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

Volume 67

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*IEI wishes its Members a Happy New Year*

## 32<sup>nd</sup> Indian Engineering Congress, Chennai

# Innovation in Engineering: Competitive Strategy Perspective

The 32<sup>nd</sup> Indian Engineering Congress of The Institution of Engineers (India) on the theme "Innovation in Engineering: Competitive Strategy Perspective", hosted by the Tamilnadu State Centre, was inaugurated by Mr M C Sampath, Hon'ble Minister of Industries, Government of Tamilnadu at Hotel Le Meridien, Chennai on December 21, 2017. In his inaugural address, Mr Sampath mentioned that 'Innovation in



**Mr M C Sampath, Hon'ble Minister of Industries, Government of Tamilnadu, inaugurating the Congress**

Engineering' is the biggest challenge in today's time. He felt that in the global innovation ecosystem, India is emerging as the innovation hub of the world. Mr Navinchandra B Vasoya, the then President, IEI, in his address, mentioned that recognizing the national problem



**A view of the dais during inaugural Session**

of unemployability and the need for training young engineers for suitable employment, The Institution of Engineers (India) is focussed to redesign its existing course, introducing new certificate courses to bridge the gap between fresh engineers skill set and industry demand. "As we are moving towards the Knowledge Learning Society, we must understand the relation between Engineering and Science, which are the key drivers of human development and are complimentary to each other", opined Mr Vasoya.

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## Engineers are Agents of Change – President of India

The Valedictory Session of the 32<sup>nd</sup> Indian Engineering Congress was graced by Hon'ble President of India, Mr Ram Nath Kovind and Mr Banwarilal Purohit, Hon'ble Governor of Tamilnadu, as the Chief Guest and Guest-of-Honour, respectively.



**Hon'ble President of India, Mr Ram Nath Kovind addressing the gathering during Valedictory Session of the Congress**

Hon'ble President of India in his address complimented the engineers for their nation building activities calling them the agents of change. He mentioned that from the earliest metal tools to the integrated circuit, from the 18th century Industrial Revolution to the 21st century Fourth Industrial Revolution – it is engineering that has spoken the language of the future. 'Today, in exploring the possibilities of Artificial Intelligence and the Internet of Things or in realising our aspirations for Make in India, once more it is to our engineers that we turn to', added Hon'ble President of India. The Hon'ble President also appreciated the role played by IEI in promoting the culture of R&D and the way IEI encourages and sponsors undergraduate engineering students for enhancement of their knowledge.



**Hon'ble President of India, Mr Ram Nath Kovind and Mr Sisir Kumer Banerjee, President, IEI**

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## Innovation in Engineering: Competitive Strategy Perspective

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Mr Rajiv Mittal, MD & CEO, Va Tech Wabong Limited, graced the occasion as the Guest-of-Honour. In his address, Mr Mittal praised the engineers for their nation building activities and discussed various aspects embracing the theme of the Congress. He also spoke about various issues, such as, fluctuation of oil prices, business around the world and Indian context, industry and employability, quality of engineering education, etc. Mr Mittal stressed the need to train engineers for creativity and innovation. He suggested engineers for creative product and innovative solutions.

Mr Sisir Kumar Banerjee, the then President-Elect, IEI, in his address mentioned that market-driven and globally networked industrial enterprises are fast becoming the emblems of a vibrant India. He felt that with a rapid development of economy during the last few decades after the advent of industrialization and globalization of economy and also the country being the second largest populous one, it has a huge internal potential.

Dr Marlene Kanga, President, World Federation of Engineering Organisations (WFEO), highlighted various activities of WFEO. She spoke about sustainable development goal and stressed on implementation of the same. Dr Kanga



also spoke about ICT and innovative technologies. She thanked IEI for the support to WFEO. Dr Kanga discussed in detail about the theme of the Congress.

On this occasion, Technical Volume of the Congress was brought out which was released by Mr M C Sampath, Hon'ble Minister of Industries, Government of Tamilnadu along with other dignitaries on the dais. 'Abhiyanta Bandhu', an Annual Technical Magazine published under the patronage of National Languages Promotional Committee (NLPC) of IEI along with Annual Technical Volumes of Environmental & Production Engineering Division Boards and Interdisciplinary Coordination Committee, IEI were also released on this occasion. Exhibition Stalls of many reputed organizations were also put up which was inaugurated by the Hon'ble Minister.

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; large number of engineers, technocrats, research scholars from reputed organizations, engineering students from various parts of the country and delegates from foreign countries. At the outset, Dr G Ranganath, Chairman, Organizing Committee and Chairman, Tamilnadu State Centre,



IEI, in his welcome address highlighted various activities of the Institution and elaborated the theme of the Congress. Maj Gen S Bhattacharya, VSM (Retd), Secretary & Director General of the Institution, proposed the vote of thanks.

The Inaugural Session was followed by the 'Glimpses of Engineering Personalities' where eminent engineer, Prof Ajoy Kumar Ray, Director, Indian Institute of Engineering Science and Technology, Shibpur 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. Two 'Visionary Talks' were also delivered by the experts, namely, Dr Ajeet Bajpai, Director General, National Critical Information Infrastructure Protection Centre (NCIIPC) and Dr S K Acharya, CMD, NLC India Limited. Various 'Prizes and Awards' for the papers published in the Journal of The Institution of Engineers (India) during the year 2016 were presented to the recipients by Mr Navinchandra B Vasoya, the then President, IEI.

Three Technical Sessions were conducted concurrently with the Congress where more than fifty papers embracing the theme of the Congress were presented and discussed which evoked keen interest amongst the participants.

An International Session was organised where presentations on WFEO – CIC (Committee on Information and Communication) and FEIAP – ICT (Information and Communication Technologies) were made. A unique event of this Congress was the 'Women Engineers Meet', where women engineers deliberated and discussed various issues and presented their views. 'IEI Alumni Meet' was also organized where 'IEI Alumni Awards' were presented.



**Mr Navinchandra B Vasoya handing over the Presidentship to Mr Sisir Kumar Banerjee**

The Ninety-eighth Annual General Meeting of the Institution was held on December 23, 2017 which was attended by large number of Corporate Members of the Institution. Mr Navinchandra B Vasoya presented the 'Best Centre Award' to Jharkhand State Centre and Hosur Local Centre of the Institution for their all-round performance during the year 2016-2017. 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 Sisir Kumar Banerjee took over charge from Mr Navinchandra B Vasoya as the President of the Institution for the Session 2017-2018 and delivered the Presidential Address. Mr Banerjee presented a Scroll-of-Honour to Mr Vasoya, Immediate Past President, in recognition of his selfless and devoted services rendered by him during his tenure.



Address by

**Mr Sisir Kumar Banerjee**

**President, IEI**

Text of the Presidential Address delivered by Mr Sisir Kumar Banerjee, President, IEI, during the 98<sup>th</sup> Annual General Meeting of the Institution held at Chennai on December 23, 2017.



It's a matter of great pleasure and honour to welcome you all in this 98<sup>th</sup> Annual General Meeting of The Institution of Engineers (India), hosted by the Tamilnadu State Centre at the heritage city of Chennai. I feel elated by the gracious presence of our esteemed Past Presidents, Council Members and Corporate Members. I feel humbled and privileged to stand before you as the President of The Institution of Engineers (India) which has completed 97 years of glorious journey and heading towards its centenary. I express my heartfelt

gratitude to the Council for the onerous responsibility that they have bestowed upon me to serve this great Institution as its President and through it to the profession and the Nation at large. I assure you that, with your support, guidance and participation, I shall make all-out efforts to uphold the high standards set by my illustrious predecessors and other engineers of eminence. I take this opportunity to thank my immediate predecessor Mr Navinchandra B Vasoya who has left for me a strong platform to start with and to develop it further.

The prestigious Indian Engineering Congress was first held in 1987 with the intention to bring together the engineering fraternity of the country as well as from the prominent parts of the globe to discuss challenging contemporary issues from an engineering perspective and evolve with the deserving solutions. This year, the 32<sup>nd</sup> Indian Engineering Congress is being hosted by Tamilnadu State Centre of the Institution at Chennai during December 21- 23, 2017 on the theme 'Innovation in Engineering: Competitive Strategy Perspective'. Engineering innovation is a philosophy that leverages the emergence of a new technology or combination of technologies that offer worthwhile benefits. Major innovations require new skills, levels of market understanding, leaps in new processing abilities, and systems throughout the organisation. With the advancement in innovation in Engineering and Technology, these fields have become more sophisticated and interdisciplinary in nature. In a dynamic business environment, constant innovation is essential to meet the evolving challenges.

In this connection, it is pertinent to mention that after three successive Five Year Plans, our planners realised the necessity of agricultural development in tandem with development in the industrial sector. As of today the necessity of all round agricultural development with the application of innovations in the domain of Science & Technology has become a paramount necessity. The dearth of adequate attention during successive plan activities made the Planners and Economists think about agricultural development through technological pursuit. Development of ground water and surface water resources are looked upon as complementary activities to establish planned irrigation facilities ensuring intensive cultivation programme for increased agricultural production.

I, therefore take the opportunity of placing before this learned body, that notwithstanding. The massive scale of development that have taken place in other areas of infrastructural development viz Railways, Highways, Aviation etc., there is much to be done for comprehensive and efficient ground water and surface water utilisation throughout the country. It is imperative to improve this area for meeting effectively the goal of making India self sufficient in the production of food grain for the entire population of the country.

It is hoped that our scientists and technologists shall be putting in their heads together to device ways and means with necessary input of knowledge in order that the shortfall in the area of efficient utilization of Ground Water and Surface Water resources could be successfully tackled and the challenges faced by our agricultural technologists could be met with vigour and enthusiasm gleefully.

