Gram Panchayat Level introduced by the Government of Karnataka based on seven attributes: Shiksha (Education, Literacy), Swastha (Preventive Health, Immunization etc), Subiksha (AGRO based industry/ MSME), Samana (Equality, Religious



Mr Madhu Sudan Ray

Harmony), Samparka (Communication, Roads), Suchitwa (Environment, Drinking Water, Sanitation) and Satsang (Spirituality, Ethical conduct). Mr Madhu Sudan Ray, who presented after Dr Gyani, started with the need for 'quality'. He spoke of the Japanese ethos of following quality stringent policies, contributing to the evolution of quality while remaining competitive. He presented a case study conducted by University of Maryland on over 370 ISO certified companies

against an equal number of non-certified companies and the results showed increased profit and sales for the certified companies with reduced operational costs establishing that quality and it pays as well. He explained the crucial role of quality towards success of self reliance program like Atma Nirbhar Bharat which would require us to earn the faith and goodwill of the international community while competing with established names like



Japan, Germany, USA and China. He spoke on the advent of Japanese in the quality horizon post WW-II when it adopted the policy of exporting high quality products at low cost which till this day remains the major determinant for survival and growth amidst a dynamic and competitive environment. He touched upon the key contributors like Dr Deming, Dr Juran and Dr Ishikawa

Contd. on page 16

# IEI Celebrates Energy Conservation Day

The Institution of Engineers (India) celebrated Energy Conservation Day all over the country on 14 December, 2020. Brief account of the celebration as received from various Centres are reported hereunder.

## STATE CENTRES

### Bihar

Bihar State Centre, IEI organised webinar to observe the Energy Conservation Day on 13 December, 2020. Mr Ramesh Kumar, Chairman, Beltron Telecom Green Energy Systems Limited, the Guest of Honour & Keynote Speaker during the function explained different dimensions of energy conservation in the context of sustainable energy in a very candid manner. Earlier, Mr Nishi Kant Prasad Sinha, Chairman, Bihar State Centre and Council Member, IEI welcomed the participants from industry, academia, research & scientific organizations and Corporate members of IEI. Mr B N Singh, Past Honorary Secretary of Bihar State Centre proposed the vote of thanks.

### Jammu & Kashmir

Jammu and Kashmir State Centre, IEI organised Energy Conservation Day in collaboration with Divisional Administration, Kashmir, Kashmir Power Distribution Corporation Limited (KPDCL) and Jammu & Kashmir State Energy Operation Centre, Srinagar through organising webinar on 14 December, 2020. Mr Pandurang K Pole, Divisional Commissioner, Kashmir delivered the inaugural address. Mr Shurjeel G Lala, CEO, IT, KPDCL, Mr Aijaz Ahmed Dar, Chief Engineer, KPDCL, Dr Syed Hanief Balkhi, Additional Deputy Commissioner, Srinagar, Mr Hindaal Mustafa, Secretary, Jammu & Kashmir Envirotech, Mohd. Suhail Wani, Consultant, Disaster Management, Mr Bashir Ahmed Dar, Secretary Technical, Power Development Department, Government of Jammu & Kashmir were present during the function and spoke about the theme of the day. Earlier, Mr Aamir Ali Mir, Chairman, Jammu & Kashmir State Centre & Council Member, IEI delivered the welcome address and highlighted the importance of energy conservation. Ms M A S W Deva, Honorary Secretary, Jammu & Kashmir State Centre proposed the vote of thanks.

### Jharkhand

Jharkhand State Centre observed Energy Conservation Day through online platform on 14 December 2020. Keynote speaker during the session, Mr Kamal Mukherjee, General Manager (Retd), Coal India Limited and Executive Committee Member, Tribology Society of India deliberated Lecture in depth on the holistic approach of achieving energy conservation through tribology and explained that better tribological approach can save lot of energy consumption in different areas of mining and allied industry. Keynote speaker during the session, Mr Shankhajeet Kumar Sinha, Additional Director and Accredited Energy Auditor, Petroleum Conservation Research Association (PCRA) Eastern Region dwelt upon 3E Harmonisation i.e. Energy, Economy and Environment and further explained that energy efficiency reduce energy cost and results less pollution and better environment. Earlier, welcome address was delivered by Mr Chandrakant Raipat, Past Chairman of the Centre. Mr M I Alam, Past Honorary Secretary of the Centre proposed the vote of thanks.

### Kerala

Kerala State Centre observed Energy Conservation Day in association with the Kerala Society of Energy Engineers & Managers on 14 December 2020 through online platform. Speaker during the session, Mr G Krishnakumar, Former National General Secretary and Chief Operating Officer, Society of Energy Engineers and Managers (SEEM) deliberated Lecture on the function. Mr K K Gopalakrishnan Nair, Chairman, Kerala State Centre and Council Member, IEI chaired the function and introduced the speaker. Mr Asok Kumar K, Honorary Secretary, Kerala State Centre proposed the vote of thanks.

### Maharashtra

Maharashtra State Centre, IEI observed Energy Conservation Day on 14 December 2020 through online platform. Ms. Kanchan Sidhaye, Environmental Architect, Green Building Expert and BEE Energy Manager and Mr Pushkar Sarda, Senior Engineer, ECBC Cell, Maharashtra Energy Development Agency delivered Lecture on the theme. Mr Narendra Karbhari Birar, Honorary Secretary, Maharashtra State Centre delivered the welcome address.

### Punjab & Chandigarh

Punjab & Chandigarh State Centre observed Energy Conservation Day on 14 December, 2020 through Webinar. Chief Guest during the session, Mr R R Tanwar, Chairman, Centres Coordination Committee, IEI emphasized on energy conservation and energy management. Keynote speaker on the session, Mr Balkar Singh, Advisor (Energy Efficiency) and Former Joint Director, Punjab Energy Development Agency (PEDA), Chandigarh emphasized on judicious use of energy, energy efficiency technologies and adoption of renewable energy strategies to save mother earth. Earlier, Mr Sukhvir Singh Mundi, Chairman, Punjab & Chandigarh State Centre welcomed the participants. Dr Baljit Singh, Honorary Secretary, Punjab & Chandigarh State Centre proposed the vote of thanks.

