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99 YEARS OF RELENTLESS JOURNEY TOWARDS ENGINEERING ADVANCEMENT FOR NATION-BUILDING

Volume 25

Number 10

IEI wishes its Members a Happy New Year

33rd Indian Engineering Congress, Udaipur

Integration of Technologies: Emerging Engineering Paradigm

The 33rd Indian Engineering Congress of The Institution of Engineers (India) on the theme "Integration of Technologies: Emerging Engineering Paradigm", hosted by Udaipur Local Centre, was inaugurated by the Chief Guest, Mr R Madhavan, Chairman & Managing Director, Hindustan Aeronautics Limited (HAL) at Hotel Ananta, Udaipur on December 21, 2018. In his inaugural address, Mr Madhavan noted that new technologies like, artificial



intelligence, robotics, nanotechnology and several other areas are incremental innovations or new applications of existing technologies which is basically the integration of technologies.

Mr Sisir Kumar Banerjee, the then President, IEI, focused on creation of ecosystem of learning, which would contribute for continuous professional development during the entire spectrum of professional career of an engineer. He also mentioned that IEI is planning to engage with the engineering students by way of digital learning and idea generation through various schemes like, IDEATHON, digital learning system etc. 'Entrepreneurship and innovation are the keys to future development and it is in these areas where cross border collaborations and synergy would be most beneficial', stated by Mr Banerjee. Mr T M Gunaraja, the then President-Elect, IEI emphasized on the technology integration, which has brought about a drastic changes at every stage of engineering development. He also focused on the incremental improvements in the recent technology and engineering arena. On this occasion, Mr N B Vasoya, Past President, IEI also highlighted

the proper integration of technologies for complex manufacturing system that encourages innovation. He also stated that the combination of novelty and complexity makes for excellence in technology integration.

On this occasion, a Souvenir and Technical Volume of the Congress were brought out which were released by the Chief Guest along with other dignitaries on the dais.

During the Inaugural Session, various prizes and awards of the Institution, namely, 'IEI Industry Excellence Award', 'NDRF Design Awards', 'Safety & Quality Awards', were presented. The inaugural function was attended by the illustrious Past Presidents, Vice-Presidents, distinguished Council Members and Corporate Members of the Institution. A large number of engineers, technocrats, research scholars from various reputed organizations, engineering students from various parts of the country and delegates from foreign countries have attended the Engineering Congress. Earlier, Mr A P Sharma, Chairman, Organizing Committee & Chairman, Udaipur Local Centre in his welcome address highlighted various activities of the Institution and elaborated the theme of the Congress. Maj Gen (Dr) S Bhattacharya, VSM (Retd), Secretary & Director



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General of the Institution proposed the vote of thanks. The Inaugural Session was followed by the 'Glimpses of Engineering Personalities' where eminent engineer, Mr Akhilesh Joshi, Former Chief Executive Officer, Hindustan Zinc Limited was felicitated for his valuable contributions in the field of engineering and technology. Eight Memorial Lectures in the memory of the distinguished stalwarts of the engineering profession were delivered by the experts in the field.

A separate session on "FEIAP Committee on ICT" was held on December 22, 2018 where the Seminar on 'Contemporary Cyber Challenges' was organized. During this session, Dr Ajeet Bajpai, Director General, National Critical Information Infrastructure Protection Centre, Govt. of India delivered a lecture on "Cyber Security (Trends, Threats & Challenges)" and Mr Amit Sharma, Additional Director, Office of the Secretary Defence (R&D) & Scientific Advisor of Defence Minister, DRDO, Govt. of India delivered a lecture on "Contemporary Cyber Challenges to Global Peace".

Various 'Prizes and Awards' for the papers published in the Journal of The



Institution of Engineers (India) during the year 2017 were presented to the recipients by Mr Sisir Kumar Banerjee, the then President, IEI. Four Technical Sessions were conducted concurrently with the Congress where more than hundred papers embracing the theme of the Congress were presented and discussed, which evoked keen interest amongst the participants. During the Congress, an International Meet was organized where foreign delegates from Sri Lanka, Nepal and Bangladesh participated. IEI Alumni Meet was also organized on December 23, 2018 where Mr Kamaleshaiah Mathavara, Scientist 'G' / Chief Scientist, CSIR – National Aerospace Lab., Mr Narender



Kumar Gupta, Scientist 'E', Department of Scientific & Industrial Research, New Delhi, Mr Mahendra Kumar Mathur, former Senior Manager (Mechanical), Rajasthan State Mines & Minerals Ltd., Udaipur and Mr Anurodh Prashant, Consultant & CEO, Vijay LakshiTechnomen, Udaipur received the 'IEI Alumni



Award'. Exhibition Stalls of many reputed organizations were also put up at the Congress venue. The Ninety-ninth Annual General Meeting of the Institution was held on December 23, 2018 which was attended by a large number of Corporate Members of the Institution. During the Congress, "Women Engineers Meet" was also conducted where a large number of lady engineers participated the gathering.

Mr Sisir Kumar Banerjee, the then President, IEI, presented the 'Best Centre Award' to Jharkhand State Centre and Madurai Local Centre of the Institution for their all-round performance during the year 2017-18. The Annual Report of IEI including Audited Accounts was accepted during the Annual General Meeting. Thereafter, the ceremonial function of installation of the New President of IEI took place where Mr T M Gunaraja took over the charge from Mr Sisir Kumar Banerjee as the President of the Institution for the Session 2018-19 and delivered the Presidential Address. Mr Gunaraja presented a Scroll-of-Honour to Mr Sisir Kumar Banerjee, Immediate Past President in recognition of his selfless and devoted services rendered by



him during his tenure. The Proceedings of the Congress was summarized in the Valedictory Session where Dr U S Sharma, Vice Chancellor, Maharana Pratap University of Agriculture & Technology, Udaipur graced the occasion as Chief Guest. Dr Sharma congratulated IEI for conducting the big event

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Address by

Mr T M Gunaraja President, IEI

Text of the Presidential Address delivered by Mr T M Gunaraja, President, IEI, during the 99th Annual General Meeting of the Institution held at Udaipur on December 23, 2018.



I approach today's installation as President of The Institution of Engineers (India) with a sense of both honour and humility in the historic city of Udaipur, vibrant with the stories of patriotism, bravery and sacrifice. I would like to sincerely thank the Council of the Institution for reposing their faith in me and I look forward to our collective leadership in various endeavours for the betterment of the engineering fraternity in the country.

I feel it appropriate to remember, on this occasion, the doyens of engineering profession who, with self-less dedication and commitment, contributed to the development of engineering in the country such as Bharat Ratna Sir Mokshagundam Visvesvaraya, Sri R N Mookerjee, Dr A N Khosla, Dr Triguna Sen, Padma Bhusan Dr K L Rao, Nawab Zain Yar Jung Bahadur, Er Dildar Hussain, Dr M S Thacker, Dr A P J Abdul Kalam and many other illustrious engineering personalities. It is with pride we note that many such luminaries were also at the helm of affairs of this august Institution and responsible for its multidimensional growth and we salute their devotion, dedication and leadership.

The status of engineering profession in India gained prominence during 1916-18 owing to a report submitted by the Industrial Commission. There were endeavours to advance an industrial society to safeguard and enhance the status of the profession. Sustained efforts by a group of Indian and British Engineers brought "The Institution of Engineers (India)" into its rightful place and the Institution was registered on September 13, 1920 under the Companies Act of 1913 with Madras as the "Province of Registration". The Registered Office was shifted to Calcutta on November 11, 1920. In recognition of valuable services for the cause of advancing the engineering developments, the Institution was granted the Royal Charter in 1935.

The Institution is a pioneer in the field of specially-designed engineering education in the country through the AMIE-Section A&B examination. The AMIE programme has been devised to serve the interest of a large number economically challenged working professionals to enhance their professional skills and career enrichment.

The Institution has also taken up the role of promoting R&D Grant-in-Aid Programme, which is recognized by the Ministry of Science & Technology, Govt. of India as a Scientific and Industrial Research Organization (SIRO), through funding and active participation with identified organizations. The

initiative was launched in 2001 and has manifested into a full-fledged programme which has percolated to the student community across the country.

IEI Entities

With this modest initiation, this great Institution has been increasing its activities and is engaged in multidimensional development towards the growth of engineering profession in the country. As of date, there are 123 State and Local Centres with a corporate membership strength of over 200,000 members and about 520 Institutional members.

The Institution has six fora and an autonomous organ for meeting the challenges related with specific areas for national interest. Of these the Engineering Staff College of India (ESCI) organizes various technical training courses throughout the country to upgrade the technical knowledge of practicing engineers and technologists. The six fora, namely, National Design and Research Forum (NDRF) Rural Development Forum (RDF), Water Management Forum (WMF), Sustainable Development Forum (SDF) and Safety & Quality Forum (SQF) and National Skill Development Forum (NSDF) have been engaged in promulgation of knowledge in a specific engineering domain for the benefit of the society at large.

International Linkages

We have six Overseas Chapters viz. Abu Dhabi, Bahrain, Dubai, Kuwait, Nepal and Qatar. We have bilateral relationships with 33 sister professional societies of international repute. IEI is a member of various international professional bodies such as World Federation of Engineering Organization (WFEO), Federation Internationale du Beton (fib), Federation of Engineering Institutions of South and Central Asia (FEISCA) and Federation of Engineering Institutions of Asia and Pacific (FEIAP). IEI is also member of International Professional Engineers Agreement (IPEA) since 2009. The IPEA is an International Recognition Agreement for professional engineering to create the framework for the establishment of an international standard of competence and also empowers each member organization to establish a section of the International Professional Engineers (IntPE). IEI operates the Indian section and holds International Professional Engineers Register and also certifies International Professional Engineers in India as per the system and procedures adopted by IEI in line with international requirements and also in the true spirit of IPEA requirements.

TOWARDS THE NEXT CENTURY

I would now like to enunciate some of the focus areas of IEI in the years ahead as we march towards the next century.

Digital Learning Paradigm

IEI's vision is to promote an environment to enable ethical pursuits of professional excellence for engineering fraternity in the country so as to

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provide leadership for serving the humanity in an inclusive manner. IEI Vision Document emphasizes on 'functional areas' and 'key result actions' to fulfill the obligations specified in the objectives under the Royal Charter. Acknowledging the vision of IEI, we need to look beyond our present structure of delivering education. We need to believe that technology can be a great enabler to improve teaching, learning and administrative processes, towards a progressive, knowledge based society. We should aim to offer our members options for cloud based platform services developed in close collaboration with academia and industry community. I would like to convey my appreciation to my worthy predecessor for initiating a digital learning paradigm for our students and corporate members, which I would like to implement in real earnest.

Membership Growth and Inclusivity

The involvement of manufacturing industries in technical activities and corporate membership organized by the Institution is to be given special impetus. We need to engage industries by organizing dedicated program on themes relevant to our industries. There is a pressing need of inclusivity of industry professionals in our various engagements in order to stay relevant and sensitive to the requirements of our industries. Plans are afoot to involve trade bodies with the objective of developing meaningful synergy and benefit from each other's expertise. Further, with enhanced participation from industries, our membership database will be more inclusive and would ensure more participation from industry in our technical events. It is worth mentioning that with modest effort we have witnessed substantial increase in participation from industries in events organized by the Institution. This is evident from the encouraging response we have received in IEI Industry Excellence Award 2018. Also, this year we have witnessed a surge in papers received from Industry as part of the Congress proceedings.