A 'Developing India' can aspire to become 'Developed India' when the quality of life in rural India becomes comparable to the quality of life in the developed countries. For this to happen, technology has to be advanced to cater to the need of rural India. All round development may mean development in agriculture, economy, technology, industry, commerce, defence, optimal utilization of natural resources, education, health, culture, environment, quality of life, international relations, etc. At the same time, we need large-scale industrialization and it is essential to adopt technology to suit rural needs. For both the cases, increased interaction between academia and industry is essential. Engineers, from time immemorial, have demonstrated their capability for great technological feats that have transformed the world around us. As we move into the 21<sup>st</sup> century, our expectations have soared to new heights and we are looking for a cascade of engineering advancements that will enable us to face the challenges of accelerated nation building through economic upliftment and sustainable development. The biggest challenge today before the engineers is to see how best development can take place with the least carbon footprint on the environment, creating environment-friendly, ecologically appropriate, energy saving developmental options - sustainable not only for the present generation but also sustainable for the emerging generations down the line.

It is worthwhile to state that the necessity of Skill Development enterprise in both public and private sectors, to meet the huge deficit in the requirement of technically skilled manpower, for pulling on the mass scale technological growth for the country to make itself reliant in all the major areas of technological and industrial development. It is heartening to note that Government Of India has given adequate attention to planning and organising large scale infrastructure to help people to be trained in different spheres of technical jobs and applications, so as to fulfil the requirement of technically skilled manpower for the development of the country and to reduce the colossal scale of unemployment in the country. Being the largest professional body of Engineers in the country, IEI, has taken up a commensurate role for meeting the country's requirements, as far as practicable.

The colonial structure of Public Administration is still being maintained even after 70 years of Independence since 1947. The Government of India constituted an Administrative Reforms Commission (ARC) which submitted its report to the Parliament in 1968-69. The Government, by and large, subsequently accepted the recommendations of the ARC but as far as the implementation is concerned, much remains yet to be done. Out of the total expenditure of any Plan, it can be mentioned that 70% of it is handled by the engineers and technologists. As such it is of paramount necessity for motivating them by way of according status commensurate to the responsibilities handled by them. Unless the Government both at Centre and State level, takes adequate steps to give them their due share in the Administrative set up of the country, the tempo of developmental works is likely to be affected. As such I would like to appeal to the Government both at Centre and the States to act wisely and quickly to implement the recommendations of the Administrative Reforms Commission (ARC) which still remain untouched.

The Institution of Engineers (India) is marching towards its 100 years of glorious contribution to national development. IEI was established to fulfill the need for trained technical manpower with the ability to contribute in national development. The country is now passing through a stage where rapid economic development through use of latest technologies and skilled manpower is being promoted by the government. Here is an opportunity for IEI to consolidate on its historical legacy and build further to contribute significantly to this cause. It is a great pleasure to inform you that we will celebrate Centenary Year from 13<sup>th</sup> September 2019 to 13<sup>th</sup> September 2020. To effectively mark the significant milestone, we propose to create a committee consisting of high-level experts from within the Institution





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and outside the Institution, for laying out the activity plan, such that the Centenary event of the IEI creates a long-term impact on the technological profile of the country. Some of these initiatives could be in the form of publication of special volumes, through renowned publishers in the areas of successful technological achievements by Indian Engineering Fraternity; helping in development of research in technological areas, by arranging lectures by international experts in chosen fields; by installing progressive series of conferences on subjects that deserve rapid systematic development. Each State and Local Centre of IEI may develop its own programme schedule, with their regional/state/local focus based on broad framework developed by IEI, with the primary objective of showcasing IEI image. I invite suggestions from all stake holders to make our Centenary truly a hallmark event for the engineering fraternity.

It is needless to reiterate that IEI is the first and oldest Accreditation Body in the country for engineering programmes and has continued the task of providing quality benchmarking in engineering education. It is interesting to mention that recognition of B.Tech degrees in Indian Institute of Technology Kharagpur, was granted by IEI in 1956. Indian Standards Institute (ISI), now designated as Bureau of Indian Standards (BIS), is the natural successor of the Institution for standardization movement in the country and is the national standards body of India.

The Institution of Engineers (India) also provides thrust on Research & Development (R&D) activities by its members associated with different engineering institutes and also by the students of those institutes by providing appropriate financial and infrastructural support. The present approach of funding R&D projects at undergraduate and post graduate levels is basically similar to the national programme on awareness and enhancing mindset of young engineers for R&D. A Compendium reflecting IEI funded research, carried out in the frontier areas of technology, is being brought out, over the last six consecutive years and same have been widely appreciated and acknowledged by various industries and government/non-government organizations. The sustained effort of promoting of R&D in this manner has resulted in recognition of IEI by the Department of Industrial and Scientific Research, Govt. of India as a Scientific and Industrial Research Organization (SIRO). I take this opportunity to share with you that the five Journals of The Institution of Engineers (India) which are published through Springer, have taken IEI to new heights and IEI has attained global recognition through these prestigious publications.

The Institution is a pioneer in the field of specially-designed engineering education in the country. During 1928, when the infrastructure of Indian education was inadequate, the Institution in its wisdom, coupled with a visionary view, started conducting Sections A and B Examinations in engineering disciplines with a view to providing and opening for education of personnel engaged in engineering works, who were not fortunate enough to have collegiate education. Passing of Section A & B Examinations is recognized as requisite qualifications for engineering services by the Union Public Service Commission as well as by the Ministry of Human Resource Development, Govt of India for higher education and equivalent to B.Tech programme. With the passage of time, the strength has increased manifold. The candidates who clear this examination have a high acceptance by industry and academic institutions both in India and abroad due to their practical skills coupled with engineering knowledge. This course has benefitted especially those who are already in the profession, as technicians and diploma holders.

Members are the strength and source of inspiration for us. Therefore, my focus will be on regular communication with them, organising more technical activities to ensure their participation and providing them additional benefits aimed at enhancing their professional knowledge. My aim will be to enroll a larger number of members from all disciplines of engineering science and from the technical student community in particular.

The focus of The Institution of Engineers (India), since its inception, has been "to promote and advance the science, practice and business of Engineering in all its branches in India". The underlying implication may be interpreted as an Institution which is strategically equipped for promotion & furtherance of Science and Technology in India and which would emerge as a key player in fostering innovation aimed at improving the prevailing socio-economic conditions. In furtherance of these objectives, the Continuous Professional Development paradigm and formation of a knowledge-learning society to share experiences and expertise, are of paramount importance to our Institution.

To provide enriched version of learning opportunities for our members, we are launching our Improved Learning Management System using modern technologies with the help of a top tier IT Company. This will help the Senior Technician members

to avail of a systematic method of learning and pre-assessment at different stages before the final appearance for the examinations. We hope that all of them will avail and be benefitted from this facility which is a unique kind of learning system for Continuous Professional Development (CPD). During my interaction with AMIE graduates, it was felt that an on-line employment management system is essential to assist them to search for better job opportunities. This will also be made accessible to prospective employers, who can choose an engineer with required skill-set from this searchable database.

Technicians' Chapters of IEI were established primarily to conduct technical activities for Senior Technician and Technician Members. The Technicians' Chapter is intended to provide a forum for mutual professional sharing of ideas amongst the members and thus promote their professional and intellectual acumen and inculcate a feeling of 'belongingness' to the fraternity. These need to be further energized with the objective of providing maximum benefits to those associated with these Chapters. We propose to do some collective thinking to further enhance the capabilities of all of our units like the Engineering Staff College of India, State/Local Centres of the Institution and at the same time initiate new activities that will benefit our members and students in a synergistic manner.

In a landmark achievement, The Institution of Engineers (India) obtained the full membership of the International Professional Engineers Agreement (IPEA) for India at the Bi-annual International Engineers Meetings held at Kyoto, Japan on 17 June 2009. The International Professional Engineers Agreement (IPEA) is an International Recognition Agreement for Professional Engineers between the engineering organizations in the member jurisdictions, which creates the framework for the establishment of an international standard of competence for professional engineering. By virtue of being a full member of the International Professional Engineers Agreement, The Institution of Engineers (India) represents India and has been empowered to establish and maintain the India section of the International Professional Engineers (IntPE) Register. The International Professional Engineers (IntPE) registered with IEI, may receive credit when seeking registration or license in the jurisdiction of another member, i.e this will facilitate an engineer in mobility across the member countries. IEI, has a robust and stringent procedure complying with the requirement of IPEA for registration as International Professional Engineers.

The Institution of Engineers (India) is a constituent of World Federation of Engineering Organisations (WFEO), Federation of Engineering Institutions of Asia and the Pacific (FEIAP) and Federation of Engineering Institutions of South and Central Asia (FEISCA). I would like to highlight the fact that The Institution of Engineers (India) is actively engaged in conducting various activities in line of the objectives of these global and regional engineering bodies and our efforts have been widely appreciated.

The biggest challenge today before engineers is to see how best development can take place with the least impact on the environment creating environment friendly, ecologically appropriate, energy saving and sustainable developmental options - sustainable not only for the present generation but also sustainable to the emerging generations down the line. The clarion call of our Prime Minister on "Swachh Bharat", "Make-in-India", "Smart Cities", "Digital India", "Bharatmala Project", "Sagarmala Project" and other programmes, provide us the much needed opportunity to develop indigenous environment-friendly technology and engineering practices. Engineers form the backbone of technology and infrastructure development of the country and it is therefore incumbent on this fraternity to rise to the occasion in contributing their professional skill related to such programme of the Government / Public Sector. It is my earnest request to all members to come forward to fulfill the goals of the Nation and share your valuable experience and thought which will be carried forward by us. Therefore, our interactions with National and International bodies, Government departments, R&D organizations, Industries, etc. have to be strengthened through planning and conducting regular collaborative technical activities of national importance. Simultaneously, our collective efforts in this direction would enable larger recognition of engineers, which is the need of the hour.

With these few words, I invite you all to join, assist and support us in our endeavours to deliver our services towards the nation so that IEI becomes a prime mover in the field of science and technology.

I express my gratitude for your august presence here and extend my sincere thanks once again for giving me a patient hearing.

Wishing you a Happy New Year 2018.