### Puducherry

Puducherry State Centre of the Institution observed Energy Conservation Day on 23 December, 2020 through online platform. Dr R Arun Prasath, Centre for Green Energy Technology, Pondicherry University, the Chief Guest of the function deliberated lecture on 'Energy Conservation and Renewable Energy for Sustainable Development'. He spoke about energy conservation, various renewable energy sources and upcoming technologies & developments in energy sources. Earlier, Prof (Dr) Raman Saravanane, Chairman, Puducherry State Centre and Council Member, IEI welcomes the delegates and members of IEI. Prof (Dr) B Radjaram, Honorary Secretary, Puducherry Local Centre proposed the vote of thanks.

### Rajasthan

Rajasthan State Centre, IEI, observed Energy Conservation Day on 14 December, 2020 through online platform. Mr K K Mahajan was the Chief Guest & Keynote Speaker on the occasion and the Guest of Honour was Dr Annapurna Bhargava, Professor & Head, Department of Electrical Engineering, Rajasthan Technical University, Kota. Mr Sudhir Kumar Kalla, Council Member, IEI also present during the function. Earlier, Mr Sajjan Singh Yadav, Chairman, Rajasthan State Centre and Council Member, IEI welcomed the Chief Guest, Guest of Honour and other dignitaries and at the end of the function proposed the vote of thanks.

### Tamil Nadu

Tamil Nadu State Centre, IEI observed Energy Conservation Day on 21 December 2020 through online mode. Dr J Balamurugan, AEE, Commercial, Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), HQRS, was the guest speaker and deliberated Lecture on the topic 'Am I not wise in Saving/Investing Money through my Energy Bills' with the objective to understand and apply Energy Efficiency Concept in day-to-day life to save energy and thereby protect the environment. Mr R Ramdoss, Chairman, Tamilnadu State Centre & Council Member, IEI welcomed the audience and introduced the guest speaker. Mr S Kannan, Honorary Secretary, Tamil Nadu State Centre proposed the vote of thanks.



## Telangana

Telangana State Centre of the Institution observed Energy Conservation Day on 14 December 2020 through online mode. Mr G Jagadish Reddy, Hon'ble Energy Minister, Government of Telangana graced the function as Chief Guest, Mr Sandeep Kumar Sultania, IAS, Secretary to Government, Department of Energy, Government of Telangana graced the function as Special Guest and Mr N Janaiah, Vice Chairman and Managing Director, Telangana State Renewable Energy Development Corporation Limited (TSREDCO) was the Guest of Honour. During the technical sessions, papers were presented on diversified topics, namely 'Conserve Energy without Spending any Money in day-to-day Life'; 'Building Energy Efficiency to Green Building to Near/Net/Zero Energy Building'; 'Energy Smart Model for Organisations -2008; Way Forward for Better Energy Conservation – A perspective and 'GHMC – Energy Efficient LED Street Lighting –Case Study'. During the valedictory session, Mr A Gopal Rao, Chairman & Managing Director, Northern Power Distribution Company, Telangana was the Chief Guest and Mr G S V Prasad, General Manager, TSREDCO, Guest of Honour. Earlier, Dr G Rameshwar Rao, Chairman, Telangana State Centre and Council Member, IEI delivered the welcome address and Mr T Anjaiah, Honorary Secretary, Telangana State Centre proposed the vote of thanks.

## Uttar Pradesh

Uttar Pradesh State Centre, IEI observed Energy Conservation Day on 14 December 2020 through organising a webinar. Mr S K Verma, Former Managing Director, Dakshinanchal Vidyut Vitran Nigam Limited, Uttar Pradesh was the Chief Guest. Mr V B Singh, Council Member, IEI and Convener of the programme laid emphasis on the use of renewable energy to protect the environment from pollution and combat for climate change. Prof (Dr) Bharat Raj Singh, Former Chairman, UP State Centre and well-known Environmentalist also spoke during the occasion. Earlier, Mr Rajesh Kumar Trivedi, Chairman, Uttar Pradesh State Centre and Council Member, IEI welcomed the guests. Vote of thanks was delivered by Mr Prabhat Kiran Chaurasia, Honorary Secretary, Uttar Pradesh State Centre.

## West Bengal

West Bengal State Centre, IEI organised a webinar to observe the Energy Conservation Day on 14 December, 2020. Speaker, In this occasion, Dr Sanjeevikumar Padmanaban, Department of Energy Technology, Aalborg University, Esbjerg, Denmark deliberated Lecture on the topic 'Electrical Vehicles Challenges, Trend and Future – Role of Power Electronics' and covered the recent technological development and future trends regarding the challenges of electrical vehicles along with the role of hybrid energy used in modern electric vehicles. Earlier, Dr P K Mukhopadhyay, on behalf of West Bengal State Centre delivered welcome address. Mr Kali Pada Das, Honorary Secretary, West Bengal State Centre, IEI proposed the vote of thanks.

## LOCAL CENTRES

### Ahmednagar

Ahmednagar Local Centre, IEI observed Energy Conservation Day on 16 December 2020 through virtual platform. Mr Yogendra Talware, Founder & Director, Strom Energie Private Limited., Pune delivered Lecture on the topic 'Art of Reading Electricity Bill – LT & HT'. Mr Sangam Sinha, Chairman, Ahmednagar Local Centre delivered the welcome address. Mr Manohar Mukund Anekar, Honorary Secretary, Ahmednagar Local Centre welcomed the speaker.

### Bareilly

A Lecture Meeting was organized through online platform by Bareilly Local Centre, IEI to observe the 'Energy Conservation Day on 14 December, 2020. The Panellists on the occasion were Dr Hemant Yadav, Director, Khandelwal College of Architecture; Mr Raj Kumar Agrawal, Chief Engineer (Retired), UP Power Corporation Limited, Uttar Pradesh and Mr Navneet Agrawal, Managing Director, Kia Motors. All the Panellists, during deliberation

emphasised how to conserve the energy for future uses Mr Sudhir Kumar Gupta, Chairman, Bareilly Local Centre in his welcome address mentioned that conserving energy is the first step towards a healthy, sustainable and greener future and focussed on increase awareness of climate change and global warming by promoting efforts towards saving energy resources. Mr Mahendra Kumar Agarwal, Honorary Secretary, Bareilly Local Centre proposed the vote of thanks.