As engineering is evolving and conquering newer frontiers the role of women engineers are coming to the forefront. Women engineers have proved their worth in all disciplines and have established themselves adept at handling various responsibilities assigned to them. The Institution of Engineers (India) need to formulate policies which will attract more women engineers as its members and ensure their active involvement in its various pursuits.

Skill Development

It has also been observed that though there have been plenty of initiatives to empower our youth through missions like 'Skill India', the advocacy of such initiatives needs dissemination. The Institution has envisaged the need for 'youth empowerment' and has come up with skill development initiatives offered through our fora like the National Skill Development Forum. These initiatives will foster economic growth of India as it aims at utilizing the existing nation's talent base, create additional employment opportunities and empower MSMEs. I would like all our fora to implement the same in their respective domain of expertise.

ACADEMIA-INDUSTRY INTERFACE

It will be my endeavour to give special attention on the issue of employability of our engineering graduates. Industries are interested to employ those who possess industry-ready skills including ability to work in a team, good communication and leadership, critical thinking, problem solving and managerial abilities to meet the challenges. This has necessitated industry to look for support from academia. At present, in the era of knowledge economy, a productive interface between academia and industry is a definite requirement. Both the domains have realized the need to increase

mutual interdependence to bridge the gap between academic institutions and corporate bodies ensuring that their respective objectives are relevant and contemporary. I would like IEI to step in as a facilitator to establish the much needed synergy between academia and industry.

Here I would like to laud the efforts of my worthy predecessor for embarking upon a programme for bringing academia and professional engineers on a single platform to share ideas, thoughts and provide policy inputs by way of academia-industry interface.

CENTENARY CELEBRATIONS

We are all aware that The Institution of Engineers India is marching towards its 100 years of glorious contribution to national development. The country is now passing through a stage where rapid economic development through use of latest technologies and skilled manpower is being stressed upon by the government. This is an opportunity for IEI to consolidate on its historical legacy and build further to contribute significantly in the period from now to completion of its 100 years in 2020. While marching towards 2020, IEI needs to highlight its strengths and strive to craft an enhanced public image by rendering dedicated and meaningful services to its stakeholders, developing skills, improving ethical standards and focusing on quality business models of growth. Incidentally, 2019 marks the 150th year of Mahatma Gandhi's Birth and this also gives an impetus for IEI to highlight the manner in which engineering is being applied in the service of mankind to make a difference in lifestyles as well as in sustainable development.

We have identified several areas which needs attention in the build up to the Centenary celebrations such as

- a) Each State and Local Centre may develop its own programme schedule based on local imperatives.
- b) Prepare a Centenary Volume on the History of Engineering to be formally inaugurated during the Centenary year.
- c) Each Engineering Division of the IEI may identify a domain area and publish a compendium focusing on the latest developments/happenings in their respective fields.
- d) Enhance corporate membership and make it more inclusive.

DYNAMIC ROLE OF IEI CENTRES

Our Centers, which have an excellent geographical coverage, need to respond in a big way. I would like to exhort our Centers to evolve innovative ways to effectively engage and create platforms for knowledge sharing between policy makers, corporate members, industry, academia and students using contemporary communication technologies. Centres should focus on conducting technical activities specially National Conventions and All India Seminars relevant to contemporary themes. I would like to emphasize that it is imperative that the National Conventions be organized in locations which have industry clusters in their respective specific engineering domain as well as academic Institutions. This, I am sure, would result in enrichment of the deliberations and lead to useful recommendations which can then be sent to stakeholders as inputs for policy making.

I am fully aware that the challenges before us are many, but I am confident that with the whole-hearted support of all of you, we can achieve our goals and usher in a new era of development of our Institution.

I wish each of you, your family members a very happy and prosperous New Year.

Thank You

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like Indian Engineering Congress in a befitting manner at the historical place of India. In this connection, he highlighted the role of engineers in the recent infrastructural development at the city of Udaipur. On this auspicious occasion, 'Abhiyanta Bandhu', an annual technical magazine for the year 2017 published under the patronage of National Languages Promotional Committee (NLPC) of IET along with Annual Technical Volumes of Civil,

Architectural, Agricultural, Electronics & Telecommunication, Computer, Mechanical, Production, and Textile Engineering Division Boards, IET were released by the Chief Guest. Mr T M Gunaraja, President, IET, thanked all the stakeholders for organizing the Congress in a befitting manner. Maj Gen (Dr) S Bhattacharya, VSM (Retd), Secretary & Director General of the Institution proposed the vote of thanks.

Release of Technical Volume of the Congress



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-third Indian Engineering Congress, these lectures were delivered by leading experts from diverse fields. Following are some excerpts of the lectures.

The 61st Sir Mokshagundam Visvesvaraya Memorial Lecture



Sir Mokshagundam Visvesvaraya Memorial Lecture was instituted in 1957-58 in the memory of Late Sir M Visvesvaraya, the doyen of Indian engineering. The 61st Sir M Visvesvaraya Memorial Lecture was delivered by Mr Balraj Joshi, Chairman & Managing Director, NHPC Ltd. on the topic "Glacial Lake Outburst Flood (GLOF) - Case Studies for NHPC Projects". He briefly described about the GLOF and its background. Mr Joshi further highlighted the major hurdles of estimation of GLOF.

Later on, he mentioned the case study on GLOF in Tawang basin project at Arunachal Pradesh. The analysis of outburst flood from artificial lake due to landslides was carried out by NHPC, where the river Phutkal has been considered for this purpose. While wrapping up, he emphasized on the fact that GLOF could create a flood as large as 100 year flood and therefore a similar analysis is recommended for derivation of design of floods located in glacial lakes dominated areas. "It would be ideal if a ground verification of the lakes could be carried out using appropriate means, nevertheless remote sensing data as well as critical analysis of physiography of the glacial lakes that could lead to the correct solution", opined by Mr Joshi.

The 53rd Nidhu Bhushan Memorial Lecture

Nidhu Bhushan Memorial Lecture was instituted in the year 1966 in the memory of Late Nidhu Bhushan Chatterjee, a social worker. 53rd Nidhu Bhushan Memorial Lecture was delivered by Prof N N Sharma, Pro Vice Chancellor, Faculty of Engineering, Manipal University, Jaipur on the topic 'Science to Technology of Microfluidics: Future of Medical Diagnostics'. He highlighted the structural coloration attributed to the nanostructure and its interfacing technology. He also emphasized on the role of nature in engineering fields and the conversion of Micro to Nano in today's world. In this connection, Prof Sharma briefly described the microfluidics and its application domain. Further, he also mentioned the lithography technology, which fostered the domain of microfluidics. Later on, he focused on the utilities of Labs-on-a-Chip for obtaining high throughput. He also described the Dielectrophoresis (DEP) that is strongly used in the medical diagnosis.



The 44th Bhaikaka Memorial Lecture



Bhaikaka Memorial Lecture was instituted in the year 1976 in the memory of Late Bhailal Bhai Patel, popularly known as Bhaikaka, an eminent engineer, educationist and administrator. The 44th Bhaikaka Memorial Lecture was delivered by Mr Laxman Singh Shekhawat, Chief Operating Officer - Mines, Hindustan Zinc Limited on the topic, "Role of Engineers". In his address, Mr

Shekhawat stated that engineering community has worked relentlessly for nation building. He also highlighted how engineers are actually using their skills in many different fields. In this context, Mr Shekhawat spoke about the rapid mechanization of mining industry and he also mentioned that there is a huge influx of both modern machines and various specialized engineers into the mining fraternity. He further emphasized on the role of Mining engineers in mine design, Infrastructure design, method of mining, etc. as integral part of mine operations. He also focused on the ventilation methodology in underground mines, dewatering, lines and Backfill / Pastefill etc., which are now becoming the most technical challenges in any mine. "There is a large number of non-working mines in various mining belts in the country due to uneconomic working, high stripping ratio, grade, recovery constraints, forest & environment clearances and poor infrastructure facilities. In order to resolve this situation, we require holistic skills and approach to move ahead.", mentioned by Mr Shekhawat.

The 40th Sir Rajendra Nath Mookerjee Memorial Lecture



Sir R N Mookerjee Memorial Lecture was instituted in the year 1980 in the memory of Late Sir Rajendra Nath Mookerjee, first President of the Institution with an Indian origin. The 40th Sir R N Mookerjee Memorial Lecture was delivered by Prof Santanu Chaudhury, Director, Indian Institute of Technology, Jodhpur on the topic, "Emerging Horizon of Technology Disruption".

Prof Chaudhury in his address stressed upon the convergence of physical and digital worlds. While detailing on 'Enabling Technologies', he explained that there are five interlinked components, which are IoT, Cyber Physical system, Machine Learning, Virtual Reality & Augmented Reality and 5G. The 5G is the most significant development in recent times and some of the important features linked with this platform are supply chain management of perishables, security & surveillance of critical infrastructure, smart city management, connected vehicles, autonomous drone control, and health care. Prof Chaudhury mentioned that technology horizon is changing fast and development of technologies cannot be made in isolation now.

The 31st Dr Ajudhia Nath Khosla Memorial Lecture

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 Past President of the Institution. The 31st Dr A N Khosla Memorial Lecture was delivered by Dr Abhijit Dasgupta, Joint Managing Director, M N Dastur & Company (P) Ltd. on the topic, "Inclusive Growth for Technological Development of Future India".



In his address, Dr Dasgupta highlighted the changing nature of technology with the progress of human civilization. He mentioned that the focus in new age technology will encompass the adequate human needs, which is connecting to 'Millennium Development Goals' and linkages with the global change research programs. Dr Dasgupta in this connection briefly described the industrial revolution from Industry 1.0 to Industry 4.0. He further mentioned the top 12 technologies, which are responsible for transforming the world beyond 2020 such as, Artificial Intelligence, Machine Learning, Block Chain, Augmented Reality & Virtual Reality, Cloud Computing, Angular & React, DevOps, Internet of Things (IoT), Intelligent Apps (I – Apps), Big Data, RPA (Robotic Process Automation) and Digital Marketing. Dr Dasgupta stressed upon the enhancement of adequate skill for young generation to accelerate the inclusive growth.

The 27th Dr Amitabha Bhattacharyya Memorial Lecture



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 27th Dr Amitabha Bhattacharyya Memorial Lecture was delivered by Prof Gautam Biswas, Director, Indian Institute of Technology Guwahati on the topic, "Impending Changes in Engineering Education".

Prof Biswas, in his address, covered the ancient civilizations when many mathematical results have been found strong for using in science to work for human beings. He also stated the revolution of science right from the era of Maharshi Kanad to Aryabhatta and Brahmagupta. He highlighted the creation of modern Universities in various places of the country. Then he stated how engineering education introduced in India. Later on, Prof Biswas opined that the conventional engineering subjects have to be modified in line with the emerging technologies like, Molecular Engineering, Intelligent Materials, Manufacturing by Self Assembly of Materials, Biological Engineering etc. He also elaborated the intersection of Life Science and Engineering. In this context, Prof Biswas has described the flow of cancer cells through micro channel with the behaviour of live cancer cells in capillary.