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### Engineers are Agents of Change – President of India

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The Guest-of-Honour, Mr Banwarilal Purohit, Hon'ble Governor of Tamilnadu, appreciated the theme chosen for the Congress and highlighted various activities of the engineers. He stressed on innovation and creativity, developing entrepreneurship, automation, combating climate change, etc. He congratulated IEI for opening large number of Student's Chapter in Tamilnadu. Mr Purohit mentioned that outcome of the Congress will enlighten us and generate awareness about the responsibility of the engineers in promoting engineering innovation and accelerating growth of the nation in all sectors in a sustainable manner.

Mr Sisir Kumar Banerjee, President, IEI, in his address, thanked the Hon'ble President of India for his gracious presence at the Valedictory Function of the Congress. He mentioned that the objective of the Congress is to enlighten the technical fraternity about the recent developments taking place in various fields of engineering and thereby enabling them to face future challenges. He informed the audience that IEI is continually engaged with policy makers to provide valuable engineering inputs which have been at the core of many large developmental initiatives of the country.

Mr Navinchandra B Vasoya, Immediate Past President, IEI, stated that through this Congress and many related activities, our efforts are



**Hon'ble President of India, Mr Ram Nath Kovind receiving memento from Mr Navinchandra B Vasoya, Immediate Past President, IEI**

constantly focused on encouraging the engineers to contribute to the pool of knowledge in science and engineering. 'I sincerely believe that IEI, the largest multidisciplinary professional body in the country will continue to contribute to the advancement of science and engineering and will provide a global platform for engineers for sharing and rebuilding ideas for socio-technical advancement of the country', he added.

At the outset, Dr G Ranganath, Chairman, Organizing Committee and Chairman, Tamilnadu State Centre of the Institution, welcomed the



**Hon'ble President of India, Mr Ram Nath Kovind delivering his address**



**Mr Banwarilal Purohit, Hon'ble Governor of Tamilnadu receiving memento from Mr Sisir Kumar Banerjee, President, IEI**

august gathering. He also summarized the proceedings of the Congress. He mentioned that the main takeaway of the Congress is formulation of engineering & technological issues and strategies for the success of 'Make in India' mission.

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

### The 60<sup>th</sup> Sir Mokshagundam Visvesvaraya Memorial Lecture



Prof B Ramamurthy

Sir Mokshagundam Visvesvaraya Memorial Lecture was instituted in 1957-58 in the memory of Late Sir M Visvesvaraya, the doyen of Indian engineering. The 60<sup>th</sup> Sir M Visvesvaraya Memorial Lecture was delivered by Prof Bhaskar Ramamurthy, Director, IIT Madras, on the topic 'Glimpses of Healthcare Technology Research @ IIT Madras'. He discussed on healthcare related research where he spoke about technology for healthcare (surgery, diagnostics, clinical examination & experimental training), cancer biology, tissue bank, brain and neurological disease, drug-related research, etc. Prof Ramamurthy mentioned that for healthcare technology research, involvement of various academic departments is necessary. He mentioned that for healthcare technology innovation, the challenge in the Indian context is that it requires an ecosystem of researchers, engineers, doctors, hospitals, vendors, industries, public health-bodies and government agencies. Prof Ramamurthy discussed various aspects, such as, Healthcare technology innovation centre, IITM Mobile Eye Surgical Unit, Image-free technology for arterial dynamics evaluation, Cuff-less blood pressure, Lab on Chip (LOC) for blood-plasma separation, LOC for dengue detection, etc.

### The 52<sup>nd</sup> 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. The 52<sup>nd</sup> Nidhu Bhushan Memorial Lecture was delivered by Mr K Pandia Rajan, Minister of Tamil Development, Culture and Archaeology, Government of Tamilnadu, on the topic 'Convergence of Engineering & Management'. He mentioned that bedrock of competitive strategy of engineers is to be part of management. According to him, creation of unipolar world started with development of TCP-IP and then IoT. He mentioned that nature of education is changing with the evolution of internet. Mr Rajan informed that outsources & offshore have generated huge job facilities in India and created a new industry.



Mr K Pandia Rajan

### The 43<sup>rd</sup> 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 43<sup>rd</sup> Bhaikaka Memorial Lecture was delivered by Mr A Chandrasekhar, AGM, IREDA on behalf of Mr Kuljit Singh Popli, CMD, IREDA, on the topic 'Renewable Energy in India and its Growth'. He mentioned that the country is shifting towards cleaner power generation at an affordable price. He stated that thermal power is still the largest produce but renewable resources of energy are now gradually replacing the conventional power as coal and oil are the fast depleting natural resources. He also informed that the government is implementing Green Energy Transmission Corridor to integrate inter-state renewable energy generation systems.

### The 39<sup>th</sup> Sir Rajendra Nath Mookerjee Memorial Lecture



Mr Lakshmi Narayan

Sir R N Mookerjee Memorial Lecture was instituted in the year 1980 in the memory of Late Sir Rajendra Nath Mookerjee, the first President of the Institution with an Indian origin. The 39<sup>th</sup> Sir R N Mookerjee Memorial Lecture was delivered by Mr Lakshmi Narayan, Former Vice Chairman, Cognizant Technology Solution on the topic 'Knowledge Management in Indian Industry'. Prof Narayan in his address mentioned that investing in traditional industries may not be a good idea, rather start an innovative business. He informed that IT industries started by adopting the innovation in western countries are now the forerunner in the world, however, in space and nuclear technology, India is moving ahead of time. Mr Narayan mentioned that in terms of global share, 4 to 5 industries, namely, Space Research & Aviation Industry, Information Technology, ICT & Electronic Manufacturing, Renewable Energy and Medical Industries, are growing faster since they are investing greatest share of their expenditure in R&D. He suggested that companies have to harvest the skill of this country to establish manufacturing industries.

### The 30<sup>th</sup> 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 a Past President of the Institution. The 30<sup>th</sup> Dr A N Khosla Memorial Lecture was delivered by Dr Devendra Gill, Chairman, Delhi State Centre, IEI on behalf of Dr Mangu Singh, Managing Director, DMRC, on the topic 'Metro as Sustainable Urban Transport'. Dr Gill mentioned that due to pollution in cities and increasing urbanisation, metro is one of the sustainable solutions. He mentioned metro as efficient mode of transport in terms of energy consumption. He discussed various advantages of metro, such as, improved aerodynamic design of reduced air resistance, reduction in weight, increasing regeneration, use of 67% power for improved acceleration and deceleration. Dr Gill also highlighted some of the salient features of metro, like, energy efficient traction & power supply system, green building features of receiving sub-station, introduction of rainwater harvesting plant in sub-station, rooftop solar power system in sub-station, sustainable built environment, etc.

### The 26<sup>th</sup> 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 a Past President of the Institution. The 26<sup>th</sup> Dr Amitabha Bhattacharyya Memorial Lecture was delivered by Dr S Rajamani, Chairman, Asian International Union of Environment (AIUE) Commission on the topic 'Environmental Challenges and Technological Development in Water and Industrial Wastewater Treatment – Indian & Asian Scenario'. Dr Rajamani, in his address, discussed various aspects, such as, Treatment Technologies for Salinity and TDS Management, RO System Linked with Membrane Bio-reactor (MBR), Residual Saline Stream Management, Marine Disposal of Treated Saline Streams, Recent Technological Developments in Asian Countries, etc. He informed that the membrane system has been widely adopted for different applications for water recovery from domestic and industrial wastewater. 'Innovative industrial processes which will greatly reduce the water and chemical usage and minimize solid waste generation are needed together with overall environmental planning and management', opined Dr Rajamani.



Dr S Rajamani



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### The 7<sup>th</sup> Prof C S Jha Memorial Lecture



Dr K Sivan

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 7<sup>th</sup> Prof C S Jha Memorial Lecture was delivered by Dr K Sivan, Director, Vikram Sarabhai Space Centre on the topic 'ISRO's Vision, Strategy and Roadmap'. Dr Sivan, in his address, mentioned that some engineers like Vikram Sarabhai have created ecosystem to enable other engineers to harness benefit to the society. He discussed in detail about the genesis of the Rocketry in India. He mentioned the objective of the Indian Space Programme is to provide space based technologies for the benefit of the society. Dr Sivan stated that PSLV-C37 was launched from the First Launch Pad of Satish Dhawan Space Centre in Sriharikota on 15 February 2017 and it was the 39<sup>th</sup> flight of the PSLV. It carried a total of 104 satellites including the primary payload Cartosat-2D. He informed that total 42 satellites of Indian origin are now orbiting the earth.

### The 3<sup>rd</sup> Dr K L Rao Memorial Lecture



Mr V Ranganathan

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 a Past President of IEI. The 3<sup>rd</sup> Dr K L Rao Memorial Lecture was delivered by Mr V Ranganathan, Programme Director, Capacity Building, ISRO & Deputy Director, Solid Propellant Plant, SDSC SHAR Sriharikota, on the topic 'India in Space'. While speaking on Development of New Launch Vehicles Technology, he mentioned that Reusable Launch Vehicle-Technology Demonstrator (RLV-TD) is one of the most technologically challenging endeavours of ISRO towards developing essential technologies for a fully reusable launch vehicle to enable low cost access. In this respect, he spoke about Scramjet Engine – TD, Crew Module Atmospheric Re-entry Experiment (CARE), Satellite Application, Satellite Communication, Disaster Management Support, Satellite Navigation, etc. Mr Ranganathan also discussed in detail about Chandrayaan-1, Mars Orbiter Mission (MOM), Space Science & Exploration, AstroSat. He highlighted some of the ISRO's future missions, such as, Chandrayaan-2, Aditya – L1 First Indian mission to study the Sun, Space Port of India – Satish Dhawan Space Centre SHAR.

### Eminent Engineering Personality Felicitated during the Congress



**Prof Ajoy Kumar Ray**

Director

Indian Institute of Engineering Science and Technology (IIST), Shibpur

### Release of Annual Technical Volume



Environmental Engineering Division Board



Production Engineering Division Board



Interdisciplinary Coordination Committee



Release of Abhiyanta Bandhu

## Recipients of IEI Industry Excellence Award 2017

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 32<sup>nd</sup> Indian Engineering Congress.