### Bokaro Steel City

Bokaro Steel City Local Centre, IEI observed Energy Conservation Day on 14 December 2020. Chief Guest, Mr S K Sahoo, Chief General Manager, Energy Management Department, SAIL, Bokaro Steel Plant inaugurated the function and stressed to minimize wastage of energy and emphasised on use of energy efficient appliances & equipment with the latest technology. Special Guest, Mr N P Srivastava, General Manager and HOD of Environment Department, SAIL, Bokaro Steel Plant mentioned about fast depletion of natural resources and more applications of renewable sources of energy to protect environment, climate change, carbon emission reduction and natural resources. Papers were presented during the session by Mr K K Sanyal, Ex-Deputy General Manager (EMD), SAIL, Bokaro Steel Plant on the topic 'Energy Conservation at post Covid-19 ERA' and Mr Akhilesh Bumb, Senior Manager, Bokaro Power Supply Company Limited (BPSCL) on 'Energy Conservation and Management'. Earlier, Mr Yogendra Nath Singh, Chairman, Bokaro Steel City Local Centre welcomed all and Mr Deo Prasad Jha, Honorary Secretary, Bokaro Steel City Local Centre proposed the vote of thanks.

### Coimbatore

Coimbatore Local Centre, IEI observed Energy Conservation Day through online platform on 14 December, 2020 in association with Akshaya College of Engineering and Technology, Coimbatore. Chief Guest during the session, Mr M Karthik Karuppu, Energy Consultant, NVICO Energy Private Limited, Chennai delivered Lecture on the topic 'Energy Conservation in Home'. Mr P R Natarajan, Chairman, Coimbatore Local Centre & Council Member, IEI welcomed all present during the session. Dr H Ram Mohan, Honorary Secretary, Coimbatore Local Centre proposed the vote of thanks.

### Dhanbad

Dhanbad Local Centre, IEI observed Energy Conservation Day in association with CSIR-CIMFR, Dhanbad on 16 December 2020. In the technical session, Mr Sachchak R Waghmare, Technical Officer, Wire Rope and Electrical Engineering, CSIR-CIMFR, Dhanbad delivered lecture on the topic 'Prospects of Solar Energy in Energy Conservation'. Dr Pradeep Kumar Singh, Chairman, Dhanbad Local Centre delivered the welcome address. Dr Satyendra Kumar Singh, Honorary Secretary, Dhanbad Local Centre proposed the vote of thanks.

### Faridabad

Faridabad Local Centre, IEI organized webinar on the occasion of observation of Energy Conservation Day on 14 December 2020. Chief Guest, Mr Surinder Singla, Managing Director, Five-M Energy Private Limited, Delhi shared his views stating the campaign of Prime Minister of India 'Vocal for Local'. Keynote Speaker, Dr P P Mittal, Accredited Energy Auditor deliberated Lecture on 'Role of Energy Management for Self-Reliant India'. Mr K K Mahajan, Ex-Senior Executive, Tata Chemicals Limited, Mr Dev Kumar Jaiswal, Head, Design & Engineering, Schneider Electric, Mr Ravi Shanker Gupta, PCRA External Faculty also addressed the audience. Earlier, Mr Sandeep Handa, Chairman, Faridabad Local Centre delivered welcome address and Mr Kuldip Raj Gupta, Honorary Secretary, Faridabad Local Centre proposed the vote of thanks.

### Ghaziabad

Ghaziabad Local Centre, IEI observed Energy Conservation Day through digital platform on 14 December 2020. Mr R P Singh, Former Chairperson, Arunachal Pradesh State Electricity Regulatory Commission, Itanagar

was the Chief Guest on the occasion. Earlier, Mr Jai Pal Singh, Chairman, Ghaziabad Local Centre and Council Member, IEI delivered the welcome address and Mr Chitra Kumar Tyagi, Honorary Secretary, Ghaziabad Local Centre proposed the vote of thanks.

### Gorakhpur

Gorakhpur Local Centre observed Energy Conservation Day on 14 December 2020 through online platform. Col. A P Pandey, Executive Committee Member of the host Centre spoke on the theme. Dr Prabhakar Tiwari, Associate Professor, Electrical Engineering Department, Madan Mohan Malaviya Institute of Technology (MMMUT) Gorakhpur, UP mentioned that one unit of energy saved is much more than the one unit of energy generated or supplied as conserving one unit of energy results in conservation of many other precious boons of the nature. Mr Prabhat Kiran Chaurasia, Honorary Secretary, Uttar Pradesh State Centre also graced the occasion. Earlier, Mr Dharendra Chaturvedi, Chairman, Gorakhpur Local Centre welcomed the speakers and guests. Mr Ved Prakash Gupta, Honorary Secretary, Gorakhpur Local Centre proposed the vote of thanks.

### Gwalior

Gwalior Local Centre, IEI observed Energy Conservation Day on 14 December, 2020 and organized a technical session on the occasion. Mr R K Datey, Executive Director (Retired), MP Power Generating Company Limited, Mr U S Pandey, Superintending Engineer (Retd), Government of Madhya Pradesh Mr M Bhatia, Business Head, Mohan Dairy, Industrial Area, Ghirongil, Malanpur, Mr Rajendra Singh, Chief Engineer (Retired), PHE Department, Government of Madhya Pradesh, Prof R K Khetan, Visiting Professor of Vikrant, IPS Technology Institutions, Dr Chhavi Singhal, Global Education Consultant Services, Gwalior, Prof P K Jain, Former Director (Academics) NRI Group College and SRT & M Institutions, Mr Rahul Khanvilkar, HRM, Diverselynx India Private Limited., Mr Rahul Sharma, Manager, NHPC Limited and Mr A Chandra, Manager, Amazon, Noida shared their views and expertise on the occasion. Earlier, Mr Prabhat Kumar Bhargawa, Chairman, Gwalior Local Centre delivered the welcome address. Mr P Y Khanvilkar, Honorary Secretary, Gwalior Local Centre proposed the vote of thanks.

### Jamshedpur

Jamshedpur Local Centre, IEI observed Energy Conservation Day on 14 December 2020 on virtual mode. Keynote speaker, Dr Rekha Choudhary, Principal, Maryland Institute of Technology & Management, Galudih, Jamshedpur delivered lecture on 'Conserving Natural Resources by using Renewable Energy Sources'. Earlier, Mr Anurag Saxena, Chairman, Jamshedpur Local Centre in his welcome address briefed about the importance of Energy Conservation Day and introduced the Keynote Speaker-cum-Chief Guest. The programme concluded with vote of thanks by Mr Pravesh Kumar Dhawan, Honorary Secretary, Jamshedpur Local Centre.