The 8th Prof C S Jha Memorial Lecture



Prof C S Jha Memorial Lecture was instituted in the year 2011, in the memory of Late Prof Chandra Sekhar Jha, an eminent engineer and educationist. The 8th Prof C S Jha Memorial Lecture was delivered by Prof K K Aggarwal, former Vice Chancellor, GGS Indraprastha University,

Delhi and former President, The Institution of Electronics & Telecommunication Engineers & Computer Society of India on the topic, "Challenges and Opportunities for Professional Societies". Prof Aggarwal described the recent challenges to be faced by various professional societies. He further emphasized that the engineering education should be focused on the new technologies like, internet of things, 3D printing, artificial intelligence, nanotechnology, cloud computing, cyber security, block chain technology etc.

The 4th Dr K L Rao Memorial Lecture

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 IEI. The 4th Dr K L Rao Memorial Lecture was delivered by Prof Raghunath K Shevgaonkar, Vice Chancellor, Bennett University, Noida on the topic, "Future Engineering Education". In his address, Prof Shevgaonkar highlighted the basic of Engineering and its historical background. He also spoke about the engineering before scientific revolution, during industrial revolution, during information age and current happenings. Further, Prof Shevgaonkar focused on the futuristic view of engineering & technology and mentioned the new technological interventions like, Biotech, nanotechnology, quantum scale electronics & optics, communication technology etc. He nicely described the existence of today's world in two basic spaces such as, Physical Space, which is linear in nature and Cyber Space, which is exponential in nature. Prof Shevgaonkar highlighted the existing engineering education must be modified and it should be learning centric education and flipped class rooms concept has to be adopted for future generation.



Eminent Engineering Personality Felicitated during the Congress



Mr Akhilesh Joshi

Former Chief Executive Officer
Hindustan Zinc Limited

Recipients of IEI Industry Excellence Award 2018

To motivate and recognise industries for innovation, environment & safety practices, HR efficiency, business performance and contribution to society, the IEI Industry Excellence Awards were presented to the following industries/consultancies during the 33rd Indian Engineering Congress.

Engineering Manufacturing & Processing

Hindustan Aeronautics Limited

J K Tyre & Industries Ltd.

Bharat Electronics Limited

Tamil Nadu Newsprint and Papers Limited

Ramkrishna Forgings Limited

Electronics Corporation of India Limited

The Kerala Minerals and Metals Ltd.

Lanco Tanjore Power Company Limited

Avantel Limited

Engineering Services & Consultancy

Engineers India Limited

M N Dastur & Company (P) Ltd.

STUP Consultants Pvt. Ltd.

Rodic Consultants Private Limited

National Research Development Corporation

Development Environenergy Services Ltd.



Release of Abhiyanta Bandhu





Presentation of IEI Industry Excellence Award 2018

1. Hindustan Aeronautics Limited; 2. Bharat Electronics Limited; 3. J K Tyre & Industries Ltd.; 4. Electronics Corporation of India Limited; 5. Engineers India Limited; 6. STUP Consultants Pvt. Ltd. 7. Development Environenergy Services Ltd.; 8. Lanco Tanjore Power Company Limited; 9. The Kerala Minerals and Metals Ltd.; 10. Tamil Nadu Newsprint and Papers Limited; 11. National Research Development Corporation; 12. Rodic Consultants Private Limited; 13. M N Dastur & Company (P) Ltd.; 14. Avantel Limited; 15. Ramkrishna Forgings Limited



33rd Indian Engineering Congress, Udaipur

IEI's Best Centre Award

The **Jharkhand State Centre** and **Madurai Local Centre** of the Institution have been adjudged the 'Best Centres' for their all-round performance during the year 2017-2018. The awards, comprising trophies and the certificates along with cash awards were given away to the respective Centres at the 99th Annual General Meeting of the Institution held at Udaipur on December 23, 2018.



Jharkhand State Centre



Madurai Local Centre

Release of Annual Technical Volume



Agricultural Engineering Division Board



Architectural Engineering Division Board



Electronics and Telecomm. Engineering Division Board



Computer Engineering Division Board



Mechanical Engineering Division Board



Civil Engineering Division Board



Mining Engineering Division Board



Production Engineering Division Board

Recipients of IEI Prizes & Awards

One of the important events of the Congress was the presentation of prizes and awards to the authors whose papers were published in the Journals of The Institution of Engineers (India) & co-published by Springer during the year 2017 and were adjudged the best in respective fields. Details of prizes and awards, the titles of the winning papers along with the authors' names are listed hereunder.

The Institution Prizes (2 Nos.)

Aabshar U K Imam and Uttam Kumar Banerjee for their paper titled '*Review of Strategies for Thermal Efficiency in Landscape Planning of Cities for Conservation of Energy and Enhanced Climatic Resilience to Urban Warming*', **Journal of The Institution of Engineers (India): Series A Issue 3, Volume 98, 2017.**



Vinay Kumar Midha, Shubham Joshi and S Suresh Kumar for their paper titled '*Performance of Chemically Treated Jute Geotextile in Unpaved Roads at Different in situ Conditions*', **Journal of The Institution of Engineers (India): Series E, Issue 1, Volume 98, 2017.**

K F Antia Memorial Prize

Thottipalayam Vellingri Arjunan, Hikmet Selli Aybar and Natarajan Nedunchezian for their paper titled '*Experimental Study on Enhancing the Productivity of Solar Still Using Locally Available Material as a Storage Medium*', **Journal of The Institution of Engineers (India): Series C Issue 2, Volume 98, 2017.**



Corps of Engineers Prize



P Umadevi, A Navas, Kesava Brahmaji Karuturi, A Abdul Shukoor, J Krishna Kumar, Sreejith Sreekumar and A Mohammed Basim for their paper titled '*Inertial Navigation System for India's Reusable Launch Vehicle-Technology Demonstrator (RLV-TD HEX) Mission*', **Journal of The Institution of Engineers (India): Series C Issue 6, Volume 98, 2017.**

The Institution Prize [Donated by Col G N Bajpai]

S Binumol, Subba Rao and Arkal Vittal Hegde for their paper titled '*Wave Reflection and Loss Characteristics of an Emerged Quarter Circle Breakwater with Varying Seaside Perforations*', **Journal of The Institution of Engineers (India): Series A, Issue 3, Volume 98, 2017.**



E P Nicolaides Prize

S S Mishra for his paper titled '*Time Period Estimation of RC Frame Buildings Through Soil Stiffness Modeling*', **Journal of The Institution of Engineers (India): Series A, Issue 3, Volume 98, 2017.**

Sir Rajendra Nath Mookerjee Memorial Prize

Ramakrishnan Balasubramanian, Karupannasamy Anandhanarayanan, Rajah Krishnamurthy and Debasis Chakraborty for their paper titled '*Numerical Simulation of Non-Equilibrium Plasma Discharge for High Speed Flow Control*', **Journal of The Institution of Engineers (India): Series C Issue 3, Volume 98, 2017.**



Sir Thomas Ward Memorial Prize

Palle Kowstubha, K Krishnaveni and K Ramesh Reddy for their paper titled '*Electronic Power Conditioner for Ku-band Travelling Wave Tube*', **Journal of The Institution of Engineers (India): Series B Issue 2, Volume 98, 2017.**



Shrimati Saroma Sanyal Memorial Prize



Sutapa Das and Sanjit Bokshi for their paper titled '*Sustainable Waste Water Treatment in Developing Countries : A Case Study of IIT Kharagpur Campus*', **Journal of The Institution of Engineers (India): Series A, Issue 2, Volume 98, 2017.**

Nawab Zain Yar Jung Bahadur Memorial Prize

Prashant P Bhawe and Yadnyeshwar S Joshi for their paper titled '*Accelerated In-vessel Composting for Household Waste*', **Journal of The Institution of Engineers (India): Series A, Issue 4, Volume 98, 2017.**



Prof R C Singh Prize



S Mariraj Mohan for his paper titled '*Vermicomposting of Paper Mill Sludge with Eisenia fetida for its Conversion to Nutrient Using Different Seed Materials*', **Journal of The Institution of Engineers (India): Series A, Issue 4, Volume 98, 2017.**

Suchit Kumar Ghosh Memorial Prize

Sanjay Tiwari and Pradeep Bhargava for their paper titled '*Load Distribution Factors for Composite Multicell Box Girder Bridges*', **Journal of The Institution of Engineers (India): Series A, Issue 4, Volume 98, 2017.**



Agricultural Engineering Division Prize



Parmendra Prasad Dabral, Santosh Kumar and Karmchand Kiku for their paper titled '*Economic Evaluation and Overall Assessment of Water Harvesting Ponds based on Scorecard System : A Case Study*', **Journal of The Institution of Engineers (India): Series A, Issue 4, Volume 98, 2017.**

Computer Engineering Division Prize

Sreya Ghosh for her paper titled '*An Approach to Building a Learning Management System that Emphasizes on Incorporating Individualized Dissemination with Intelligent Tutoring*', **Journal of The Institution of Engineers (India): Series B, Issue 1, Volume 98, 2017.**



Marine Engineering Division Prize

Gulamhusenwala Habib Huseni and Ramakrishnan Balaji for their paper titled 'Wavelet Transform Based Higher Order Statistical Analysis of Wind and Wave Time Histories', **Journal of The Institution of Engineers (India): Series C, Issue 4, Volume 98, 2017.**



The President of India's Prize

Jafar Sharhrivar Guzolu, Mahdi Gharabaghi, Mohammad Mobin and Hojat Alilofor for their paper titled 'Extraction of Li and Co from Li-ion Batteries by Chemical Methods', **Journal of The Institution of Engineers (India): Series D, Issue 1, Volume 98, 2017.**

Union Ministry of Energy – Department of Power Prize

Chitralekha Jena and Mousumi Basu for their paper titled 'Group Search Optimization for Fixed Head Hydrothermal Power System', **Journal of The Institution of Engineers (India): Series B, Issue 1, Volume 98, 2017.**

Sir Arthur Cotton Memorial Prize

A Rashid Ahmad Safuan, Kalatehjari Roohollah, Nadia Aini Hashim, Norzurairahetty Mohd Yunus and Norhazilan Md Noor for their paper titled 'Determination of Soil Specific Gravity by Using Partially Vacuum and Shaking Methods Partially Vacuum and Shaking Methods', **Journal of The Institution of Engineers (India): Series A, Issue 2, Volume 98, 2017.**

Pandit Madan Mohan Malaviya Memorial Prize

Sanjiv Kumar and Narendra Kumar for their paper titled 'Alleviation SSR and Low Frequency Power Oscillations in Series Compensated Transmission Line using SVC Supplementary Controllers', **Journal of The Institution of Engineers (India): Series B, Issue 3, Volume 98, 2017.**

Tata Rao Prize

K S Meera for her paper titled 'Dynamic Simulation of EAF on RTDS for Compensation Sizing', **Journal of The Institution of Engineers (India): Series B, Issue 1, Volume 98, 2017.**

Aerospace Engineering Division Prize

Pawan Kumar Chandana, Shashibhushan Tiwari and Kishorenath Vukkadala for their paper titled 'Numerical Estimation of Sound Transmission Loss in Launch Vehicle Payload Fairing', **Journal of The Institution of Engineers (India): Series C, Issue 4, Volume 98, 2017.**

Metallurgical and Materials Engineering Division Prize

Priyanka Rajput, Vangada Janakiram, Kalidoss Jayasankar, Shivakumar Angadi, Bhagyadhar Bhoi and Partha Sarathi Mukherjee for their paper titled 'Environmental Benign Process for Production of Molybdenum Metal from Sulphide Based Minerals', **Journal of The Institution of Engineers (India): Series D Issue 2, Volume 98, 2017.**

The Steel Authority of India Ltd (SAIL) had instituted two Awards, namely, SAIL AWARD and DR M VISVESVARAYA AWARD to be given away every year during the Indian Engineering Congress to author/s of the articles adjudged best on selected topics.