### Manufacturing & Processing

- ❑ NLC India Limited
- ❑ Hindustan Aeronautics Ltd.
- ❑ Goa Shipyard Ltd.
- ❑ Ramkrishna Forgings Limited
- ❑ Pennar Engineered Building Systems Ltd.
- ❑ Lanco Tanjore Power Co. Ltd.
- ❑ Rajasthan Electronics & Instruments Ltd.

### Engineering Services & Consultancy

- ❑ NBCC (India) Limited
- ❑ MECON Limited
- ❑ Development Environenergy Services Ltd.

## Recipients of Certificate of Commendation

### Manufacturing & Processing

- ❑ J K Tyre & Industries Ltd. Chennai Tyre Plant
- ❑ Hindustan Zinc Ltd.



## Visionary Talk

During the 32<sup>nd</sup> Indian Engineering Congress, 'Visionary Talks' on contemporary issues were delivered by Dr Ajeet Bajpai and Dr S K Acharya



**Dr Ajeet Bajpai**  
Director General, National Critical Information  
Infrastructure Protection Centre (NCIIPC)



**Dr S K Acharya**  
CMD, NLC India Limited



## 32<sup>nd</sup> Indian Engineering Congress, Chennai

# Presentation of IEI Industry Excellence Award 2017



1. NLC India Limited; 2. Hindustan Aeronautics Ltd. 3. Goa Shipyard Ltd.; 4. Ramkrishna Forgings Limited; 5. Pennar Engineered Building Systems Ltd.; 6. Lanco Tanjore Power Co. Ltd.; 7. Rajasthan Electronics & Instruments Ltd.; 8. NBCC (India) Limited; 9. MECON Limited; 10. Development Environenergy Services Ltd.

## Presentation of Certificate of Commendation



1. J K Tyre & Industries Ltd. Chennai Tyre Plant; 2. Hindustan Zinc Ltd.





## 32<sup>nd</sup> Indian Engineering Congress, Chennai

# IEI's Best Centre Award

The **Jharkhand State Centre** and **Hosur Local Centre** of the Institution have been adjudged the 'Best Centres' for their all-round performance during the year 2016-2017. The awards, comprising trophies and the certificates along with cash awards were given away to the respective Centres at the 98th Annual General Meeting of the Institution held at Chennai on December 23, 2017.



**Jharkhand State Centre**



**Hosur Local Centre**

During 32nd Indian Engineering Congress, held at Chennai during December 21-23, 2017, the **Best Centre Award for Technical Activities** was presented to Odisha State Centre from Group A, Jharkhand State Centre and Durgapur Local Centre from Group B, Tripura State Centre and Hosur Local Centre from Group C and Gwalior Local Centre from Group D.



**Odisha State Centre**



**Jharkhand State Centre**



**Durgapur Local Centre**



**Tripura State Centre**



**Hosur Local Centre**



## NDRF Design Awards 2017

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 32<sup>nd</sup> Indian Engineering Congress held at Chennai, following Design Awards for the year 2017 were presented.

### National Design Award



**Dr G Satheesh Reddy**

Distinguished Scientist & Director General, Missiles and Strategic [DG-MSS] & Scientific Adviser to Raksha Mantri [SA to RM] O/o G[MSS], Hyderabad

### Environmental Engineering Design Award



**Dr S Venkata Mohan**

Principal Scientist, Bioengineering and Environmental Sciences Lab, EEEF Department CSIR- Indian Institute of Chemical Technology [CSIR-IICT], Hyderabad

### Mechanical Engineering Design Award



**Dr P Muthukumar**

Professor  
Department of Mechanical Engineering  
Indian Institute of Technology Guwahati

### Mining Engineering Design Award



**Dr Karra Ram Chandar**

Assistant Professor  
Department of Mining Engineering  
NIT Karnataka Surathkal

### Prestressed Concrete Design Award



**Mr Partha Pratim Roy**

Senior Vice President  
Adapt International Pvt Ltd  
Kolkata

## Safety and Quality Award 2017

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 2017, **Mr Prabhu Narayan Singh**, Head Safety (Mfg & Customer Services – India), FLSmith Private Limited, Gurgaon received the Safety Award and **Mr Ravi Kapoor**, Chief Engineer, Delhi Metro Rail Corporation, New Delhi received the Quality Award.



Mr Prabhu Narayan Singh receiving the Safety Award

### H Nandy Memorial 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 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 2016, Mr Ashok Kumar was selected for the award.

## 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 2016 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.

### Corps of Engineers Prize

Obla Ramanandam Nandagopan, Santharam RanjithkumarChirayil and Gopalakrishnnanair Nandakumar for their paper titled '*Shock Analysis of Water Backed Perforated Plate Subjected to Underwater Explosion*', *Journal of The Institution of Engineers (India)*: Series C, Issue 3, Volume 97, 2016.



O R Nandagopan

### Sir Rajendra Nath Mookerjee Memorial Prize

Chellapilla V K N S N Moorthy and Vadapalli Srinivas for their paper titled '*Corrosion and Heat Transfer Characteristics of Water Dispersed with Carboxylate Additives and Multi Walled Carbon Nano Tubes*', *Journal of The Institution of Engineers (India)*: Series C, Issue 4, Volume 97, 2016.



Ch V K N S N Moorthy

### Railway Board's 1st Prize



A Gangopadhyay

Avijit Gangopadhyay and Aparna Dey Ghosh for their paper titled '*Seismic Retrofitting of an Existing Steel Railway Bridge by Fluid Viscous Dampers*', *Journal of The Institution of Engineers (India)*: Series A, Issue 3, Volume 97, 2016.



K Usha

K Usha and K Jeya Kumar for their paper titled '*Performance Analysis of New Binary User Codes for DS-CDMA Communication*', *Journal of The Institution of Engineers (India)*: Series B, Issue 1, Volume 97, 2016.

### E P Nicolaides Prize

Paresh V Patel, Vishnu H Jariwala and Sharadkumar P Purohit for their paper titled '*Torsional Strengthening of RC Beams Using GFRP Composites*', *Journal of The Institution of Engineers (India)*: Series A, Issue 3, Volume 97, 2016.



P V Patel

### Nawab Zain Yar Jung Bahadur Memorial Prize

Malabika Biswas Roy, Pankaj Kumar Roy, Nihar Ranjan Samal and Asis Mazumdar for their paper titled '*A Comparative Study of Labour Participation in Three Wetland Regions of West Bengal, India*', *Journal of The Institution of Engineers (India)*: Series A, Issue 2, Volume 97, 2016.



M B Roy

### Corps of Electrical and Mechanical Engineers' Prize



S Vijayalekshmy

S Vijayalekshmy, G R Bindu and S Rama Iyer for their paper titled '*Performance Improvement of Partially Shaded Photovoltaic Arrays under Moving Shadow Conditions through Shade Dispersion*', *Journal of The Institution of Engineers (India)*: Series B, Issue 4, Volume 97, 2016.



S K Reddy

Sandi Kumar Reddy and Vedala Rama Sastry for their paper titled '*Stress Distribution on Blasting Gallery Barrier Pillar due to Goaf Formation During Extraction*', *Journal of The Institution of Engineers (India)*: Series D Issue 2, Volume 97, 2016.

### Union Ministry of Water Resources – Department of Irrigation Prize

Sirajul Islam and Bipul Talukdar for their paper titled '*A Linked Simulation–Optimization (LSO) Model for Conjunctive Irrigation Management using Clonal Selection Algorithm*', *Journal of The Institution of Engineers (India)*: Series A, Issue 3, Volume 97, 2016.



Sirajul Islam

### Sir Ganga Ram Memorial Prize

Sudev Das and Swapan Bhaumik for their paper titled '*The Effect of Coating Thickness and Roughness of Nucleate Pool Boiling Heat Transfer on Nanoparticle Coated Surface*', *Journal of The Institution of Engineers (India)*: Series E, Issue 1, Volume 97, 2016.



S Das

### Sir Arthur Cotton Memorial Prize



H R Kumavat

Hemraj Ramdas Kumavat for his paper titled '*An Experimental Investigation of Mechanical Properties in Clay Brick Masonry by Partial Replacement of Fine Aggregate with Clay Brick Waste*', *Journal of The Institution of Engineers (India)*: Series A, Issue 3, Volume 97, 2016.



P Bansal

Pikesh Bansal, Ajit Kumar Chattopadhyay and Vishnu Prakash Agrawal for their paper titled '*Steady State Performance Characteristics of Micropolar Lubricated Hydrodynamic Journal Bearings with Flexible Liner*', *Journal of The Institution of Engineers (India)*: Series C, Issue 2, Volume 97, 2016.

### Dr Jai Krishna Prize

A Manchalwar and S V Bakre for their paper titled '*Performance of RC Structures Equipped with Steel and Aluminium X-Plate Dampers*', *Journal of The Institution of Engineers (India)*: Series A, Issue 4, Volume 97, 2016.



A Manchalwar

### Dr Triguna Charan Sen Prize

N C Ray, A Mukhopadhyay and V K Midha for their paper titled '*Response of Slub Characteristics on Tensile Properties of Injected Slub Yarn*', *Journal of The Institution of Engineers (India)*: Series E, Issue 1, Volume 97, 2016.



N C Ray



## 32<sup>nd</sup> Indian Engineering Congress, Chennai

### Brij Mohan Lal Memorial Prize

P Kamatchi, K Rama Raju, K Ravisankar and Nagesh R Iyer for their paper titled '*Design of Visco-Elastic Dampers for RC Frame for Site-Specific Earthquake*', *Journal of The Institution of Engineers (India)*: Series A, Issue 4, Volume 97, 2016.



P Kamatchi

### Computer Engineering Division Prize

Ch. Rupa for her paper titled '*A Novel Approach in Security Using Gyration Slab with Watermarking Technique*', *Journal of The Institution of Engineers (India)*: Series B, Issue 3, Volume 97, 2016.