### Kalaburagi

Kalaburagi Local Centre, IEI observed Energy Conservation Day on 26 December 2020. Dr Rajshekhar M, Department of Mechanical Engineering, Bheemanna Khandre Institute of Technology, Bhalki and Dr Prabhudev M S, Department of Mechanical Engineering, Government Polytechnic, Kalgi were the speakers during the session. The session was chaired by Mr Babu Sidramappa More, Chairman, Kalaburagi Local Centre. Dr Baburao Neelkantappa Sherikar, Honorary Secretary, Kalaburagi Local Centre proposed the vote of thanks.

### Kanpur

Kanpur Local Centre, IEI in association with The Institution of Electronics & Telecommunication Engineers, Kanpur and IEEE, Uttar Pradesh Section observed Energy Conservation Day on 15 December 2020 through cloud mode. Guest Speaker, Mr Ankit Yadav, Department of Electrical Engineering, Indian Institute of Technology, Kanpur delivered Lecture on the topic

'Dimensions of Energy Efficiency'. Prof (Dr) J Ramkumar, Chairman, Kanpur Local Centre, IEI delivered the welcome address and Dr Rajat Kumar Khare, Honorary Secretary, Kanpur Local Centre proposed the vote of thanks.

### Kanyakumari

Kanyakumari Local Centre of the Institution observed Energy Conservation Day on 14 December, 2020 through online mode. Keynote speaker on the occasion, Dr M Marsaline Beno, Vice Principal, St. Xavier's Catholic College of Engineering, Nagercoil delivered lecture on the topic 'Making India Energy Efficient'. Earlier, Welcome Address was delivered by Mr V Sivathanu Pillai, Chairman, Kanyakumari Local Centre. Mr V Muthum Perumal, Honorary Secretary, Kanyakumari Local Centre proposed the vote of thanks.

### Ludhiana

Ludhiana Local Centre of the organisation observed Energy Conservation Day on 19 December, 2020 in association with ASHRAE and Guru Nanak Dev Engineering College (GNDEC) through online mode. Speaker of the day, Mr Balkar Singh, Former Joint Director, Punjab Energy Development Agency (PEDA) Chandigarh in his address highlighted the adverse impact of exploitation of resources and advocated judicious use of energy in all spheres. Noted speakers also include Ms Akansha Krishan, BEE, Mr Ashu Gupta, Director, Design2Occupancy Services, Jaipur, Mr Money Khanna, Project Manager, PEDA, Chandigarh and Secretary, ASHRAE Chandigarh Chapter, Ar Vivek Sehgal, HOD Architecture, GNDEC School of Architecture and Dr Narinder Kumar Khullar, Retd Professor, Civil Engineering, Punjab Agricultural University, Ludhiana. Dr Arvind Dhingra, Auditor and Faculty, GNDEC was the moderator during the function. Earlier, Mr Surjit Singh, Honorary Secretary, Ludhiana Local Centre welcomed all and Mr Rup Lal Mahajan, Chairman, Ludhiana Local Centre and Council Member, IEI proposed the vote of thanks.

### Madurai

Madurai Local Centre, IEI observed Energy Conservation Day through online platform on 14 December, 2020. Chief Guest during the session, Ms S Vennila, Superintending Engineer, Tamilnadu Generation and Distribution Company Limited (TANGEDCO), MEDC, Metro, Madurai delivered Lecture on the theme 'Energy Conservation'. Earlier, Mr S Rajagopal, Chairman, Madurai Local Centre and Council Member, IEI delivered the welcome address. Mr P Rajamani, Chairman, Electrical Engineering Division Board, IEI briefed about energy conservation. Mr R Ramdoss, Chairman, Tamil Nadu State Centre also participated in the programme. Mr R Narayanasamy, Honorary Secretary, Madurai Local Centre introduced the chief guest. Mr S Kannan, Honorary Secretary, Tamil Nadu State Centre proposed the vote of thanks.

### Meerut

Meerut Local Centre, IEI Energy Conservation Day on 14 December, 2020 by organizing a webinar on Google Meet. Keynote speaker during the function, Mr V C Gupta, Superintending Engineer (Retd), U P Power Corporation explained. energy conservation as a part Eco-sufficiency and stressed more in application of solar power and hydrogen fuel. Earlier, Mr Rajneesh Kumar, Chairman, Meerut Local Centre welcomed the guests and highlighted the importance of the day. Mr Mohan Lal Jain, Honorary Secretary, Meerut Local Centre proposed the vote of thanks.

### Neyveli

Neyveli Local Centre, IEI observed Energy Conservation Day on 14 December, 2020 through virtual mode. Speaker during the session, Mr B Samson Nallathambi, ADGM (TA) delivered Lecture on the topic 'Energy Management and Conservation' and stressed on demand side management and load management For energy conservation Earlier, Mr A Sekar, Honorary Secretary, Neyveli Local Centre delivered the welcome address and at the end of the session, proposed the vote of thanks.



# News-in-Brief

## STATE CENTRES

### Punjab & Chandigarh

Organised International Seminar on the topic 'Role of Telemedicine & AI in Covid – 19 Pandemic' through online platform on 12 December, 2020. Panellists during the function were Dr Dharam Singh Jat, Professor, Faculty of Computing & Informatics, Namibia University of Science and Technology; Mr Yashu Bether, Director of Business Intelligence and Data Analytics with Government of Saskatchewan, Canada and Dr Amar Pratap Singh Phawaha, Professor, ECE Department, Sant Longowal Institute of Engineering and Technology, Longowal.

Organised webinar in collaboration with Yadavindra College of Engineering, Talwandi Sabo, Punjab on the topic 'Data Science using Python' on 27 May, 2020 through online mode. Dr. Vinay Kumar Goyal, Vertical Head - IT (Program Governance and Excellence) at iNurture Education Solution, Bengaluru was the speaker during the session.

Organised webinar in collaboration with Central University of Punjab, Bathinda on the topic 'World of Big Data' on 18 June, 2020 through online mode. Dr. Satwinder Singh, Associate Professor, and HOD CST, Central University of Punjab, Bathinda was the Key Speaker on the function.

Organised webinar in collaboration with Mata Gujri Khalsa College, Kartarpur on the topic 'Role of Artificial Intelligence for Diagnosis of COVID-19' on 27 May, 2020. Dr. Dilbag Singh, Assistant Professor in Computer and Engineering Technology and Dr. Manjit Kaur, Assistant Professor in Computer and Communication Technology, Manipal University, Jaipur delivered Lecture during the session.