SAIL Award

For this year 2018, Santosh Kumar for his paper entitled 'Emerging Trends in Slag Management in Steel Industry'.



Mr Santosh Kumar

Dr M Visvesvaraya Award



Mr Antariksh Gupta

For the year 2018, Antariksh Gupta, Subhra Dhara and Somnath Kumar for their paper entitled 'Managing the Logistics Cost to Reduce the Cost of Crude Steel Production'.

H Nandy Memorial Award



2017. **Mr Prakash Kumar Prasad** was selected for the award.

The Institution of Engineers (India) instituted the Award in the name of Late H Nandy, renowned Council Member, a doyen and eminent engineer in the field of Metallurgical and Materials Engineering and to be given away to a student who tops the list of Section B Examination of the Institution in the branch of Materials & Metallurgical Engineering, considering both Summer and Winter examinations for the year

Safety and Quality Award 2017



Dr Anil Jain

Safety Award and Quality Award were instituted by the Safety and Quality Forum (SQF) of the Institution with a view to encourage professionals from manufacturing and service sectors to strive for excellence. For the year 2018, **Dr Anil Jain**, VP & Head – HSE Essar Steel India Limited Hazira received the Safety Award and **Dr R P Singh**, Secretary General Quality Council of India New Delhi has been selected for the Quality Award.



Dr R P Singh

The Coal India Ltd (CIL) had instituted an Award to perpetuate the memory of Late J G Kumaramangalam, its first Chairman, to be awarded every year during the Indian Engineering Congress to author/s of the articles adjudged best on a selected topic.

Coal India (J G Kumaramangalam Memorial) Award

For the year 2018, Rajan Kumar Dubey and B K Choudhury for their paper entitled 'A Realistic Glimpse into India's Energy Security in Foreseeable Future. Can Renewable Alternatives Really Push Aside Coal from its High Energy Pedestal?'.



Mr Rajan Kumar Dubey

NDRF Design Awards 2018

The National Design and Research Forum (NDRF) – an Autonomous Forum of the IEI, had instituted these awards with a view to promote advancement of engineering design and to facilitate exchange of ideas on its different aspects. During the 33rd Indian Engineering Congress held at Udaipur, following Design Awards for the year 2018 were presented.

National Design Award



Dr K M Rajan
Distinguished Scientist & Director, Armament
Research and Development Establishment, Pune

Environmental Engineering Design Award



Mr Sanjay Sen
General Manager, MECON Ltd,
Ranchi

Mechanical Engineering Design Award



Prof Debi Prasad Mishra
Department of Aerospace Engineering
Indian Institute of Technology Kanpur

Mining Engineering Design Award



Dr Chintapudi Eswaraiah
Principal Scientist, Mineral Processing Department
CSIR-Institute of Minerals and Materials Technology, Bhubaneswar

Prestressed Concrete Design Award



Mr Umesh Rajeshirke
Managing Director, Spectrum Techno
Consultants Pvt Ltd., Navi Mumbai

Suman Sharma Award



Dr Brinda V
Sci/Engr'H', Group Head, PPEG
ISRO Telemetry Tracking & Command Network (ISTRAC), Bangalore

Powering India through Innovation and Technology in Railways

The Institution of Engineers (India) in association with the Ministry of Railways, Govt. of India organized 'Curtain Raiser Event' on the theme, 'Powering India through Innovation and Technology in Railways' on



December 18, 2018 at Vigyan Bhawan, New Delhi. Mr Manoj Sinha, Hon'ble Minister of State (Independent Charge) for Communications & Minister of State for Railways, Government of India graced the occasion as Chief Guest and inaugurated the event. In his welcome address, Mr Sisir Kumar Banerjee, the then President of IEI appreciated the Chairman, Railway Board and Member – Rolling Stock, Railway Board for extending their support to organize the event in association with IEI. He further stated that Indian Railways is one of the important organs to bring industrialization in India with some of the largest workshops to manufacture and repair Rolling Stock of India. 'IEI and Indian Railways have vast network and expertise to facilitate awareness and importance of innovation and adoption of emerging technologies in the country', opined by Mr Banerjee. On this auspicious occasion, Mr T M Gunaraja, the then President-Elect, IEI and Mr N B Vasoya, Past President, IEI were also present and addressed the august gathering. Mr Gunaraja in his address emphasized that such events should be organized throughout the year by focusing on 15-20 Centres of IEI in association with Indian Railways as part of 'Centenary Celebration of IEI'. 'It will showcase the activities and achievements of IEI for engineering fraternity and professional engineers', he added. Mr Vasoya, Past President of IEI focused on the theme and elaborated various projects executed by Indian Railways and Govt. of India in the state of Gujarat, which are crucial for socio-technical challenges for success and economical growth of India. The background of the theme was elaborated upon by

Mr Rajesh Agarwal, Member – Rolling Stock, Railway Board & Ex-officio Secretary, Government of India. Mr Agrawal also appreciated the efforts made by IEI and Indian Railways to organize this event in a befitting manner. He further elaborated that Indian Railways & IEI should organize workshops and seminars on regular basis by using their wide network across the country. He further shared that both IEI and Railways may start some new Professional Courses for fresh engineering graduates to bridge the industry and academic gap for making them employable as per the requirement of the Industry. On this occasion, Prof Ashutosh Sharma, Secretary, Department of Science & Technology, Govt. of India delivered a Keynote address on

'Innovation in India through Science & Technology'. Prof Sharma highlighted the current happenings on various innovations and emerging technologies across the world. He further mentioned that the technology should be utilized for improving the quality of life. Maj Gen (Dr) S Bhattacharya VSM (Retd.), Secretary & Director General, IEI proposed the vote of thanks. The inaugural session was followed by a panel discussion on, 'Challenges Faced by Innovative, Emerging and Disruptive Technologies in India and Indian Railways'. During the panel discussion, Prof N S Vyas, Chairman, Technology Mission for Indian Railways (TMIR) & Professor of Mechanical Engineering Department, IIT Kanpur, Mr Sanjay Kumar, Additional Director General, Research Designs & Standards Organisation, Indian Railways, Lucknow and Mr Vikas Lashkari, Director & Chief Procurement Officer, Ernst & Young Services Pvt. Ltd. participated as Panelists during the session. Maj Gen (Dr) S Bhattacharya VSM (Retd), Secretary & Director General, IEI moderated the Panel discussion.

Prof N S Vyas elaborated upon disruptive technology, innovation, validation, digitization in railways, IoT, etc. Mr Sanjay Kumar stressed that there is a need to change mindset to adopt the optimum ways and means to develop Indian Railways. Mr Vikas Lashkari focused on the demographic changes, globalization, digitization etc. to tackle the unknown areas. Later, Mr Ravinder



Gupta, Principal Executive Director, ME/W, Railway Board highlighted the salient visions for future prospects of Indian railways. He mentioned that 'No locomotive and no driver, just train' should come in the near future with the help of complete digitization. A large number of participants from Indian railways, Ministries, Indian army, Government organizations, industries and academic institutions attended the function. Mr H R P Yadav, Director, HQ Cell, IEI, New Delhi proposed the formal vote of thanks.

Architectural Engineering for Socio-Economic Development

Mangalore Local Centre of the Institution organized Thirty-fourth National Convention of Architectural Engineers and National Seminar on 'Architectural Engineering for Socio-Economic Development' under the aegis of Architecture Engineering Division Board (ARDB) of IEI during November 24-25, 2018 at Surathkal, Mangalore. The Convention was inaugurated by the Chief Guest, Prof Karanam Uma Maheshwar Rao, Director, NIT Karnataka,



Surathkal. In his inaugural address, Prof Rao expressed that architectural engineering was practiced since early days of civilization as is evident from the remains of Harappa and Mohenjo-Daro. He continued that India has a great legacy of town planning & engineering and those have been practiced through Vastu-Shastra. 'Proof of scientific drainage, water supply and rainwater harvesting can be seen in those ancient civilizations', added by Prof Rao. He further opined that engineers of the country should study the indigenous technologies and practice without blindly copying the western

models for continuing sustainable socio-economic development. Mr P K Maity, Chairman, ARDB of IEI, in his address mentioned that shelter is a fundamental need of mankind and this need is being gradually multiplied due to change in perception of the lifestyle systems, which are being adopted due to advances in science & technology. 'The complexities of different elements of modern living have raised the expectation level of our habitation pattern especially in urban spheres and it resulted into severe shortage of shelter in the country', he added. Mr Maity also mentioned that the task in front of the planners, engineers & architects is highly challenging and at the same time laced with the great deal of opportunities. Earlier, Prof K Venkataramana, Chairman of the Centre welcomed all the dignitaries and guests present on the occasion. Dr P C Madhuraj, Organizing Secretary of the Convention explained the theme of the national seminar. He mentioned

that genesis of architectural engineering is from the "system approach" to building design that can include many parameters of design, integrating them with the designated priorities. Dr B M Sunil, Immediate Past Honorary Secretary of the Centre offered the vote of thanks. On this occasion, the Eminent Engineering Personalities, namely, Prof P P Anilkumar, Department of Architecture & Planning, NIT Calicut and Mr M S Vijayashankar, Consultant have been felicitated for their valuable contributions in the field of Architectural Engineering. The prestigious "T S Narayana Rao Memorial Lecture" was delivered by Prof Balagopal T S Prabhu, former Head, Department of Civil Engineering, NIT Calicut on the theme "A pedagogic

vision for strengthening architectural engineering profession". Prof Prabhu elaborated the nature of buildings and the initiation of architectural engineering in India. During the inaugural function, the Keynote address was delivered by Prof Manoj Dutta, D G College of Architecture, Kerala on the theme 'Integration of Architecture and Engineering in Modern Buildings'. A large number of participants attended the Convention and presented papers in various technical sessions.

Research Challenges in Grid Integrated Solar Wind Energy Systems

Tuticorin Local Centre of the Institution in association with Department of Electrical & Electronics Engineering, V V College of Engineering, organized All India Seminar on 'Research Challenges in Grid Integrated Solar Wind Energy Systems' under the aegis of Electrical Engineering Division Board (ELDB) of IEI during September 5-6, 2018 at Tuticorin. The Chief Guest, Mr I Maria Michael Raj, former Scientific Officer 'G', Heavy Water Board, Department of Atomic Energy, inaugurated the function. The Chief Guest, in his speech highlighted the gap between per capita demand and supply of power with the necessity of harnessing renewable energy sources like, wind & solar energy to bridge the gap. Mr Sanjeev K Basker, Executive Engineer, Uttar Pradesh Power Transmission Corporation Ltd., Lucknow delivered the Keynote address. On this occasion, Mr G Selvaraj, former Chief Engineer, Tuticorin Thermal Power Station & Convener of the event stated about the challenges facing the integrated grid system. Earlier, Mr S Aribu Sulthan, Chairman of the Centre in his welcome address shared

his experiences in innovative development in green energy utilization. Ms S Jeyaseeli, Assistant Professor, Department of Electrical & Electronics Engineering, V V College of Engineering proposed the vote of thanks. A large number of papers were presented and discussed by the experts on the theme during the technical sessions of the Seminar.



IEI Celebrates Energy Conservation Day

The Institution of Engineers (India) celebrated Energy Conservation Day all over the country on December 14, 2018. Brief account of the celebration as received from various Centres are reported hereunder.