Ch. Rupa

### Prof R C Singh Prize



R K Singh

R K Singh, N C Gupta and B K Guha for their paper titled '*Fly Ash Disposal in Ash Ponds: A Threat to Ground Water Contamination*', *Journal of The Institution of Engineers (India)*: Series A, Issue 3, Volume 97, 2016.

### Marine Engineering Division Prize



K Venkata Subbaiah

Kambagowni Venkata Subbaiah, Koneru Yeshwanth Sai and Challa Suresh for their paper titled '*QFD-ANP Approach for the Conceptual Design of Research Vessels: A Case Study*', *Journal of The Institution of Engineers (India)*: Series C, Issue 4, Volume 97, 2016.

### Metallurgical and Materials Engineering Division Prize

Satendra Kumar, Mrigendra Singhai, Rahul Desai, Srimanta Sam and Pradip Kumar Patra for their paper titled '*Development of Advanced High Strength Steel for Improved Vehicle Safety, Fuel Efficiency and CO2 Emission*', *Journal of The Institution of Engineers (India)*: Series D, Issue 2, Volume 97, 2016.



S Kumar

### Tata Rao Prize

Ashwani Kumar Sharma, Ram Kumar Mittapalli and Yash Pal for their paper titled '*FACTS Devices Cost Recovery During Congestion Management in Deregulated Electricity Markets*', *Journal of The Institution of Engineers (India)*: Series B, Issue 3, Volume 97, 2016.



A K Sharma

### Production Engineering Division Prize

Nilrudra Mandal, Biswanath Doloi and Biswanath Mondal for their paper titled '*Surface Roughness Prediction Model using Zirconia Toughened Alumina [ZTA] Turning Inserts: Taguchi Method and Regression Analysis*', *Journal of The Institution of Engineers (India)*: Series C, Issue 1, Volume 97, 2016.



N Mandal

### Rekha Nandi and Bhupesh Nandi Prize



P V S Giri Babu

P V S Giri Babu and G Swaminathan for their paper titled '*Comparative Study on Synergetic Degradation of a Reactive Dye using Different Types of Fly Ash in Combined Adsorption and Photocatalysis*', *Journal of The Institution of Engineers (India)*: Series A, Issue 3, Volume 97, 2016.

### The President of India's Prize

Syed Khaleelullah, Utsav Bhardwaj and Rajkumar Sureshchandra Pantfor their paper titled '*Design, Fabrication and Testing of Mooring Masts for Remotely Controlled Indoor and Outdoor Airships*', *Journal of The Institution of Engineers (India)*: Series C, Issue 2, Volume 97, 2016.

### The Institution Prizes (2 Nos.)

Pabitra Rajbongshi and Sonika Thongram for their paper titled '*An Approach for Nonlinear Fatigue Damage Evaluation in Asphalt Pavements*', *Journal of The Institution of Engineers (India)*: Series A Issue 3, Volume 97, 2016.

Debasish Chatterjee for his paper titled '*A Novel Tundish for Single Strand Slab Casting*', *Journal of The Institution of Engineers (India)*: Series D, Issue 2, Volume 97, 2016.

### K F Antia Memorial Prize

Shakir Ali for his paper titled '*Estimation of Time Variant Water Availability and Irrigation Potential of Small Ponds in a Semi-arid Region of Rajasthan, India*', *Journal of The Institution of Engineers (India)*: Series A, Issue 1, Volume 97, 2016.

### The Institution Prize [Donated by Col G N Bajpai]

Kavithaa Thirumalai Subramanian, Natchimuthu Balashanmugam and Panaghra Veeraiah Shashi Kumar for their paper titled '*Nanometric Finishing on Biomedical Implants by Abrasive Flow Finishing*', *Journal of The Institution of Engineers (India)*: Series C, Issue 1, Volume 97, 2016.

### Railway Board's 2nd Prize

S S Murthy, Bhim Singh and Vuddanti Sandeep for their paper titled '*Experience in Developing a Single-Phase Two Winding 5 kW Self-excited Induction Generator for Off-Grid Renewable Energy Based Power Generation*', *Journal of The Institution of Engineers (India)*: Series B, Issue 2, Volume 97, 2016.

### Suchit Kumar Ghosh Memorial Prize

P Ramachandra Reddy Kovvuri, Anil Sawhney, Ritu Ahuja and Aiswarya Sreekumar for their paper titled '*Efficient Project Delivery Using Lean Principles – An Indian Case Study*', *Journal of The Institution of Engineers (India)*: Series A, Issue 1, Volume 97, 2016.



P R R Kovvuri

### Aerospace Engineering Division Prize



K Vijayakumar

Kolandapaiyan Vijayakumar, Uttam Chandrasekhar and Nagaraj Chandrashekhar for their paper titled '*Aerodynamic Analysis of Flexible Flapping Wing Micro Aerial Vehicle using Quasi-Steady Approach*', *Journal of The Institution of Engineers (India)*: Series C, Issue 4, Volume 97, 2016.

### Agricultural Engineering Division Prize

Vivek Kumar, H K Sharma and K Singh for their paper titled '*Mathematical Modeling of Thin Layer Microwave Drying of Taro Slices*', *Journal of The Institution of Engineers (India)*: Series A Issue 1, Volume 97, 2016.



V Kumar

### Architectural Engineering Division Prize



S Ghosh

Sukanya Ghosh, Souvanic Roy and Manas Kumar Sanyal for their paper titled '*Soft System Methodology as a Tool to Understand Issues of Governmental Affordable Housing Programme of India: A Case Study Approach*', *Journal of The Institution of Engineers (India)*: Series A, Issue 3, Volume 97, 2016.

## John C Gammon Prize

A K Verma, T N Singh, Nikhil Kumar Chauhan and K Sarkar for their paper titled 'A Hybrid FEM-ANN Approach for Slope Instability Prediction', *Journal of The Institution of Engineers (India): Series A, Issue 3, Volume 97, 2016*.

## Union Ministry of Energy – Department of Power Prize

Harish Kumar Verma and Cheshta Jain for their paper titled 'A Novel Hybrid Statistical Particle Swarm Optimization for Multimodal Functions and Frequency Control of Hybrid Wind-Solar System', *Journal of The Institution of Engineers (India): Series B, Issue 3, Volume 97, 2016*.

## Pandit Madan Mohan Malaviya Memorial Prize

Aniket Datta and G Narayanan for their paper titled 'Measurement of Parasitic Inductances in the Bus-Bar Assembly of a High Power Voltage Source Converter', *Journal of The Institution of Engineers (India): Series B, Issue 4, Volume 97, 2016*.

## Shrimati Saroma Sanyal Memorial Prize

Tabish Alam and Kishore Kulkarni for their paper titled 'Municipal Solid Waste Management and its Energy Potential in Roorkee City, Uttarakhand, India', *Journal of The Institution of Engineers (India): Series A, Issue 1, Volume 97, 2016*.

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 the year 2017, Mr Subir Bhattacharya, Mr Sanjay Sen, Mr M R Kumar and Mr Umesh Kumar Vishwakarma received the award for their paper entitled 'Growth of India's Steel Sector Amidst Global Overcapacity: Challenges for 300MT Steel Vision'.



Mr Subir Bhattacharya

## Dr M Visvesvaraya Award



Mr Subhra Dhara

For the year 2017, Mr Subhra Dhara and Mr Somnath Kumar received the award for their paper entitled 'Sustainability of Steel in the Transition to a Low Carbon Economy'.

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 2017, Mr G Venkateswara Rao, Mr G V S Nageswara Rao and Mr Rajan Kumar received the award for their paper entitled 'Safety Culture Promotional Strategy for Large Coal Mining Company-Indian Perspective'.



Mr G Venkateswara Rao



## The Institution of Engineers (India)

Sir R N Mookerjee Engineering Information Service Centre  
IEI Headquarters, Kolkata

## New Arrival of Books

Title and Author	Publisher		
• GATE 2018: Civil Engineering [Reference]	G. K. Publications Pvt. Ltd.	• VLSI Technology (2nd Ed.); S. M. Sze	McGraw Hill Education (India) Pvt. Ltd.
• GATE 2018: Mechanical Engineering [Reference]	G. K. Publications Pvt. Ltd.	• Operations Research: Principle and Practice (2nd Ed.); A. Ravindran, Don T. Phillips, James J. Solberg	Wiley India Pvt. Ltd.
• GATE 2018: Electrical Engineering [Reference]	G. K. Publications Pvt. Ltd.	• Raspberry Pi Cookbook for Python Programmers; Tim Cox	Shroff Publishers & Distributors Pvt. Ltd.
• GATE 2018: Electronics & Communication Engineering [Reference]	G. K. Publications Pvt. Ltd.	• Nonlinear Mechanical Vibrations; P. Srinivasan	New Age International (P) Ltd.
• GATE 2018: Computer Science & Information Technology [Reference]	G. K. Publications Pvt. Ltd.	• Reliability in Engineering Design; K. C. Kapur, L. R. Lamberson	Wiley India Pvt. Ltd.
• RFID Security and Privacy: Concepts, Protocols and Architectures; Dirk Henrici	Springer	• Gas Turbines (3rd Ed.); V. Ganesan	McGraw Hill Education (India) Pvt. Ltd.
• Microwave Engineering; S. Vasuki, D. Margaret Helena, R. Rajeswari	McGraw Hill Education (India) Pvt. Ltd.	• A Textbook of Chemical Reaction Engineering; S. C. Roy, C. Guha	Dhanpat Rai & Co.
• Smart Material Systems and MEMS: Design and Development Methodologies; Vijay K. Varadan, K.J. Vinoy, S. Gopalakrishnan	Wiley India Pvt. Ltd.	• Irrigation Engineering; H. M. Raghunath	Wiley India Pvt. Ltd.
• Introduction to the Optical Transfer Function; Charles S. Williams, Orville A. Becklund	New Age International (P) Ltd.	• Electric Power Distribution (6th Ed.); A. S. Pabla	McGraw Hill Education (India) Pvt. Ltd.
• Satellite Communications (4th Ed.); Dennis Roddy	Tata McGraw Hill Education Pvt. Ltd.	• Introduction to Robotics: Analysis, Control, Applications; Saeed B. Niku	Wiley India Pvt. Ltd.
• Advanced Engineering Mathematics (6th Ed.); C. Ray Wylie, Louis C. Barrett	McGraw Hill Education (India) Pvt. Ltd.	• Digital Principles Switching Theory (2nd Ed.); A. K. Singh, M. Tiwari, A. Prakash	New Age International (P) Ltd.
• Discrete Mathematical Structures; V. Subramanian	Scitech Publications (India) Pvt. Ltd.	• Workshop Practice (2nd Ed.); H.S. Bawa	McGraw Hill Education (India) Pvt. Ltd.
		• Non-Conventional Energy Resources (3rd Ed.); D. S. Chauhan, S. K. Srivastava	New Age International (P) Ltd.
		• Wireless Communications Systems and Networks; Mohsen Guizani (Edited)	Springer
		• Mechanics of Fluids; P. Purushothama Raj, V. Ramasamy	Scitech Publications (India) Pvt. Ltd.
		• Antenna and Wave propagation; Sisir K Das, Annapurna Das	McGraw Hill Education (India) Pvt. Ltd.
		• Motion and Time Study Design and Measurement of Work (7th Ed.); Ralph M. Barnes	Wiley India Pvt. Ltd.
		• Digital Systems Design with FPGAs and CPLDs; Ian Grout	Newnes