Organised webinar in collaboration with Mata Gujri Khalsa College, Kartarpur on the topic 'Role of Distance Education after COVID-19' on 22 June, 2020. Dr. Gurdeep Singh Hura, Professor in Mathematics and Computer Science, University of Maryland, Princess Anne, Maryland, USA was the speaker in the occasion.

Organised Webinar on the topic 'Intelligent Buildings' on 4 July, 2020. On this occasion, Dr. Manjeet Bansal, Professor & Dean, Consultancy & Industry Linkage, Maharaja Ranjit Singh Punjab Technical University, Bathinda (Punjab), delivered Keynote address.

### Jammu & Kashmir

Webinar was organised on the topic 'Disaster Risk Reduction' on 23 December, 2020 in association with National Institute of Disaster Management and in collaboration with Jammu & Kashmir Information and Public Relations Department, Kashmir Editors Guild, Kashmir Press Club and J&K State Emergency Operation Centre, Srinagar. The webinar was inaugurated by Dr Syed Sehrish Asgar, Director, Information and Public Relations Department. Dr Amir Ali Khan, Faculty NIDM; Mr Qazi Salman, Deputy Director (News), Doordarshan; Mr Satish Vimal, All India Radio, Srinagar, Mr Sardar Nasir Ali Khan, FM Radio, Mr Majid Hyderi, Freelance Journalist and Analyst, Ms Yogita Garbyal, NIDM, Ms Bilquees Dar, Consultant, Disaster Management spoke during the occasion.

### Tamil Nadu

Organised jointly with Madurai Local Centre, IEI organised the online Technical Lecture Meeting on 26 December 2020 on the topic 'Real Challenges of Smart City and Simple Practical Solutions – Based on Present Madurai Corporation Scenario from Past to Present'. Mr E Ramakrishnan, Professional Civil Engineer, Engineering Council of India, delivered speech on the topic.

Organised Lecture Meeting on cloud mode on 31 October 2020 in association with Tamil Nadu State Centre, IEI. Chief Guest & Speaker, Mr E Mohanraj, Scientific Officer 'E', Materials Chemistry & Metal Fuel Cycle Group delivered Lecture on the topic 'Air-Conditioning & Ventilation for Nuclear Facilities-

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

Safety Features', which covered different aspects of air conditioning, principle purpose and types of containments in radioactive facilities, design feature of nuclear ventilation systems etc.

In association with Madurai Local Centre observed World Environment Day on 5 June 2020 through online mode. Prof (Dr) K Muthuchelian, Pro Vice Chancellor of Dayanda Sagar University, Bangalore, deliberated speech on the theme 'Biodiversity'.

Observed Royal Charter Day on 9 September, 2020 through online mode. Chief Guest, Dr Raj Subbiah, Vice President, Hydromodelling Lnc., Florida, USA delivered Lecture on the topic 'Vibration of Machines'.

Observed 53<sup>rd</sup> Engineers' Day on 15 September, 2020 through online mode. Mr P Kunhikrishnan, Distinguished Scientist and Director, U R Rao Satellite Centre graced the function as Chief Guest and Mr Sanjeev S Vakil, Chief Executive Officer, Hindustan Institute of Maritime Training, Chennai, Guest of Honour.

Organised Technical Lecture through online mode on 5 December 2020 on the topic 'Block chain Use Cases – Making IoT Technology Work for People'. Guest Speaker, Mr Tom De Block, Solution Architect & Chairman of AIOTI WG on Distributed Ledger Technologies deliberated Lecture on the topic.

Organised jointly with Tiruchirappalli Local Centre and Madurai Local Centre, IEI Lecture Meeting on 13 December 2020 through virtual mode on the topic 'Innovation in Engineering'.

### Telangana

Organised Late I Basava Raju Sixth Endowment Lecture on the topic 'High Voltage Insulation System for Large Capacity Turbo Generators' on 30 December 2020 through webinar. Mr R Acharya, General Manager and Head, Corporate R & D, BHEL, Hyderabad graced the occasion as Chief Guest and delivered the Endowment Lecture.

Celebrated National Farmers' Day on 23 December, 2020 through webinar mode. Dr K Yella Reddy, Dean, Agricultural Engineering & Technology, ANGR Agricultural University, Guntur & Vice President, ICID graced the occasion as Chief Guest. Dr P W Johnson, Former District Rural Development Officer, Vikarabad addressed on the topic 'Importance of Soil & Water Conservation in Agricultural Development'.

Organised Dr A Ramakrishna Eighth Endowment Lecture on the topic 'The Trends of Digitization in Civil Engineering' through online platform on 21 December, 2020. Mr M P Naidu, Former Project Director, Hyderabad Metro Rail Limited, delivered Lecture on the topic.

## LOCAL CENTRES

### Ahmednagar

Organised online Lecture Meeting in association with Government Polytechnic Ahmednagar on 9 December, 2020. Mr Avinash Kulkarni, Past Chairman, Ahmednagar Local Centre presented Lecture on the topic 'Opportunities for Civil Engineering Students'.

### Bhilai

Organised Technical Webinar on the topic 'Safety Measures and Precautions for Electrical Home Appliances' on 18 July, 2020. Prof Nagendra Tripathi, Electrical Engineering, BIT Durg.

### Bokaro Steel City Local Centre

Organised webinar on the theme 'Data Analytics: The Game Changer' on 27 December, 2020 through online platform. Mr Nitesh Ranjan, AGM (Environment), SAIL, Bokaro Steel Plant was the Speaker during the session.

## Faridabad

Organised webinar on the topic 'Career Opportunities in Green and Sustainable Infrastructure' on 19 December 2020 through digital medium. Dr Rajender Kumar, Coordinator, Manav Rachna International Institute of Research and Studies delivered Lecture in the occasion. Mr Devendra Gill, Immediate Past Chairman, Delhi State Centre, IEI also addressed the audience. Technical papers were presented by Mr I S Oberoi, Director, A D Global Synergies Private Limited and Mr Neeraj Arora, Senior Director & Head, ASSOCHAM.

## Gorakhpur

Organised webinar on 27 December 2020 on the topic 'Road Safety: Challenges & Solutions'. Mr Ajay Kumar Gangwar, Superintending Engineer, IDS Circle, UP PWD, Lucknow and Mr Ashutosh Shukla, Superintendent of Police, Traffic, Gorakhpur presented Lectures during the function.