STATE CENTRES

Andhra Pradesh

The Chief Guest, Mr Venu Kumar Balla, Country Manager & Wind Engineering Consultant, CPP Wind Engineering & Air Quality Consultants, Mumbai explained the concept of Non-conventional Energy Resources and wind energy. He further narrated about the current trends in this sector in various countries and its potentiality. Mr Balla emphasized more on green energy buildings construction and Solar Panel erections on tall structures like, towers, stadiums etc. On this occasion, Mr K M Ambedkar, Divisional Engineer (Construction), APEPDCL, Eluru while addressing the gathering, stated that for every purpose, several energy resources play an important role in daily life. Earlier, Dr P K Rama Rao, Chairman of the Centre, in his address briefed about the activities and other benefits of the IEI in general. Dr K Brahma Raju, Council Member of IEI explained elaborately the benefits of enrolling the budding engineering into the fold of IEI. Mr P Charan, Department of Electrical & Electronics Engineering, Sir C R Reddy College of Engineering, Eluru proposed the vote of thanks.



Delhi

The Chief Guest Mr A K P Singh, Member Secretary, Northern Power Regional Committee, Ministry of Power, Govt. of India, in his address apprised that all conventional forms of energy are fast depleting. He stated that every day population across the world uses energy for leading a civilized life. 'These resources are the critical input of human development which comprises providing adequate food, shelter, drinking water, sanitation, medication, schooling, transportation, industrial applications, access to information etc.', he opined. Earlier, Mr Dinesh Kumar, Chairman of the Centre, in his welcome address highlighted the importance of energy consumption and its use in our day-to-day life. He further stated that it focuses the attention of significant issues facing the future of mankind with aspect to energy. Mr Jitendra Kumar Sharma, Honorary Secretary of the Centre coordinated the function and proposed the vote of thanks.



Gujarat

Mr Niraj S Shah, Automation & Robotic Expert spoke on 'Renewable Energy Resources'. He explained various types of non-renewable resources such as, crude oil, coal and gas. 'Renewable resources are mainly five types, namely, Solar Energy, Wind Energy, Geothermal Energy, Biomass Energy and Water or Hydro Power', opined by Mr Shah. He also described all five types of renewable energy sources in details with its advantages and disadvantages and also from cost economic comparisons. Mr Shyam Varghese, the Honorary Secretary of the Centre proposed vote of thanks.



Kerala

The Speaker on the occasion, Prof V K Damodaran, Former Director, Energy Management Centre, Kerala, while speaking on the topic, 'Energy, Climate Change, Floods and How much of these can we have', stated that the energy conservation is needed due to the dwindling energy resources, to ensure sustainable future and to reduce loss of lives due to air/water pollution. 'Cumulative carbon dioxide emissions are getting closer to the 3010 GT Carbon budget until 2100 AD and the effect is already visible in the form of climate change', he added. He further narrated that efforts are being made to increase the voltage of electricity transmission lines to reduce the losses, thereby enabling longer / wider distribution networks for this clean energy. Earlier, Mr N Rajkumar, Past Chairman of the Centre welcomed the gathering. Mr Asok Kumar K, Honorary Secretary of the Centre proposed the vote thanks.



Manipur

Mr N Shyamsundar Singh, Chairman of the Centre, in his welcome address spoke about different aspects of Energy and its importance in this knowledge era. Beginning with definition of Energy and its forms, Mr Singh continued to highlight the need for Energy in day-to-day life, the growth in this demand, the issues facing the generation of energy, the fast depletion



of finite reserve of fossil fuels & natural gas and other impacts on the environment that cause climate change. He also emphasized upon the urgent need for judicious use of energy and conserving it as a most precious commodity. Earlier, Mr A Roudrajit Moirang, Honorary

Secretary of the Centre welcomed the guests and dignitaries present on the occasion and briefly narrated about the observation.

Punjab & Chandigarh

The Chief Guest, Mr Harwinder Singh Bansal, Deputy Chief Engineer, Punjab State Power Corporation Ltd. (PSPCL), Patiala highlighted the importance of electricity in today's world. He emphasized on the fact that the growth of a country depends upon how much energy is saved. In this context, he insisted on the importance of LED bulbs in saving electrical energy. 'Around 3 lakh units has been saved in Super Thermal plant by the use of four star motor pumps and also by the efforts of PSPCL losses like, tempering have been reduced', stated by Mr Bansal. On this occasion, Dr R Jha, Director General & Director (R&D), IET Bhaddhal, Technical Campus spoke on the Efficient Energy Management in India. He mentioned about various forms of energy and how it is being used in different sectors. 'There is a need to shift towards improvement in operational efficiency of existing power stations, reduction of T&D losses and using end products having Energy Efficiency like 4/5 star ratings', as opined by Dr Jha. Earlier, Mr Janak Raj Garg, Chairman of the Centre in his welcome speech highlighted the achievements of IEI in the field of energy conservation. Mr S S Mundi, Honorary Secretary of the Centre proposed the vote of thanks.



Tamilnadu

Mr K R Ajith Kumar, Additional Director, PCRA, while speaking on the theme, 'Energy Conservation in Daily Life : Industry & Domestic' explained about the PCRA integrated energy solution provider activities in different sectors like commercial, industrial, agriculture, transport, domestic etc. Mr F Sathiyaraj, Deputy Director, Southern Region, PCRA delivering speech

on 'Energy Scenario & Eco-Driving' stated that eco driving means smarter and more fuel efficient manoeuvring of a vehicle and it represents a new driving culture that makes best use of advance vehicle technologies, while improving road safety. Mr S Mahadevan, Consulting Engineer spoke on the theme 'Compressed Bio Gas (CBG) as Automobile Fuel in place of Petrol and Diesel - Potentials and Emerging Opportunities'. Mr Mahadevan, in his speech, explained that bio-gas is produced naturally through a process of anaerobic decomposition from waste / bio-mass sources like agriculture residue, cattle dung, sugarcane press mud, sago industries waste, municipal solid waste, sewage treatment plant waste, etc. Dr S Sankara Narayanan, Executive Engineer, TANGEDCO, speaking on 'Minimum Energy Maximum Results' highlighted the green building concept, which uses less water, less natural resources, less power, generate less waste, provides healthier living spaces. Earlier, Mr R Ramdoss, Chairman of the Centre welcomed the gathering. Mr P Gomathi Nayagam, Honorary Secretary of the Centre proposed the vote of thanks.

Telangana

Dr B Janardhana Reddy, Metropolitan Commissioner, Hyderabad Metropolitan Development Authority (HMDA) graced the occasion as Chief Guest and inaugurated the function. On this occasion, Mr N Janaiah, Vice Chairman & Managing Director, Telangana State Renewable Energy Development Corporation Ltd. graced the occasion as Guest-of-Honour. During the Inauguration, two technical talks were conducted by Prof Nishanth Donagari, IIT Hyderabad and Prof Naga Sujatha, Department of Electrical & Electronics Engineering, Jawaharlal Nehru Technological University Hyderabad. Earlier, Dr G Rameshwara Rao, Chairman of the Centre welcomed the gathering.

Tripura

Dr Murhari S Kele, Chairman-cum-Managing Director, Tripura State Electricity Corporation Ltd, Agartala graced the occasion as Chief Guest. Dr Kele in his address, deliberated on Energy Conservation Act of India. Mr Syantan Chakraborty, Head, Department of Electrical & Electronics Engineering, ICAI University, Tripura was also present during the program. Earlier, Mr Tapas Bhattacharya, Honorary Secretary of the Centre welcomed the gathering and Mr Tapan Lodh, Chairman of the Centre presided over the function.

Uttar Pradesh

The Chief Guest, Mr Sanjay Tewary, Director (P&A), Uttar Pradesh Rajya Vidyut Utpadan Nigam, stated that conservation of energy is the need of the hour in the modern world today, which serves two important and useful purposes viz. the energy saves fuel and the health of environment is directly proportional to the energy saved. He further emphasized on the necessity of conservation of energy and various ways to conserve the same. The Keynote speaker, Ms Varalika Dubey, Chief Engineer, Uttar Pradesh Power Corporation Ltd. dealt at length various ways to conserve energy such as, using energy efficient devices, use of solar energy in place of conventional energy. She also stated that use of Energy Conservation Building Code (ECBC) must be used for construction of all

the building. Earlier, Mr R K Trivedi, Chairman of the Centre welcomed the guests. Mr P K Chaurasia, Honorary Secretary of the Centre proposed the vote of thanks.

LOCAL CENTRES

Alwar

Mr B S Meena, Superintendent Engineer, Jaipur Vidyut Vitran Nigam Limited, Alwar and Mr Aditya Sharma, Superintendent Engineer, Public Health Engineering Department, Govt. of Rajasthan, Alwar graced the occasion as Chief Guest and Guest-of-Honour respectively. The function was presided over by Mr Manohar Lal Yadav, Chairman of the Centre. Mr K L Sharma, Immediate Past Chairman of the Centre spoke on 'Energy Conservation'. Mr S C Joshi highlighted on many aspects of energy and its conservation. Mr A K Gupta proposed the vote of thanks at the end of the function.

Anpara

The Chief Guest, Mr C P Mishra, General Manager, DTPS, addressed the gathering and highlighted the importance of energy conservation. Mr Prasant Kumar, Anpara Thermal Power Project in his keynote address, presented a detailed account of various issues concerned with the topic 'Recent Advances in Energy-Water-Food Nexus'. Earlier, Mr D K Singh, Immediate Past Honorary Secretary of the Centre welcomed the august gathering.

Bareilly

Mr Sovan Mohanty, Assistant Professor, Shri Ram Murti Smarak Institution, Bareilly mentioned that Government is trying to focus on the Natural Energy Conservation and it is possible when every people make the proper mind to think and work for saving of natural energy. Mr S C Sundrani, Past Chairman of the Centre suggested that each and every citizen of India must be aware about how to use efficient energy and how to save the energy for their own future safety and many more ways. Earlier, Mr Subhash Mehra, Chairman of the Centre, in his inaugural address urged that the day is celebrated to aware people about the importance of energy as well as saving or conserving more energy by using less energy. Dr Pankaj Sharma, Honorary Secretary of the Centre proposed the vote of thanks.

Bokaro Steel City

The Chief Guest, Mr S K Sahoo, General Manager (Energy Management Department), SAIL-Bokaro Steel Plant, in his speech stressed upon maximizing use of air & solar energy being cheap as well as pollution free and also explained the actions initiated to reduce the energy consumption in steel production of Bokaro Steel Plant. Mr K K Sanyal, Deputy General Manager (EMD), SAIL- Bokaro Steel Plant in his address, elaborated each unit of Bokaro Steel Plant where energy is being saved. Mr Y N Singh, Chairman of the Centre, in his welcome speech emphasized to inculcate in the minds of every people in the country as well as all over world to make a habit for less use of energy by avoiding unnecessary use of energy and stressed on maximum use of renewable energy instead of non-renewable energy. Mr D P Jha, Honorary Secretary of the Centre proposed the vote of thanks.

Coimbatore

Dr S Babu, Associate Professor, School of Energy, Department of Mechanical Engineering, PSG College of Technology, Coimbatore graced the occasion as Chief Guest and delivered speech on the topic 'Recent Trends in New and Renewable Energy Technologies'. Earlier, Dr M Senthilkumar, Immediate Past Honorary Secretary of the Centre welcomed the gathering and presided over the function. Dr M Senthilkumar, Immediate Past Honorary Secretary of the Centre proposed the vote of thanks.