## Thirty-third National Convention of Architectural Engineers, Telangana

# Architectural Engineering Aspect for Sustainable Building Envelopes

**Telangana State Centre** of the Institution organized the Thirty-third National Convention of Architectural Engineers and National Seminar on the theme 'Architectural Engineering Aspect for Sustainable Building Envelopes' during November 10-11, 2017 at Hyderabad. The Chief Guest Mr B Kalyan Chakravarthy, Director General, Environmental Protection, Training & Research Institute, Hyderabad, in his inaugural address, discussed on the security of water over the period with the growth of population and other relevant reasons. He stressed that the quality of water both for drinking and domestic usage should be improved and emphasized on the quality improvement strategies of indoor air. Mr Chakravarthy suggested to focus on implementation of water harvesting at large scale and retreatment policies of used water for maintaining sustainability. Mr Sisir Kumar Banerjee, the then President-Elect of the Institution also graced the occasion as Special Guest. Mr Banerjee in his address highlighted various issues on structures and stressed on proper utilization of materials for construction of buildings as per the norms of Bureau of Indian Standards (BIS). The Guest-of-Honour, Mr J Ramu Rao, Director, My Home Group, Hyderabad, deliberated on various aspects of building envelopes. Mr H K Mittal, Chairman, Architectural Engineering Division Board, IEI, highlighted various activities of the Division Board emphasizing Architectural Engineering to develop India. Mr G L Rao and Mr G Prabhakar, Past Presidents of the Institution, also graced the inaugural session with their august presence. A Proceedings of the Convention containing technical papers was brought out on this occasion which was released by the Chief Guest. On this occasion, three Eminent Engineering Personalities namely, Mr Sajjad Sahid, Chief



Consultant & Proprietor, M/s Sajjad Sahid & Associates, Hyderabad; Mr P Subrahmanyam, Senior Architect, Partner, Murthy & Manyam, Hyderabad (in absentia) and Prof Rajesh Chandra, Chairman, Institute of Town Planners, Uttarakhand (in absentia) were felicitated for their valuable contributions in the field of architectural engineering. The prestigious 'T S Narayana Rao Memorial Lecture' was delivered by Mr Vijay Kulkarni, Technical Advisor, Quality Council of India on the topic 'Sustainability of Concrete: Some Critical Issues'. Mr Juzer S Kothari, Managing Director, Conserve Consultants Pvt Ltd, Chennai, delivered the State-of-the-Art Lecture on the topic 'Sustainable Building Envelopes'. Mr Sajjad Sahid delivered the Keynote Address on the topic 'Seeking Information in Built Heritage'. Earlier, Dr S Satyanarayana, Chairman of the Centre, welcomed the august gathering and Mr S P Anchuri, Convener of the function elaborated the theme of the Convention. Mr G Rameshwar Rao, Honorary Secretary of the Centre, proposed the vote of thanks. Papers on various sub-themes were presented and discussed during the technical sessions.

## IEI Celebrates World Standards Day

**Theme: Standards Make Cities Smarter**

The World Standards Day was celebrated by the Institution on October 14, 2017. Brief accounts of celebration as received from various Centres are reported hereunder

### STATE CENTRE

#### Jharkhand

Mr Sivananda Roy, Past Chairman of the Centre, presided over the function and welcomed the august gathering. Mr Abhik Bhowmic, DGM (Inspection and QA), MECON Limited and Convener of the programme, spoke about the significance of observing the day and highlighted the role of Bureau of Indian Standards (BIS) in framing more than 18,000 standards under 24 groups, the different 'Certification Marks' given by various statutory governments and other certifying agencies. The Chief Guest, Mr Sidhartha Chakravarty,



Executive Director, MECON Limited, in his address, highlighted how adherence to standards is so important to the successful execution and completion of a project and enriches the quality of human life in

cities. The Guest Speaker, Mr Ranjit Kumar, JGM (Rolling Mills), MECON Limited, discussed various ISO features, specially the requirements of various industries to upgrade from ISO-9001 (2008) to ISO-9001 (2015). The other Guest Speaker, Mrs Rupali Mani, AGM (Environment), MECON

Limited, highlighted various advantages of Effluent Treatment Plant (ETP) and ISO 14001, which is considered as the Standards for Environment issues. Mr M R Kumar, Honorary Secretary of the Centre, proposed the vote of thanks.

### LOCAL CENTRES

#### Ghaziabad

Welcoming the Chief Guest and other dignitaries, Dr H S Sharma, Chairman of the Centre, elaborated the usefulness and need of standards in various aspects of social life viz. water, housing, electricity etc and hoped that the deliberations will create awareness for adopting and using standards for better quality of life. The Chief Guest, Mr S S Sharma, Past Chairman of the Centre, enumerated on some basic issues of a city, like, availability of sufficient fresh water, universal access to clean energy, ability to



travel efficiently, etc and discussed at length on the role of standards in these areas. He further mentioned that international standards can make cities smarter step by step. Dr Satish Chandra Gupta, Honorary Secretary of the Centre, proposed the vote of thanks.

#### Tirupati

Prof J Karthikeyan, Department of Civil Engineering, College of Engineering, S V University, Tirupati and Executive Committee Member of the Centre graced the occasion as the Invited Speaker. Prof Karthikeyan addressed the august gathering on the topic 'Standards Make Cities Smarter'. He discussed various aspects embracing the theme of the day.



## Thirty-third National Convention of Electrical Engineers, Tiruchirappalli

# Hybrid AC/DC Power Systems for Effective Utilization of Renewable Energy

**Tiruchirappalli Local Centre** of the Institution organized the Thirty-third National Convention of Electrical Engineers and National Seminar on the topic 'Hybrid AC/DC Power Systems for Effective Utilization of Renewable Energy' during November 24-25, 2017 at Tiruchirappalli. Mr R Selvaraj, Chairman of the Centre, welcomed the guests and participants. Dr S Dharmalingam,



Convener of the Convention, briefing on the theme, enumerated on the development of AC/DC hybrid power systems. He mentioned that in the present day generation sector, many distributed energy resources, such as photovoltaic systems, fuel cells, etc have emerged which generate power in DC form. Mr P Rajamani, Chairman, Electrical Engineering Division Board, IEI, presided over the inaugural session. In his address, Mr Rajamani stressed upon for a commercially viable sustainable power system capable of catering to the power demand of the country. He mentioned that cost of non-conventional and renewable energy is now comparable to conventional energy. Mr Rajamani further mentioned that to meet with the growing solar energy development in the country, proper grid connection is necessary. In absence of the Chief Guest, Mr K S Popli, Chairman & Managing Director, Indian Renewable Energy Development Agency Ltd (IREDA), New Delhi, Mr A Chandrashekar, AGM, IREDA, inaugurated the Convention. In his inaugural address, Mr Chandrashekar highlighted the tremendous growth taking place in the renewable energy sector in India in the last 2-3 years with a set target of 175 GW by 2022. 'With the infrastructure cost of renewable energy coming down due to advancements in manufacturing, the renewable

energy cost is also coming down to less than ₹ 3 per unit', he added. The Guest-of-Honour, Mr S Akshayakumar, Chairman, Tamil Nadu Electricity Regulatory Commission while releasing the Souvenir of the Convention, stated that Government of India is banking heavily on renewable energy for energy security. He mentioned that since most of the present day electronic gadgets working on DC power, power generated through renewable energy could be easily distributed through local DC power distribution system. 'Hybrid AC/DC power distribution with bidirectional conversion facility would be the order of the day in future', he added. The other Guest-of-Honour, Prof (Dr) Mini Shaji Thomas, Director, NIT, Tiruchirappalli, highlighted the challenges in power system and assured all possible support from NIT Tiruchirappalli for developing hybrid AC/DC power system and congratulated the organizers for mobilizing a lot of industry oriented papers in this convention.

The prestigious M S Thacker Memorial Lecture was delivered by Dr M Ramamoorthy, Former Director General, CPRI Bangalore & Chancellor, K L University, Guntur, Andhra Pradesh on the topic 'Classical Variable Speed Drives'. A State-of-the-Art lecture was also delivered by Mr Karriprasad, GM (Sc & PV), BHEL. Dr G Ranganath and Mr T M Gunaraja, Council Members, IEI also attended the Convention. On this occasion, four Eminent Engineers, namely, Mr K S Popli, Chairman and Managing Director, IREDA, New Delhi (in absentia); Mr S Akshayakumar, Chairman, Tamil Nadu Electricity Regulatory Commission; Dr S Dharmalingam, Former General Manager, BHEL, Tiruchirappalli; and Prof (Mrs) Mini Shaji Thomas, Director, NIT, Tiruchirappalli, were felicitated for their immense contribution to the Electrical Engineering profession. The 'IEI Young Engineers Award' in Electrical Engineering Division for the year 2017-18 was presented to Dr Vijayakumar Krishnaswamy, Assistant Professor, Department of Electrical Engineering, Malaviya National Institute of Technology, Jaipur; Dr Chandrasekhar Perumalla, Assistant Professor, Department of Electrical Engineering, National Institute of Technology Warangal and Mr Jada Ganeswara Rao, Executive Engineer, Eastern Regional Power Committee, Central Electricity Authority, Ministry of Power, Government of India, Kolkata. Mr S Lakshmanan, Honorary Secretary of the Centre proposed the vote of thanks. A large number of papers embracing the theme of the Convention were presented and discussed during the various Technical Sessions.