## Kollam

Organised Webinar on the theme 'PyWeek: National Tech Test' during 28 August – 20 September, 2020. Dr Ansamma John, Professor and Head of the Department, Department of Computer Science and Engineering, TKM College of Engineering, Kollam and Dr Shyna A, TKM College of Engineering, Kollam delivered Lecture in this occasion.

Organised webinar on the topic 'Prospect of Engineering Education in Post Covid Scenario' on 13 August, 2021. Dr Achuthsankar S Nair, Professor of Computer Science, University of Kerala; Dr Alexander Jacob, IPS (Retd), Nodal Officer of National University for Police Sciences and Security Studies and Dr S Jose, Principal, Albertian Institute of Science and Technology, Cochin deliberated Lecture on the topic.

## Madurai

Organised Lecture Meeting in association with Tamil Nadu State Centre, IEI on 'Supply Chain Management' on 28 November, 2020 through webinar. Chief Guest, Dr M Rajmohan, Professor, Department of Industrial Engineering, College of Engineering, Guindy, Anna University, Chennai deliberated lecture on the topic and explained the SCM structure, working principle, Bullwhip Effect, characteristics of competitive SCM etc.

Observed World Standards Day in association with Tamil Nadu State Centre and Tiruchirappalli Local Centre, IEI on 13 October, 2020 through online platform. On the occasion, Dr G Rajasingh Thaangadurai, Scientist 'G', Project Director, BRAHMOS Defence Research Development Laboratory, Ministry of Defence, Hyderabad deliberated Lecture on the topic 'Protecting the Planet with Standards'.

*Contd. on page 20*

## Role of Renewable Energy for Reducing Green House Gas Emissions

*Contd. from page 10*

releases water vapor to the atmosphere and opined that Hydrogen Fuel Cell (HFC) technology, with developments on anvil, is poised to make the world a much cleaner eco-system and vehicles in future will use both Fuel Cells and Hydrogen IC engine technology. The speaker informed that EU Auto makers (HYZON, Toyota, Hyundai, Shell, BMW etc.), committed in Nov. 2020 to reduce GHG in Europe by 90% by 2050. Mr Deshpande deliberated on Blue

hydrogen and Green hydrogen technology, Green Grid energy storage etc and concluded with the hope that world economy may shift to renewable and hydrogen in not-too-distant future to achieve a pollution-free world. Fruitful deliberations were obtained during the Question-Answer Sessions when the Panelists interacted with the participants. Mr Kuldeep Raj Gupta, Honorary Secretary, Faridabad Local Centre delivered vote of thanks.

## Achieving Sustainable Development Goals by the Local Governments - Quality Management guided by ISO 18091

*Contd. from page 11*

whose perception of quality was based on adoption of efficient processes especially when there is resource constraint. He mentioned that adoption of quality is the major driver for developed as well as emerging economies. Mr Ray spoke on the guidelines for the implementation of ISO 18091:2019 at the local government level aligned with sustainable development goals like Decent Work and Economic Growth (Goal 8), Industry, Innovation and Infrastructure (Goal 9), Reduced Inequalities (Goal 10) and Peace, Justice and Strong Institutions (Goal 16). He explained that ISO 9001 is the primary step towards achieving reliability and from there on ISO 18091 provides the framework to build an efficient and finally an excellence model. Thereafter, Mr Ray presented the model for introducing QMS at the Local Government level which will use inputs from stakeholders like inputs from citizens, expectations and needs of interested parties as drivers and evolve around a core leadership of the local government. This core, according to Mr Ray, will be responsible for planning based on the inputs/needs which will be supported through proper infrastructure building, operation planning and execution and thereafter the output is to be evaluated through performance evaluation and thereafter the gaps/lacunae are to be identified and need to be rectified/incorporated in the model. Mr Ray presented a SWOT analysis with conclusion that our country is now having more strength and opportunity areas if we can manage the threats through effective quality policies. In his presentation he also touched upon the European Foundation for Quality Management (EFQM) Business Excellence Model which can be an enabler for achieving self reliance while addressing the SDGs for \$5 trillion economy like India making it economically stronger and resilient. In

EFQM terminologies we need to establish 'RADAR' defining how we deploy our resources starting with identifying results, defining approaches to achieve them, deploy this approaches and thereafter assess and refine them based on deviation from established standards. Speaking about the 'Made in India' initiative, Mr Ray set forth some propositions like buoying the enablers, develop with zero defects at competitive price and finally deliver just in time. According to Mr Ray, the work at hand is to project 'Made in India' as a super brand and promote a quality culture to design and develop reliable products as a top national priority, usher in serious quality movement, developing Quality Assurance Program to encourage and provide continued support to MSME, rewards superior performance and introducing a grievance redressal process for the defaulter. He also spoke on the challenges for the Value Added System and Certification and also discussed the avenues for serving people and nation together through initiatives like quality and safety training to develop outstanding people-the basic enabler for employment and investment, offer training that has national and global demand, partnership with educational institutions with practical on job training and accredited international certifications, support institutions to achieve ISO 9001/ISO 21001 to meet NBA generic system requirement and training on accelerated learning to faculty. The webinar was supplemented by a web based assessment of the quality policies through an quiz program conducted by Mr Ray on behalf of his organization in which the attendees participated enthusiastically. The concluding remarks were provided by Prof (Dr) Swapan Bhaumik, Chairman, Committee for Advancement of Technology and Engineering (CATE), IEI.