Faridabad

The Chief Guest, Mr Rohit Kumar, Joint Director, Petroleum Conservation Research Association (PCRA) shared his experiences related to special efforts made to conserve energy. Mr Rajesh from National Small Industries Corporation deliberated on the effective use of Energy Management System. He explained at length that how energy can be saved by using simple techniques like, replacing light bulbs, using smart power strips, installing smart thermostats etc. Earlier, Chairman of the Centre, Mr Subhash Chander, in his opening address mentioned that the objective of this event is to highlight the initiatives in energy in the domestic, industrial, transport and services sector in view of sensitizing and creating a synergy around an effective management of energy. Mr Sandeep Handa, Honorary Secretary of the Centre proposed the vote of thanks.



Ghaziabad

The Chief Guest, Mr S C Sharma, former Director (Technical), THDC India Ltd. apprised about the importance of the day explaining different innovative methods, ideas & technology to be used at large to save energy. The Keynote Speaker on the occasion, Mr Akshay Kumar Attrey, former Chief Commercial Manager, Indian Farmers Fertiliser Cooperative spoke on the theme of the day. The Guest-of-Honour, Mr Sanjay Bharti, Senior General Manager (Technical), DS Group highlighted about the measures adopted in their industry to conserve the energy by way of providing energy efficient equipments and adopting technology available for the purpose thus saving energy and money considerably. Mr R R Tanwar, Council Member of IEI also graced the occasion and insisted upon members to be more sincere and dedicated to educate people and end users regarding the energy conservation methods available in the interest at large. Earlier, Mr J P Singh, Chairman of the Centre welcomed all the dignitaries and guests. Dr Satish Chandra Gupta, Honorary Secretary of the Centre proposed the vote of thanks.



Gorakhpur

The Chief Guest, Dr Aseem Satydeo, Principal, BRD PG College, Gorakhpur suggested to reduce the consumption of power and the energy. He stressed on the change of lavish lifestyle and minimizing the dependency on machines in daily life. The Keynote Speaker, Dr S K Hassan, Associate Professor, Chemistry Department, Institute of Technology and Management described the share of power generating stations and appliances in increasing the environmental problems, being faced today. He appreciated some states



of India like, Maharashtra, Kerala, Rajasthan have been trying to create the Energy Conservation awareness. Earlier, Dr Rajkumari Pandey, Principal, DAV PG College delivered the welcome address. Mr V K Srivastava, Honorary Secretary of the Centre proposed the vote of thanks.

Kanpur

The Guest Speaker on the occasion, Dr K G Arvind Kumar, IIT Kanpur, while speaking on the topic 'Energy Conservation and Best Practices of Industries in India', enumerated that Energy Conservation is achieved when growth of energy consumption is reduced and it can, therefore, be the result of several processes or developments, such as productivity increase or technological progress. He further explained that economic growth is desirable for developing countries, energy is essential for economic growth, if India is to achieve the targeted GDP, it would need commensurate input of energy, mainly commercial energy in the form of coal, oil, gas and electricity. Dr Kumar concluded that there is considerable potential for reducing energy consumption by adopting energy efficiency measures at various sectors of our country. Earlier, Prof D P Mishra, Immediate Past Chairman of the Centre delivered the welcome address. Dr Rajat Kumar Khare, Honorary Secretary of the Centre proposed the vote of thanks.



Kota

Mr C P Jhamb, Former Site Director, NPCIL Rawatbhata and Mr A K Gupta, Former Managing Director, JVVNL, Jaipur graced the occasion as the Chief Guest and the Guest-of-Honour respectively. The Guest Speaker on the occasion, Mr Purushottam Dhariwal, Superintendent Engineer, Kota Super Thermal Power Station spoke on saving energy and emphasized that today's energy saving is a production of future. Another Guest Speaker Dr D K Yadav, Associate Professor, Rajasthan Technical University, Kota deliberated on saving energy and future energy. Earlier, Mr Anand Bardava, Chairman of the Centre delivered the welcome address and presided over the function. Mr Sunil Bohra, Honorary Secretary of the Centre extended the vote of thanks.



Ludhiana

Dr Arvind Dhingra, Energy Auditor and Faculty, Guru Nanak Dev Engineering College, Ludhiana, in his address stated the need of energy conservation and presented an insight into means to conserve energy. 'Since the energy reserves of the world were declining, it becomes pertinent to save energy', he added. Dr Dhingra further urged that installing of energy-saving devices is required including energy-saving lighting schemes. 'maintaining proper power factor in industry and having right capacity motors would help in saving lot of energy', he opined. Earlier, Mr Surjit Singh, Honorary Secretary of the Centre, in his welcome speech, mentioned that energy conservation is the need of the hour. Mr R L Mahajan, Chairman of the Centre shared his experiences in saving energy for bulk energy consuming industries.



Madurai

The Chief Guest Mr J Goldwin Williams, Chief Engineer/Distribution, TANGEDCO, Madurai Region, Madurai presented a detailed statistics of electricity scenario in Tamilnadu and how to conserve the electrical energy in our daily use. Earlier, Mr S Rajagopal, Chairman of the Centre, in his welcome

address, urged the gathering to use electricity only when it is required and emphasised the importance of the conservation of energy. Mr R Narayanasamy introduced the Chief Guest to the audience. Mr M Savariraj, Jt. Honorary Secretary of the Centre proposed the vote of thanks.



Meerut

Mr Ashutosh Niranjana, Managing Director, Pashchimanchal Vidyut Vitaran Nigam Limited (PVVNL), graced the occasion as Chief Guest. The Speaker on the day Mr Sanjay Anand Jain, Chief Engineer (Commercial), PVVNL highlighted about the background of Energy Conservation Act. He informed



about various initiatives taken by PVVNL to reduce T&D losses and gave figures of achievements during preceding years and informed about distribution of efficient agricultural pump sets in rural areas. Earlier, Immediate Past Chairman of the Centre, Mr S C Govil, in his welcome address, introduced the theme by highlighting the need of conservation of Energy in the present context. Mr M L Jain, Honorary Secretary of the Centre proposed the vote of thanks.

North Bengal

Mr Sandipan Ganguly, Assistant Professor, Department of Civil Engineering, Jalpaiguri Govt. Engineering College, Jalpaiguri delivered speech on the theme, 'Recent Advances in Energy-Water-Food Nexus'. Mr Ganguly explained that energy is required for extraction, production and treatment of water, which is needed for production of energy. He further narrated that balanced utilization of these resources is required to resolve global issues of hunger, poverty, improving health and economical and physical development. Mr Santanu Das, Honorary Secretary of the Centre proposed the vote of thanks at the end of the programme.



Palghat

The Guest Speaker Mr K Madhana Mohan, IRSEE, Former Deputy Chief Electrical Engineer, Railways spoke on the topic 'Emerging Renewable Technologies at a Glance in Harnessing Geothermal and Fuel Cell Renewable Energy'. He explained that due to more and more urbanization and industrialization, there is an ever growing demand for energy on one hand and the fossil fuels are depleting rapidly on the other hand, causing a greater concern in energy sector. Advanced technologies will help to manage geothermal resources for maximum power production, improve plant operating efficiencies and develop new resources like hot dry rock, geo pressurized brines and magma', he added. Dr V Balakrishnan Panicker,



Former Principal of NSS College of Engineering emphasized the need for developing the technologies to prevent energy loss as maximum as possible while converting one form of energy into another form. Mr K Unnikrishnan, Chairman of the Centre presided over the function. Mr A Ramesh, Honorary Secretary of the Centre proposed the vote of thanks.

Rourkela

Mr B P Pandey, Manager (EMD), SAIL- Rourkela Steel Plant, while speaking on the theme, 'Energy Efficiency in Iron & Steel Industry', highlighted about

the energy conservation, its importance, energy challenge and global energy in daily life. He further enumerated on energy saving potential in various sectors viz. agriculture, industry, transport, domestic and commercial. He elaborated on comprehensive insight to Energy Management System (EMS) requirement covering management responsibility, energy policy, energy planning, implementation and operation, checking and management review in order to improve the energy efficiency. Earlier, Prof H M Jena, Honorary Secretary of the Centre welcomed the gathering.



Saurashtra

Prof D J Pandya, Head, Electrical Engineering Department, Institute of Technology & Science, Rajkot spoke on the theme. Prof Pandya, in his address, focused on various aspects viz. use of LED lamp, use of electronics regulator



in fan, use of energy efficient devices, green building etc., which can only create awareness among the people in the society towards conservation of energy. Earlier, Dr Ashit A Pandya, Chairman of the Centre and Prof G D Acharya, Principal, Atmiya Institute of Technology & Science, Rajkot

welcomed the august gathering. Mr Ranchhod K Babaria, Honorary Secretary of the Centre proposed the vote of thanks.

South Gujarat

Prof Naimish Zaveri, Head, Electrical Engineering Department, C K Pithawala College delivered the keynote address and spoke on 'Present Indian Energy Scenario with conservation and issues related to Audit and Power Quality' in today's concept. Earlier, Dr K N Mistry, Past Chairman of the Centre welcomed the dignitaries and briefed about the activities of IEI. Mr D G Patel, Honorary Secretary of the Centre proposed the vote of thanks at the end of the programme.



Sunabeda

Mr Dilip Kumar Garg, Deputy General Manager (Mechanical), National Aluminium Company (NALCO), Damanjodi and Mr Netaji Subudhi, Deputy General Manager, Govt. of Odisha graced the occasion as Chief Guest and the Guest-of-Honour respectively. Mr Sunil Kumar Biswal, certified Energy Auditor, Odisha delivered the Keynote Address. Earlier, Mr Nirod Chandra Behera, Chairman of the Centre delivered welcome address. Mr Arabinda Swamy, Honorary Secretary of the Centre proposed the vote of thanks at the end of the function.



Trichur

Mr V G Sankaranarayanan, Chairman of the Centre presided over the function. Mr T K Jos, General Manager (Projects & Construction), FACT Engineering and Design Organisation, Kochi delivered the lecture on 'More Stars more Savings'. Mr Sasidharan Achari M N, Honorary Secretary proposed the vote of thanks.



Concrete and Steel Structure – Care for their Health and Longevity

Bokaro Steel City Local Centre of the Institution in association with SAIL- Bokaro Steel Plant organized All India Seminar on 'Concrete and Steel Structure – Care for their Health and Longevity' under the aegis of Civil Engineering Division Board (CVDB) of IEI during August 25-26, 2018 at Bokaro Steel City. The Chief Guest, Mr Siyaranjan Kumar Singh, Superintending Engineer, R&C Department, Govt. of Jharkhand inaugurated the Seminar. In his inaugural address, Mr Singh stated about the importance of seminar, which is very much needed for addressing the advanced engineering solutions. The Guest-of-Honour, Mr N C Pandey, Executive Director, ONGC, Bokaro Unit mentioned that in new generation of materials, proper maintenance, cost effective design and reliable quality control methods are required to be enhanced the longevity of concrete and steel structures. Mr N P Srivastava, Head, Environment, SAIL- Bokaro Steel Plant in his Keynote address stressed upon the need of revisiting our practices and concepts on massive use of RCC structures in construction



and need to explore and adopt some better technology, which can replace the dependability on RCC structures. Earlier, Mr A C Goyal, Chairman of the Centre welcomed the dignitaries and presented a brief of the Seminar. Mr S N Teriar, Convenor of the event briefly explained various aspects embracing the theme of the Seminar. A Souvenir was brought out on this occasion, which was released by the Chief Guest and other dignitaries presented on the dais. Mr Y N Singh, Honorary Secretary of the Centre proposed the vote of thanks. A large number of papers embracing the theme were presented and discussed during various technical sessions of the Seminar.