## IEI Celebrates World Habitat Day

**Theme: Housing Policies: Affordable Homes**

The World Habitat Day was celebrated by the Institution on October 2, 2017. Brief accounts of celebration as received from various Centres are reported hereunder.

### STATE CENTRE

#### Jharkhand

Mr Sanjay Sen, Chairman of the Centre, welcomed the dignitaries and the participants and highlighted various activities of the Centre. Mr Chandrakant Raipat, MD, Rameswaram Industries, Ranchi and Past Chairman of the Centre, graced the occasion as the Chief Guest.



In his Keynote Address, Mr Raipat enumerated the importance of simplified policies for affordable homes and major considerations guiding the policy making by NITI Ayog. He highlighted the new perspectives on several aspects of RERA rules and regulations, which people in general are not aware of. Mr Devesh Goyal conducted the proceedings of the function. The programme was concluded with the vote of thanks proposed by Mr Subrata Mukherjee, Past Honorary Secretary of the Centre.

### LOCAL CENTRE

#### Tirupati

Mr S Vijayabhaskar, Honorary Secretary of the Centre delivered the welcome address. Mr K Vidyasagar Reddy, Chairman of the Centre, presided over the function. The Chief Guest, Dr B Madhusudhana Reddy, Assistant Professor, Department of Civil Engineering, College of Engineering, S V University, Tirupati and Executive Committee Member of the Centre, elaborated the theme 'Housing Policies: Affordable Homes'. Dr Reddy, in his speech, mentioned that engineers play a very important role in housing policies and are versatile in minds who build bridges between sciences, technology and society. Mr S Vijayabhaskar, proposed the vote of thanks.





### Recent Advances in IoT

**Telangana State Centre** of the Institution in association with the Department of Electronics and Telecommunication Engineering, Spoorthy Engineering College, Hyderabad, organized the Thirty-third National Convention of Electronics & Telecommunication Engineers and National Seminar on the theme 'Recent Advances in IoT' during November 29-30, 2017 at Hyderabad. The Chief Guest, Mr B H V S Narayana Murthy, Outstanding Scientist and Director, Research Centre, Imarat (RCI), DRDO, Hyderabad, delivered an enlightening lecture on the importance of Cloud Computing, Big Data Analytics, Blockchain Technology and Cognitive Computing in implementation of IoT. He mentioned that IoT has changed the life in ways never imagined before and has applications in Digital Healthcare, Smart Home Applications, Energy and Utilities (for example Smart Grid and Smart Meters etc.). He also spoke about the Honorable Prime Minister's flagship



programme of Smart Cities (concepts like Smart Lighting, Smart Traffic Management/Parking, Solid Waste and Water Quality Management, etc) and Smart Agriculture etc, which can be realized through IoT. Mr Murthy concluded his speech with the hope that proper implementation of IoT will transform India into a digitally empowered society and knowledge economy. The Guest-of-Honour, Mr Uday Raj, Chief General Manager, Regional Remote Sensing Centres, NRSC-ISRO, Hyderabad, delivered an informative lecture on 'Geo-spatial Analytics in IoT'. He discussed various aspects, such as, collection of spatial data, use of Drones, Value-added Database Management Systems and their applications. He further spoke about new GPS Aided GEO Augmented Navigation (GAGAN) — an implementation of a regional satellite-based augmentation system made by ISRO GAGAN though

primarily meant for aviation, will provide benefits beyond aviation to many other user segments, such as, intelligent transportation, maritime, highways, railways, surveying, geodesy, security agencies, telecom industry, etc. Mr Uday Raj stressed that the success of IoT and its applications depends on very precise GPS locations. He also mentioned how remote sensing data and its vertical profiling add value to IoT technologies for the benefit of the society and explained the Smart use of Cyber cartography with a visual example. In absence of Dr (Ms) G Padmavathi, Chairperson, Electronics and Telecommunication Engineering Division Board (ETDB), IEI, Mr B Brahma Reddy, Member, ETDB & Council Member, IEI, presided over the inaugural session and emphasized on IoT technology and its recent applications for the benefit of the society. The prestigious Prof S K Mitra Memorial Lecture was delivered by Mr Ajay Singhal, Head, International Satellite Monitoring Earth Station, Jalna, Maharashtra. The State-of-the-Art Lecture was delivered by Dr Atul Negi, Professor, SCIS, University of Hyderabad on the topic 'An Engineering Perspective on Societal Transformation by Internet of Things (IoT)'. On this occasion, three Eminent Engineering Personalities, namely, Dr G Satheesh Reddy, Scientific Advisor to Raksha Mantri, Govt. of India; Director General, Missiles and Strategic Systems, DRDO and Director, Research Centre Imarat, Hyderabad (in absentia); Prof S Ramachandram, Vice Chancellor, Osmania University, Hyderabad and Mr Chandrakant Pithawa (Padma Shri Awardee) Former Director, Electronics and Instrumentation Group, Bhabha Atomic Research Centre, Mumbai, were felicitated for their immense contribution to the Electronics and Telecommunication Engineering profession. The 'Young Engineers Award' in Electronics and Telecommunication Engineering Division for the year 2017-18 were presented to Dr P Vimala, Associate Professor, Department of Electronics and Communication Engineering, Dayananda Sagar College of Engineering, Bengaluru; Dr D Nirmal, Associate Professor and Post Graduate Program Coordinator, Department of Electrical Technology, Karunya University, Coimbatore; and Ms Naga Vara Aparna Akula, Scientist, Computational Instrumentation, CSIR-Central Scientific Instruments Organization (CSIO), Chandigarh. Earlier, Dr S Sathyanarayana, Chairman of the Centre, welcomed the august gathering and Dr K V N S V P L Narasimham, Convener of the Convention elaborated the theme of the National Seminar. Mr G Rameshwar Rao, Honorary Secretary of the Centre, proposed the vote of thanks. Papers embracing the theme of the Convention were presented and discussed during technical sessions.

### Extreme Loading on Structures

**Roorkee Local Centre** of the Institution in association with CSIR-CBRI Roorkee and IIT Roorkee organized a two-day All India Workshop on the theme 'Extreme Loading on Structures' under the aegis of Civil Engineering Division, IEI, during October 26-27, 2017 at Roorkee. Mr Malvinder Singh, Chairman of the Centre, welcomed the dignitaries and participants. He highlighted various activities of IEI in general and the Centre, in particular which gives engineers a global platform to share views. The Chief Guest, Padma Shri Prof N K Gupta, IIT Delhi, in his inaugural address, emphasized that extreme loading situations transpiring through accidents, natural calamities, etc. not only jeopardize the infrastructure and human life but also impose global challenges for environmental and ecological systems. 'Experimental errors during a research shall not be ignored at once but be carefully explored for the possible reasons of extreme loading for understanding the mechanics and design aspects', he added. Inaugural session was presided over

by Dr N Gopalakrishnan, Director, CSIR-CBRI Roorkee who presented an introduction to 'Mechanics of Impact Phenomenon on Structures'. Prof C S P Ojha, Head, Civil Engineering Department, IIT Roorkee, spoke about the fundamental design aspects of deformation of structures subject to extreme loading structures. The All India Workshop was attended by more than hundred participants including members of IEI, students, scientists, faculty of IIT Roorkee, CBRI Scientists and NITs. It was an excellent opportunity to understand and learn through the work of subject experts in broader sense. The programme concluded with the vote of thanks proposed by Dr Achal Mittal, Honorary Secretary of the Centre.



# IEI Celebrates Energy Conservation Day

The Institution of Engineers (India) celebrated Energy Conservation Day all over the country on December 14, 2017. Brief account of the celebration as received from various Centres are reported hereunder.

## STATE CENTRES

### Gujarat

The keynote speaker Mr Sachin Shah, Managing Director, Star Renewable Pvt. Ltd., Ahmedabad, explained the purpose of celebration of this day is to make every people aware of saving the national energy for their future use and urged to create a consensus among the people for conservation of national energy. Mr Shah further explained in detail about the advantage of rooftop solar energy installation and subsidy available from state and central government. 'National Energy is important for every people to develop and achieve the goals of every task properly. Without National Energy, it is impossible for the people to do many of important tasks', he added.



### Jharkhand

Mr Sanjay Sen, Chairman of the Centre, in his welcome address, opined that each and every citizen of India must be aware about how to use efficient energy, how to save the energy for their own future safety and should follow all the rules, regulations and policies implemented by the Government of India in order to support the energy efficiency. He also presented energy conservation methodology adopted by the State Centre. The Keynote Speaker, Mr Vijay Singh, Design Engineer (Electrical – Power Transmission & Distribution), mentioned that solar energy is an important source of renewable energy and its technologies are characterization as either passive solar or active solar depending on how they capture and distribute solar energy or convert it into solar power. He opined that in the last two decades, photovoltaics (PV), also known as solar PV, has evolved from a pure niche market of small scale applications towards becoming a mainstream electricity source. The programme was conveyed and conducted by Ms Priyam Mitra, Executive Committee Member of the Centre. Mr M R Kumar, Honorary Secretary of the Centre proposed the vote of thanks.