## The Institution of Engineers (India)

8 Gokhale Road, Kolkata-700020

29 January 2021

### Notice of Special General Meeting of Corporate Members under Bye-Law 32 (b)(i)

Notice is hereby given that a Special General Meeting of the Corporate Members of The Institution will be held at **1030 hrs on 28 February 2021** at the **premises of The Institution of Engineers (India), Uttarakhand State Centre, ENGINEERS BHAWAN, Near ISBT Flyover, Saharanpur Road, Dehradun 248002** for the following purpose:

To consider the recommendation of the Council relating to amendment of Regulations as given hereunder:

Existing Regulations	Proposed Amended Regulations
3. (c) The term of Committee of each State Centre or Local Centre shall be for two sessions only.	3. (c) (i) The term of Committee of each State Centre or Local Centre shall be for two sessions only.  (ii) Notwithstanding anything contained in the Regulations, considering the unprecedented circumstances due to pandemic COVID-19 in the year 2020, the term of existing elected members of the Committee in State/ Local Centre in the Sessions 2018-20 or 2019 – 21 (as the case may be) referred in sub-clause (c)(i) above shall be extended by one more session so that each of such elected members continues as member of the Committee for three sessions with effect from his becoming a member of the Committee.
7. (b) The term of office of a Chairman of a State Centre shall be for two sessions and he shall not be eligible for further election as a Chairman of any State Centre after laying down his office as the Chairman completing his term of office partly or fully.	7. (b) (i) The term of office of a Chairman of a State Centre shall be for two sessions, subject to Regulation 3(c)(ii) and he shall not be eligible for further election as a Chairman of any State Centre after laying down his office as the Chairman completing his term of office partly or fully.  (ii) In view of Regulation 3(c)(ii) the election to the office of the Chairman of a State Centre for the sessions 2020-22 or sessions 2021-23 (as the case may be) stands postponed by one year.
7. (c) The term of office of a Chairman of a Local Centre shall be for two sessions and he shall not be eligible for further election as a Chairman of any Local Centre after laying down his office as the Chairman completing his term of office partly or fully.	7. (c) (i) The term of office of a Chairman of a Local Centre shall be for two sessions, subject to Regulation 3(c)(ii) and he shall not be eligible for further election as a Chairman of any Local Centre after laying down his office as the Chairman completing his term of office partly or fully.  (ii) In view of Regulation 3(c)(ii) the election to the office of the Chairman of a Local Centre for the sessions 2020-22 or sessions 2021-23 (as the case may be) stands postponed by one year.

<p>8. (a) Before Annual General Meeting in the year in which election is due, the Committee of each State Centre shall also elect one of its members to be the Honorary Secretary of the Committee for the two ensuing sessions pursuant to the provisions of Regulation 3(e) and he shall not be eligible for further election as an Honorary Secretary of any State Centre after laying his office as the Honorary Secretary completing his term of office partly or fully. The person so elected shall take office as Honorary Secretary of the State Centre at the Annual General Meeting of the State Centre. An Honorary Secretary of a State Centre shall not be eligible for further election.</p>	<p>8. (a) (i) Before Annual General Meeting in the year in which election is due, the Committee of each State Centre, subject to Regulation 3(c)(ii), shall also elect one of its members to be the Honorary Secretary of the Committee for the two ensuing sessions pursuant to the provisions of Regulation 3(e) and he shall not be eligible for further election as an Honorary Secretary of any State Centre after laying his office as the Honorary Secretary completing his term of office partly or fully. The person so elected shall take office as Honorary Secretary of the State Centre at the Annual General Meeting of the State Centre. An Honorary Secretary of a State Centre shall not be eligible for further election.</p> <p>(ii) In view of Regulation 3(c)(ii) the election to the office of the Honorary Secretary of a State Centre for the sessions 2020-22 or sessions 2021-23 (as the case may be) stands postponed by one year.</p>
<p>8. (b) Before Annual General Meeting in the year in which election is due, the Committee of each Local Centre shall also elect one of its members to be the Honorary Secretary of the Committee for the two ensuing sessions pursuant to the provisions of Regulation 3(e) and he shall not be eligible for further election as an Honorary Secretary of any Local Centre after laying his office as the Honorary Secretary completing his term of office partly or fully. The person so elected shall take office as Honorary Secretary of the Local Centre at the Annual General Meeting of the Local Centre. An Honorary Secretary of a Local Centre shall not be eligible for further election.</p>	<p>8. (b) (i) Before Annual General Meeting in the year in which election is due, the Committee of each Local Centre, subject to Regulation 3(c)(ii), shall also elect one of its members to be the Honorary Secretary of the Committee for the two ensuing sessions pursuant to the provisions of Regulation 3(e) and he shall not be eligible for further election as an Honorary Secretary of any Local Centre after laying his office as the Honorary Secretary completing his term of office partly or fully. The person so elected shall take office as Honorary Secretary of the Local Centre at the Annual General Meeting of the Local Centre. An Honorary Secretary of a Local Centre shall not be eligible for further election.</p> <p>(ii) In view of Regulation 3(c)(ii) the election to the office of the Honorary Secretary of a Local Centre for the sessions 2020-22 or sessions 2021-23 (as the case may be) stands postponed by one year.</p>

By Order of the Council

Sd/-

**Dr H R P Yadav**

Secretary and Director General

**Note :** If a Corporate Member is unable to attend the meeting, he may fill the Form of Proxy with name of his representative. The Form of Proxy is to be signed and to be returned to the Secretary and Director General, The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700020 to reach him not later than 1030 hrs on 25 February 2021.

## The Institution of Engineers (India)

### SPECIAL GENERAL MEETING

#### FORM OF PROXY

I, ..... of ..... being a Corporate Member of the above Institution hereby appoint ..... of ..... or failing him ..... of ..... as my proxy at Special General Meeting of the Institution to be held on the ..... day of ..... 2021 and at any poll held in connection therewith.

As witness my hand ..... day of ..... 2021.

Signature.....

Class of Membership of IEI..... No.....





## The Institution of Engineers (India)

8 Gokhale Road, Kolkata-700020

29 January 2021

### Notice of Extraordinary General Meeting of Corporate Members under Bye Law 32(c)(i)

Notice is hereby given that an Extraordinary General Meeting of the Corporate Members of The Institution will be held at the premises of **The Institution of Engineers (India), Uttarakhand State Centre, ENGINEERS BHAWAN, Near ISBT Flyover, Saharanpur Road, Dehradun 248002** on 28 February 2021 immediately after the Special General Meeting for the following purpose:

To consider the recommendation of the Council relating to amendment of Bye-Laws as given hereunder:

EXISTING BYE-LAWS	PROPOSED AMENDED BYE-LAWS
<p>5. The Council shall in its last meeting prior to Annual General Meeting, elect the President from amongst the Fellows in the Council excluding the Past Presidents and the members co-opted under Bye-Law 4(c), 12(a), 12(b) and 13. The term of the office of the President shall be for one session only.</p> <p>The co-opted/nominated members in the Council shall be eligible to vote for the office of the President.</p>	<p>5. (a) The Council shall in its last meeting prior to Annual General Meeting, elect the President from amongst the Fellows in the Council excluding the Past Presidents and the members co-opted under Bye-Law 4(c), 12(a), 12(b) and 13. The term of the office of the President shall be for one session only.</p> <p>The co-opted/nominated members in the Council shall be eligible to vote for the office of the President.</p> <p>(b) Notwithstanding anything contained in the Bye-Laws, considering the unprecedented circumstances due to pandemic COVID-19 in the year 2020, the election to the office of the President scheduled to be held in 2020 stands postponed by one year and the term of the office of the President elected in 2019 would be for two sessions.</p>
<p>6. The term of the elected members of the Council, other than the President and two immediate Past Presidents shall be for four Sessions, provided that if the strength of Corporate Members of a State Centre gets reduced below 1.5% of the total strength of Corporate Members of the Institution as on 31st March of the year for any reason whatsoever representation by one Corporate Member from the State Centre as per Bye-Law 4(a)(iii) shall cease to exist with effect from the next Annual General Meeting of the Institution when the Member elected under the said Bye-Law 4(a)(iii) shall also cease to be Member of the Council.</p>	<p>6. (a) The term of the elected members of the Council, other than the President and two immediate Past Presidents shall be for four Sessions, provided that if the strength of Corporate Members of a State Centre gets reduced below 1.5% of the total strength of Corporate Members of the Institution as on 31st March of the year for any reason whatsoever representation by one Corporate Member from the State Centre as per Bye-Law 4(a)(iii) shall cease to exist with effect from the next Annual General Meeting of the Institution when the Member elected under the said Bye-Law 4(a)(iii) shall also cease to be Member of the Council.</p> <p>(b) Notwithstanding anything contained in the Bye-Laws and the Regulations, considering the unprecedented circumstances due to pandemic COVID-19 in the year 2020, the term of the existing elected members of the Council in the session 2019-20 referred sub-clause – (a) above shall be extended by one more session so that each of such elected members continues as a member of the Council for five sessions with effect from his becoming a member in the Council.</p>

By Order of the Council

Sd/-

**Dr H R P Yadav**

Secretary and Director General

**Note :** If a Corporate Member is unable to attend the meeting, he may fill the Form of Proxy with name of his representative. The Form of Proxy is to be signed and to be returned to the Secretary and Director General, The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700020 to reach him not later than 1030 hrs on 25 February 2021.

### The Institution of Engineers (India)

#### EXTRAORDINARY GENERAL MEETING

#### FORM OF PROXY

I, ..... of ..... being a Corporate Member of the above Institution hereby appoint ..... of ..... or failing him ..... of ..... as my proxy at Extraordinary General Meeting of the Institution to be held on the ..... day of ..... 2021 and at any poll held in connection therewith.

As witness my hand ..... day of ..... 2021.

Signature.....

Class of Membership of IEI..... No.....

## Obituary



Prof (Dr) Mandyamkoppal Puttaiah Chowdiah, Past President of the Institution and Professor Emeritus, UGC and Director, Centre for Agile Manufacturing & Research, University Visvesvaraya College of Engineering, Bangalore University, Bangalore left for his heavenly abode on 05 January, 2021. Born in 10 April, 1931, he obtained his BE Degree in Mechanical Engineering from University of Mysore, MSME from Purdue University, USA, Doctor of Engineering from University of Mysore and Diplome in Administration, USA. Dr Chowdiah, who had dedicated himself to the cause of technical education, was a pious and popular teacher, and a dynamic leader with outstanding contribution in the areas of R&D and teaching both in India and abroad. He had achieved immense professional experience while serving in several factories and industrial organizations at Bangalore and overseas. He was Project Engineer in the General Motor Corporation, USA, Design and Development Engineer in Frimberger Company, USA. His extensive assignments in West Germany with FA Sening, N Fehrman and Company and world reputed Fried-Krups Harburger Eison and Brozewerke enriched his engineering experience even more. Dr Chowdiah, has served IEI with unsurpassed dedication and distinction in different prestigious offices, when his devoted association in various official capacities had extended well over a decade. He was the Joint Secretary, Honorary Secretary and Chairman of The Karnataka State Centre, IEI, Chairman, NDRF, IEI, Vice President, IEI (1996-1997) and had been elected as the President of the Institution for the session 1999-2000.

## News-in-Brief

Contd. from page 16

### Muzaffarpur

Organised Lecture Meeting through online platform on 13 December, 2020 on the topic 'Use of Artificial Intelligence for Flood Control'. Keynote Speaker, Prof (Dr) Nirmal Kumar, Bhagalpur College of Engineering deliberated Lecture on the topic.

### Neyveli

Observed 53rd Engineers' Day on 01 December 2020 through cloud mode. Mr A Ravindran, Executive Director (Thermal), NLC India Limited, deliberated Lecture on the topic 'Engineers for Self-reliant India'.

Mr T D Natraj, General Manager (CARD), Retired, NLC India Limited & President, Engineers & Scientists Association, Neyveli delivered Lecture through virtual presence on the topic 'Surface Gasification of Coal and Lignite' on 2 January, 2021.

### Rourkela

Organised Technical Lecture on 27 December 2020 both in online and offline mode on the topic 'Security in IoT: Issues, Challenges and Solutions'. Speaker, Dr Ramesh Kumar Mohapatra, Department of Computer Science and Engineering, National Institute of Technology, Rourkela presented lecture on the topic.

## 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](mailto:datamemb@ieindia.org) by 10 February 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

# IEI NEWS

ISSN 0971-3352

Owner : The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700 020  
Printer : Dr H R P Yadav, Secretary & Director General  
Publisher : Dr H R P Yadav, Secretary & Director General  
Published from : 8 Gokhale Road, Kolkata 700 020  
Printed from : M/s Sailee Press Pvt. Ltd.  
4A Manicktala Main Road, Kolkata 700054  
Editor : Dr H R P Yadav, Secretary & Director General

**President : Er Narendra Singh**

**Editor : Dr H R P Yadav**

**Associate Editor: Mr Kingshuk Sen**

*Special Contributors:* Dr N Sengupta, Dr S Ghosh,  
Mr T Chakraborty, Ms A Dutta, Mr P Chakraborty,  
Ms H Roy, Mr S Bagchi

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

Telephones: 91-33-2223 8311/14/15/16; Web: <http://www.ieindia.org>; E-mail: [iei.technical@gmail.com](mailto:iei.technical@gmail.com)