Use of Green & Clean Energy in Construction

Uttar Pradesh State Centre of the Institution organized All India Seminar on 'Use of Green & Clean Energy in Construction' in Hindi under the aegis of National Languages Promotion Committee (NLPC) of IEI during August 25-26, 2018 at Lucknow. Mr Vishnu Agarwal, Chairman & Managing Director, Technical Associates Ltd., Lucknow graced the occasion as Chief Guest. Mr Agarwal, in his address, exhorted that the use of green & clean energy in construction being limited but are costly as compared to conventional energy. 'Due to increase in urbanization, energy demand is increasing day by day and the energy generation in the country is being used in construction and buildings', he added. Mr Agarwal suggested that to reduce the consumption of conventional energy in construction, solar energy and wind energy should be used. On this occasion, the Keynote address was delivered by Dr (Ms) Usha Bajpai, former Head & Coordinator, Renewable Energy Research Centre, Lucknow University. In her address, Dr Bajpai emphasized the need of using clean and green energy in construction and maintenance of buildings. She further discussed about the utilities of energy efficient buildings, green buildings, passive ventilated buildings etc. Mr V B Singh, Chairman, NLPC, IEI highlighted about creating awareness among builders, residents and other stakeholders regarding the use of green and clean energy in construction & maintenance of buildings.

Earlier, Dr B R Singh, Chairman of the Centre welcomed the guests and other dignitaries. Mr R K Trivedi, Honorary Secretary of the Centre proposed the vote of thanks at the end of the programme.





The Institution of Engineers (India)

Notification for R&D Grant-in-Aid (2019-20)

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

Like every year, the Institution invites applications for the session 2019-20 for funding industry-oriented R&D projects and research initiatives aimed at improving the life-style of common people from engineering students pursuing full time Diploma/UG/PG/PhD engineering program in AICTE/UGC/NAAC approved Institutions/Colleges/Universities. The application form and guidelines are available in our website <https://www.ieindia.org>. The projects should be carried out under the guidance of faculty members who are Corporate Members of IEI. Membership criteria for student(s), guide(s) and Institution(s) are as follows:

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

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

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

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

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

RERA: A Change Management Exercise

Goa State Centre of the Institution organized All India Seminar on 'RERA: A Change Management Exercise' under the aegis of Architecture Engineering Division Board (ARDB) of IEI during August 18-19, 2018 at Goa. The Chief Guest, Dr S T Putturaju, Chief Town Planner, Town & Country Planning Department, Govt. of Goa inaugurated the Seminar. In his address, Dr Putturaju elaborated that the new Act on Real Estate Regulatory Authority (RERA) has protected the interests of home buyers and enhanced the transparency in the real estate sector. He further said that the Central Act provides a greater visibility of the track record of the builders and hence it helps in safeguarding the interests of the buyers. Dr Putturaju also highlighted on the investment in real estate that has potentially been increased after implementation of RERA. Mr Chandrashekar Prabhudessai, Organising Secretary of the event focused on the need of RERA Act, which will bring transparency, accountability in housing transactions and boosts the future in investments in Real Estate Sectors. The Guest-of-Honour, Dr



Jagannath (Desh) Prabhudessai, President, Confederation of Real Estate Developers' Associations of India (CREDAI) said that the RERA Act has brought more professionalism in the real estate sector and highlighted that RERA has ensured a quality in construction. Mr Ashwin Shah, the RERA expert from Maharashtra Chamber of Housing Industry (MCHI), Thane unit of Mumbai deliberated on RERA transformation and balancing of rights & obligations, ongoing projects, obligations of land owners. Mr Suresh Lotlikar,

former Advocate General of Goa and faculty of V M Salgaonkar College of Law delivered a lecture on 'Adjudicating Disputes relating to Real Estate projects'. Earlier, Mr G M Naik Parrikar, Chairman of the Centre welcomed the gathering. On this auspicious occasion, the Souvenir of the Seminar was released by the Chief Guest and other dignitaries. Mr Deepak A Karmalkar, Honorary Secretary of the Centre proposed the vote of thanks.



Aerospace Engineering Division

All India Seminar on "Emerging Trends in Aircraft Structure Materials"

Pune, February 16-17, 2019

The Honorary Secretary, IEI, Pune Local Centre, Abhiyanta Bhavan, 1332, J M Road, Shivajinagar, Pune 411005, Maharashtra [☎: 020-25533376 / 25520239 / 25530150; e-mail: punelc@ieindia.org]

Thirty-third National Convention of Aerospace Engineers on "Emerging Technologies in Aerospace Structures, Materials and Propulsion System"

Pune, November 15-16, 2019

The Honorary Secretary, IEI, Pune Local Centre, Abhiyanta Bhavan, 1332, J M Road, Shivajinagar, Pune 411005, Maharashtra [☎: 020-25533376 / 25520239 / 25530150; e-mail: punelc@ieindia.org]

Thirty-fourth National Convention of Aerospace Engineers on "Advances in Aerospace Engineering"

Kanpur, November 9-10, 2020

The Honorary Secretary, IEI, Kanpur Local Centre, Engineers Bhawan, HBTI East Campus, Nawabganj, Kanpur 208002 [Telefax: (0512) 2560034; e-mail: kanpurlc@ieindia.org]

Agricultural Engineering Division

National Conference on "Agricultural Engineering Interventions for Sustainable Organic Hill Farming"

Gangtok, February 1-2, 2019

The Honorary Secretary, IEI, Sikkim State Centre, First Floor, North Academic Block, Central Agricultural University Campus, College of Agricultural Engineering & Post Harvest Technology, Ranipool 737135 [e-mail: sikkimsc@ieindia.org]

All India Seminar on "Water Conservation: A Necessity of the Present to Secure the Future"

Kota, February 16-17, 2019

The Honorary Secretary, IEI, Kota Local Centre, Engineers Bhawan, Near BSNL Office, Jhalawar Road, Kota 324005 [☎: 0744 2428250, M 9116029550; e-mail: kotalc@ieindia.org]

International Conference on "Role of Agricultural Engineering towards Global Food Security"

Bangalore, April 11-13, 2019

The Honorary Secretary, IEI, Karnataka State Centre, 3, Dr B R Ambedkar Veedhi, Bangalore 560001 [☎: (080) 22264698; Telefax: (080) 22256191; e-mail: karnatakasc@ieindia.org; website: www.ieiksc.org]

Thirty-third National Convention of Agricultural Engineers on "Commercial Crops Processing and Value Addition"

Agartala, August 10-11, 2019

The Honorary Secretary, IEI, Tripura State Centre, Pandit Nehru Complex, Near Tripura Housing Board, P. O. Kunjaban, PB No 139, Agartala 799 006 [☎: 0381-2304700; Fax: 0381-2304700; e-mail: tripurasc@ieindia.org]

Architectural Engineering Division

International Conference on "Architectural Innovations: Engineering, Technology and Materials"

Kolkata, November 27-29, 2019

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

Chemical Engineering Division

Thirty-fifth National Convention of Chemical Engineers on "The Food-Energy-Water (FEW) Nexus-Challenges for Chemical Engineers"

Guwahati, September 06-07, 2019

The Honorary Secretary, IEI, Assam State Centre, Panbazar Overbridge, East Lane, Guwahati 781001 [☎: 0361-2548742; Fax: (0361) 2630368; e-mail: assamsc@ieindia.org; website: ieiasc.org]

Civil Engineering Division

One day Seminar on 'Issues & Challenges in Water Resources Management'

Ahmedabad, February 16, 2019

The Honorary Secretary, IEI, Gujarat State Centre Bhaikaka Bhavan, Near Law Garden, Law College Road, Ellisbridge, Ahmedabad 380006 [☎: (079) 26400811; Telefax: (079) 26561825; e-mail: gujaratlc@ieindia.org; web: ieigujaratsc@ieindia.org]

All India Seminar on "Role of Enterprise Portfolio Project Management in Civil Engineering"

Dharwad, February 21-22, 2019

The Honorary Secretary, IEI, Dharwad Local Centre, Balekundry Bhavan, Sir M Visvesvaraya Road, D C Compound, Dharwad 580 001 [☎: (0836) 2742979; e-mail: dharwadlc@ieindia.org]

Computer Engineering Division

One Day Seminar on "Angular 6 + Google Firebase"

Solapur, February 02, 2019

The Honorary Secretary, IEI, Solapur Local Centre, Vastu Vaibhav, 3 North Kasaba, 4th Floor, Near Laxmi Bank, Shivaji Chowk, Solapur 413001 [☎: 0217 2727707; e-mail: solapurlc@ieindia.org]

All India Seminar on "Recent Trends in Image Processing for AI Implementation"

Chandigarh, February 07-08, 2019

The Honorary Secretary, IEI, Punjab & Chandigarh State Centre, IEI, Madhya Marg, Sector 19-A, Chandigarh 160019 [☎: (0172) 2775418; Fax: (0172) 2540133; e-mail: pcsc@ieindia.org]

One Day Workshop on "Robotics in Utilities"

Gwalior, February 17, 2019

The Honorary Secretary, IEI, Gwalior Local Centre, Green Park, Engineers Road, Near New Collectorate, City Centre, Gwalior 474011 [e-mail: gwaliorlc@ieindia.org]

One Day Workshop on "Blockchain and Cryptocurrencies"

Kanchepuram, March 13, 2019

The Honorary Secretary, IEI, Kanchepuram Local Centre, Agni College of Technology - ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [e-mail: kanchepuramlc@ieindia.org]

National Conference on "Data Protection and Privacy"

Salem, March 24-25, 2019

The Honorary Secretary, IEI, Salem Local Centre, 3rd Floor, SPC Bhawan No. 104/7, Manivannan Street, Opp to Salem New Bus Stand, Salem 636004 [Ph. 0427 2332544; e-mail: salemc@ieindia.org]

Electrical Engineering Division

One Day Seminar on "Robotics Monitoring of Power Systems"

Salem, February 08, 2019

The Honorary Secretary, IEI, Salem Local Centre, 3rd Floor, SPC Bhawan No. 104/7, Manivannan Street, Opp to Salem New Bus Stand, Salem 636004 [Ph. 0427 2332544; e-mail: salemc@ieindia.org]

One Day Workshop on "Instruments for Solar Photovoltaic (PV) Systems Monitoring and Conditioning"

Kanchepuram, February 20, 2019

The Honorary Secretary, IEI, Kanchepuram Local Centre, Agni College of Technology - ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [e-mail: kanchepuramlc@ieindia.org]

All India Workshop on "Design of Micro Grid and Grid integration issues of distributed generation"

Tiruchirapalli, March 6-7, 2019

The Honorary Secretary, IEI, Tiruchirapalli Local Centre, BHEL Main Office Road, Tiruchirapalli 620014 [☎: 0431-255 4285; Fax: 0431-2520383 / 2520775; e-mail: tiruchirapallilc@ieindia.org]

All India Workshop on "Design of Solar Photo Voltaic (PV) Power System for Rural Applications"

Kanchepuram, March 28-29, 2019

The Honorary Secretary, IEI, Kanchepuram Local Centre, Agni College of Technology - ACT, Old Mahabalipuram Road, Thalambur, Chennai 600130 [e-mail: kanchepuramlc@ieindia.org]

Electronics & Telecom. Engg. Division

All India Seminar on "Recent Innovation and Challenges in Electronics Circuits, Technologies and Its Applications (RICETA2019)"

Bareilly, February 15-16, 2019

The Honorary Secretary, IEI, Bareilly Local Centre, House No. 270, Camphor Estate, Rampur Road, Post - Clutterbuck Ganj (C. B. Ganj), Bareilly 243502 [e-mail: bareillylc@ieindia.org]

All India Seminar on "Knowledge Breaks in Environmental Health and Safety for Sustainable Progress of Nano-Industries"

Coimbatore, April 5-6, 2019

The Honorary Secretary, IEI, Coimbatore Local Centre, PSG College of Technology Campus, Peelamedu, Coimbatore 641004, [☎: 0422-2580733; e-mail: coimbatorelc@ieindia.org]



Thirty-fifth National Convention of Electronics & Telecommunication Engineers on **“Mechatronics: Bridge between Technologies”**
Pune, November 23-24, 2019

The Honorary Secretary, IEI, Pune Local Centre, Abhiyanta Bhavan, 1332, J M Road, Shivajinagar, Pune 411005, Maharashtra [☎: 020-25533376 / 25520239 / 25530150; e-mail: punelc@ieiindia.org]

Environmental Engineering Division

One Day Seminar on **“Sustainable Solid Waste Management for Smart Cities”**
Bhimavaram, February 02, 2019

The Honorary Secretary, IEI, Bhimavaram Local Centre, First Floor, General Emenities Building, SRKR Engineering College, PO Chinnaamiram, Dist West Godavari, Bhimavaram 534204 [☎: 08816-233522; e-mail: bhimavaramlc@ieiindia.org]

All India Seminar on **“Clean and Water and Sanitation”**

Hyderabad, March 22-23, 2019

The Honorary Secretary, IEI, Telangana State Centre, Visvesvaraya Bhavan, Khairatabad, Hyderabad 500004 [☎: 040-23314969; e-mail: telanganasc@ieiindia.org; website: ieitsc.org]

Thirty-fifth National Convention of Environmental Engineers on **“Green Technology for Clean & Green India”**

Bangalore, August 17-18, 2019

The Honorary Secretary, IEI, Karnataka State Centre, No. 3, Dr. B R Ambedkar Veedhi, Bangalore 560001 [☎: 080-22264698; Telefax: 080-22256191; e-mail: karnatakasc@ieiindia.org; www.ieiksc.org]

All India Seminar on **“Solid Waste Management: An Industrial Perspective”**

Bokaro Steel City, September 21-22, 2019

The Honorary Secretary, IEI, Bokaro Steel City Local Centre, Abhiyanta Bhawan, Sector V-A, Bokaro Steel City 827006 [☎: 06542-267227/288972; e-mail: bokarolc@ieiindia.org]

International Conference on **“Influx of Environmental Problems and Sustainable Living”**

Hyderabad, November 22-24, 2019

The Honorary Secretary, IEI, Telangana State Centre, Visvesvaraya Bhavan, Khairatabad, Hyderabad 500004 [☎: 040-23314969; e-mail: telanganasc@ieiindia.org; website: ieitsc.org]

Marine Engineering Division

All India Seminar on **“Development of Small and Medium Ports across the Coast, for harnessing the Logistics, Transport and Economy”**

Hyderabad, March 28-29, 2019

The Honorary Secretary, IEI, Telangana State Centre, Visvesvaraya Bhavan, Khairatabad, Hyderabad 500004 [☎: 040-23314969; e-mail: telanganasc@ieiindia.org; website: ieitsc.org]

Mechanical Engineering Division

One Day Seminar on **“Computational Fluid Dynamics using MATLAB”**

Bhimavaram, February 02, 2019

The Honorary Secretary, IEI, Bhimavaram Local Centre, First Floor, General Emenities Building, SRKR Engineering College, PO Chinnaamiram, Dist West Godavari, Bhimavaram 534204 [☎: 08816-233522; e-mail: bhimavaramlc@ieiindia.org]

All India Seminar on **“Materials for Energy Conversion and Storage”**

Madurai, February 05-06, 2019

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

One Day Workshop on **“Basics of Surface Modelling Using CATIAV5”**

Solapur, February 23, 2019

The Honorary Secretary, IEI, Solapur Local Centre, Vastu Vaibhav, 3 North Kasaba, 4th Floor, Near Laxmi Bank, Shivaji Chowk, Solapur 413001 [☎: 0217 2727707; e-mail: solapurlc@ieiindia.org]

All India Seminar on **“Advancements of Materials in Automobile Industry”**

Coimbatore, March 28-29, 2019

The Honorary Secretary, IEI, Coimbatore Local Centre, PSG College of Technology Campus, Peelamedu, Coimbatore 641004, Ph: 0422-2580733 [e-mail: coimbatorelc@ieiindia.org]

All India Workshop on **“Advanced Materials and their Machining”**

Mohali, April 09-10, 2019

The Honorary Secretary, IEI, Punjab & Chandigarh State Centre, IEI, Madhya Marg, Sector 19-A, Chandigarh 160019 [☎: (0172) 2775418; Fax: (0172) 2540133; e-mail: pcsc@ieiindia.org]

Thirty-fifth National Convention of Mechanical Engineers, on **“Trends and Developments in Automotive Industry”**

Hosur, September 13-14, 2019

The Honorary Secretary, IEI, Hosur Local Centre, No.69, Kamaraj Nagar, Kumudapall, Near Adhiyamaan College of Engineering, Tamilnadu, Hosur 635109 [e-mail: hosurlc@ieiindia.org]

Thirty-sixth National Convention of Mechanical Engineers, on **“Innovations in Thermal Science and Engineering”**

Agartala, September 05-06, 2020

The Honorary Secretary, IEI, Tripura State Centre, Pandit Nehru Complex, Near Tripura Housing Board, P. O. Kunjaban, PB No 139, Agartala 799 006 [☎: 0381-2304700; Fax: 0381-2304700; e-mail: tripurasc@ieiindia.org]

Mining Engineering Division

All India Workshop on **“Principles and Practices Involved in Effective Utilization of Nonconventional Gases: CBM, Shale gas and UCG”**

Durgapur, March 25-27, 2019

The Honorary Secretary, IEI, Durgapur Local Centre, Nehru Avenue, 'B' Zone, Durgapur 713205 [Telefax: 0343-2564770; e-mail: durgapurlc@ieiindia.org; web: ieidurgapurlc.org]

Metallurgical & Mater. Engineering Division

International Conference of Metallurgical & Materials Engineers on **“Synthesis, Characterization and Application of Nanomaterials (SCAN)”**

Kolkata, November 01-03, 2019

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

Production Engineering Division

All India Seminar on **“Green Manufacturing”**

Madurai February 01-02, 2019

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

Thirty-fifth National Convention of Production Engineers on **“Emerging Technologies in Power Sector Equipment Manufacturing”**

Tiruchirappalli, May 25-26, 2019

The Honorary Secretary, IEI, Tiruchirappalli Local Centre, BHEL Main Office Road, Tiruchirappalli 620014 [☎: 0431-2554285; Fax: 0431-2520383/2520775; e-mail: tiruchirappallilc@ieiindia.org]

Textile Engineering Division

All India Seminar on **“Diversity in Handlooms and Textiles and Global Trends in Fashion and Clothing”**

Hyderabad, February 08-09, 2019

The Honorary Secretary, IEI, Telangana State Centre, Visvesvaraya Bhavan, Khairatabad, Hyderabad 500004 [☎: 040-23314969; e-mail: telanganasc@ieiindia.org; website: ieitsc.org]

Interdisciplinary

One Day Seminar on **“Role of Engineers in Development of Technologies for a Better Quality of Human Life”**

Ranchi, March 09, 2019

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, Doranda, Ranchi 834002 [☎: (0651) 2491344; e-mail: jharkhandsc@ieiindia.org; website: www.iejsc.org]

All India Seminar on **“Impact of Recent Policies on Mineral Industries”**

Hyderabad, March 15-16, 2019

The Honorary Secretary, IEI, Telangana State Centre, Visvesvaraya Bhavan, Khairatabad, Hyderabad 500004 [☎: 040-23314969; e-mail: telanganasc@ieiindia.org; website: ieitsc.org]

All India Seminar on **“Cyber Law and Legal Status of Software Engineering and Digital Forensic”**

Berhampur, March 30-31, 2019

The Honorary Secretary, IEI, Berhampur Local Centre, O/o The Executive Engineer, Quality Control Division, Courtpetta, Dist Ganjam Berhampur 760004 [e-mail: berhampurlc@ieiindia.org]



The Institution of Engineers (India)

IEI YOUNG ENGINEERS AWARD 2019-20

Notification

The Institution of Engineers (India) is a multi-disciplinary professional body of engineers with 15 engineering disciplines and over 8,00,000 members in India and abroad. The Institution was established in 1920 and was incorporated by Royal Charter in 1935. It has been in the forefront of engineering profession addressing the socio engineering problems for progress of the country. IEI functions among professional engineers, academicians, research workers to update their professional knowledge through continuous professional development. With its large international linkages and a network of 123 Centres in India and Six Overseas Chapters, the Institution has built up wide reach and large infrastructure to meet its objectives of promoting engineering in all aspects.

With a view to promote the pursuit of excellence in the field of engineering, IEI has instituted 'IEI Young Engineers Award'. The Award consist of a Plaque and a Certificate. The purpose of the Award is to recognize outstanding achievements/contributions made by young engineers in engineering research, excellence in engineering technology development, technology transfer, etc. Any engineer citizen of India not older than 35 years of age as on March 31, 2019 is eligible for the Award. The IEI Young Engineers Award is presented to awardees for all the 15 Engineering Divisions of the IEI during the respective National Conventions. The awardees attending the National Convention will be provided with free accommodation & their traveling expenses (AC-3 Tier train fare by shortest route) will be reimbursed on production of original documents.

The Application Proforma may be downloaded from IEI website (<https://www.ieindia.org>). Soft copy of the filled-in application proforma should be forwarded to award@ieindia.org by March 31, 2019. Further, six copies of the duly filled application form, along with all supporting documents, endorsed by appropriate authority should be sent to the below mentioned address so as to reach us latest by April 10, 2019:

Director (Technical)

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

The envelope containing the application should be superscribed at the top as 'IEI Young Engineers Award 2019-2020' and name of the engineering division under which the applicant desires to be considered for the Award.

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BE A CORPORATE MEMBER OF IEI. FOR FURTHER DETAILS PLEASE FOLLOW THE LINK <https://www.ieindia.org/webui/iei-Memb.aspx#download>

Superannuation from IEI



Mr Subrata Banerjee, an employee of the Institution HQ will be superannuated from the services of IEI on January 31, 2019. He joined the Institution on May 1, 1983 and rendered his services to the Institution for a period of over 35 years.

IEI wishes Mr Subrata Banerjee and his family a happy and healthy life in future.

IVRS at IEI HQ

For General Enquiry,
please dial IVRS No. (033) 4015 5400
Contact for queries related to
Examination : exams@ieindia.org
Membership and change of address :
membership@ieindia.org

IEI NEWS

ISSN 0971-3352

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

President : **Mr T M Gunaraja**

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