### Manipur

Mr N Joykumar Singh, Honorary Secretary of the Centre, welcomed the august gathering. Mr N Shyamsundar Singh, Former Chairman, JERC, Manipur & Mizoram delivered lecture on the topic 'Renewable Energy – an Ultimate Option'. Mr Kh Tehmba Singh, Chairman of the Centre, emphasized the need to take special care of the renewable energy as an ultimate option for the development of the State. Mr Th Subhaschandra Singh, Lecturer, Mechanical Engineering, NIT Manipur, mentioned that appropriate technology should be applied for renewable energy and it should be taken as a very important factor by all stakeholders. Mr Saratchandra



Singh, Proprietor of M/s S S Electronics, Imphal, stressed the need to take special care for supply and consumption of energy. 'Our roof top could be a perennial source of power', he opined. Mr A Narendradhwaja Singh, Executive Committee Member of the Centre, proposed the vote of thanks.

### Punjab & Chandigarh

Dr T S Kamal, Council Member, IEI welcomed the august gathering. Dr G S Lamba, Principal, BBSBEC, highlighted the need for managing the available resources. He further laid stress on striking a balance between the demand and supply of energy. Mr J R Garg, Chairman of the Centre stressed on energy conservation. The Chief Guest, Mr Padamjit Singh, emphasized the use of renewable resources for power generation which do not emit carbon dioxide. Dr Arvind Dhingra, Assistant Professor, GNDEC, Ludhiana, shared his expert views on energy management. Mr R K Gupta, Chief Engineer, PSPCL, highlighted the efforts of PSPCL in the field of energy conservation. Mr S S Mundi, Honorary Secretary of the Centre, proposed the vote of thanks.



### Tripura

On this occasion, a Semiar was organized. Mr Tapas Bhattacharya, Honorary Secretary of the Center, welcomed the august gathering. Mr Chandan Chakraborty, Senior Manager (O & M), TNGCL, Agartala, highlighted various functions and key objectives for optimum utilizations of natural gas throughout City Gas Project and also vehicular CNG network operating in different parts of the State. He also highlighted the basic and simpler way for maximum conservation of the natural gas. Mr Nilanjan Bose, Consultant, Bureau of Energy Efficiency, speaking on behalf of TSECL, elaborated the policy of Govt. of India in respect to energy conservation through key objectives and target, like Energy Compliance Building Code (ECBC) etc. He nicely narrated that electricity can be saved to a significant level which directly contributes in accelerating GDP & towards national economy. Mr Debabrata Sukladas, Project Director, TREDA, Agartala, presented a very informative paper on alternate source energy efficiency gas stoves, solar plant, Bio-Gas plant etc. Mr Tapan Lodh, Chairman of the Centre, presided over the session and delivered his address through summing up the recommendations of the Seminar.



### Uttar Pradesh

Prof Bharat Raj Singh, Chairman of the Centre, in his welcome address, stressed upon the need to save energy by using energy saving devices and alternative sources of energy instead of energy generated by fossil fuel. The Chief Guest, Mr S C Jha, Director, Madhyanchal Vidyut Vitran Nigam Ltd., Lucknow, explained various ways to save energy, such as, using solar light, CFL bulb, LED and using energy efficient devices approved by Bureau of Energy Efficiency. He further enumerated that consumers using more energy should be levied extra taxes so that it acts as disincentive for excess energy consumption. The Keynote Speaker Mr Ashok Saxena, Superintending Engineer, Rajya Vidyut Utpadan Nigam Ltd., Lucknow stressed the need for reducing generation of electricity through diesel and coal and shift to renewable energy, such as, solar, wind, biomass & hydro, so that, energy may be conserved for future generation. Mr J S Mishra, Past Honorary Secretary of the Centre convened programme. Mr R K Trivedi, Honorary Secretary of the Centre proposed the vote of thanks.





## LOCAL CENTRES

### Ahmednagar

Mr R P Waykar highlighted the importance of energy conservation and introduced the Speaker. The Speaker, Dr R S Deshpande, Principal, Shri Chhatrapati Shivaji Maharaj College of Engineering, Ahmednagar, delivered lecture on the topic 'Non-conventional Energy Resources'. In his address, Dr Deshpande explained that renewable energy sources, also called as non-conventional energy sources, are the sources that are continuously replenished by natural processes. He further mentioned that most of the renewable energy comes either directly or indirectly from sun and wind and can never be exhausted and therefore they are called renewable. Describing technical details of solar electricity generation, he stated that one cell produces about 1.5 W of power. 'Dependability on sunlight, high initial cost, problem of efficiency and considerable maintenance cost are limitations for solar energy', he opined. He informed that Central Government and State Governments have also introduced various schemes and incentives for promoting generation and utilization of non-conventional energy in the country. Mr A D Kulkarni, Chairman of the Centre felicitated the Speaker.



### Aligarh

Prof Imtiaz Ashraf, Chairman, Department of Electrical Engineering, Zakir Hussain College of Engineering & Technology, Aligarh Muslim University [AMU], Aligarh, graced the occasion as the Chief Guest and delivered his speech highlighting various aspects of energy conservation. The Convener of the function was Dr Salma Shaheen, Honorary Secretary of the Centre and Principal, University Women's Polytechnic, AMU, Aligarh. The welcome address was delivered by Prof Kr Khalil A Khan, Past Chairman of the Centre. The programme concluded with the vote of thanks proposed by Dr Salma Shaheen.



### Alwar

Prof (Dr) Dharamvir Mangal, Gautam Buddha University, Noida, graced the function as Keynote Speaker. He delivered an informative and educative lecture on the topic 'Role of Renewable Energy in Climate Mitigation'. Most of the Corporate Members of the Centre, Heads of Engineering Colleges, Engineers from Govt. Departments, Industry Leaders and Entrepreneurs graced the occasion with their august presence.

### Ananthapuram

The Chief Guest, Mr Y Appa Rao, Superintendent Engineer, APTRANSCO, Anantapur, in his speech, narrated the challenges of Andhra Pradesh State in transportation of energy from various sources to customers. He explained the latest technology available for energy conservation and advised the engineering fraternity to design all the equipment which will meet the energy conservation requirements. The Keynote Speaker, Prof K Hemachandra Reddy, described various energy sources and potential in India and enumerated the applications of each of them and prospects of such sources in the emerging technology. Prof C Sashidhar and Prof M L S Deva Kumar, Chairman and Honorary Secretary of the Centre respectively, Dr M Rakakrishna Reddy, Dr B Chandra Mohana Reddy and Prof C Shobabindu, Local Committee Members and Corporate Members also graced the function with their august presence.



### Bareilly

In his Inaugural Address, Mr Subhash Mehra, Chairman of the Centre highlighted the importance of energy consumption and its use in our day-to-day life, its scarcity and its impact on the sustainability of global ecosystems. Mr B R Dutta, Dean, ANA College, Bareilly, emphasized that energy use is a major source of global warming, which has the potential of making the earth uninhabitable. 'As we all aware of the threatening fact that reserves of all conventional forms of energy are fast depleting and every day the human population across the world uses energy for leading a civilized life', he added. Prof (Dr) A K Gupta, Dean, MJPR University, Bareilly presented the concluding works at the end of the lecture series. Dignitaries attended the function included; Mr S C Sundrani and Mr S K Gupta, Past Chairman and Honorary Secretary of the Centre, respectively; Ms Shanti Pandey, MJPR University; Mr Sovan Mohanty, Assistant Professor, SRMS College, Bareilly. Dr Pankaj Sharma, Honorary Secretary of the Centre proposed the vote of thanks.



### Coimbatore

Dr M Senthilkumar, Honorary Secretary, welcomed the gathering and presided over the function. He also introduced the Chief Guest to the audience. The Chief Guest Mr Sundar Muruganandhan, Managing Director, Versa Drives Private Limited, Coimbatore delivered lecture on the topic 'Energy Efficiency'. The programme was concluded with vote of thanks proposed by Dr H Rammohan, Joint Honorary Secretary of the Centre.



### Durgapur

Mr R K Roy, Chairman of the Centre, in his welcome address, mentioned that energy conservation plays a significant role in lessening climate change. Mr M N Bandyopadhyay, Honorary Secretary of the Centre, explained the significance of observing the day. The Chief Guest Mr Mahendra Debdas, Chief Engineer, DVC, DSTPS, Andal, mentioned that energy conservation plays a very important role because utilization of non-renewable resources also has impact on the environment. The Guest-of-Honour, Dr Pradip Kumar Chatterjee, Chief Scientist & Head, Energy Research & Technology Group, CSIR-Central Mechanical Engineering Research Institute deliberated on the topic 'An overview of Waste Management' and mentioned that waste can be further exploited for useful products. The other Guest-of-Honour Dr Jagannath Munda, SDE, DVC, Mejia Thermal Power Station, addressed the gathering on the topic 'Energy Conservation in Thermal Power Plant'. He highlighted the importance of energy conservation, why it is required and power scenario in India. Mr M N Bandyopadhyay, proposed the vote of thanks.



### Fariadabad

Mr Subhash Chander, Chairman of the Centre delivered the welcome address. Mr Sandeep Handa, Honorary Secretary of the Centre, highlighted various activities of the Centre. Mr. Desh Deepak, Retd. Deputy Director General, BIS, deliberated on the effective use of energy management system. Mr Sushil K Bajaj, spoke about ECBC-2017 sharing various requirements for energy efficiency designs. Mr Sameer Kumar, Convener of Technical Committee, proposed the vote of thanks.



## Gwalior

Mr Prabhat Bhargava explained that in earlier times, the highways were designed (connecting to the city) so that the wind tunnel gets created according to the direction of wind and this extra wind cleans away the city pollution automatically. He mentioned that sometimes to prevent direct sunlight, the RCC louvers were so designed that only diffused sunlight enters the building. Mr Rakesh Gupta discussed the electricity scenario in the country. Mr P K Singhal explained that the electronic devices are becoming power efficient day by day. He elaborated the journey from vacuum tubes to latest CMOS technology and VLSI devices. Mr Vinay Shukla briefed some measures taken for energy savings in the NFL Guna.

## Indore

The Theme Speaker Mr R P Gautam, Advisor, Laxyo Energy Ltd., Indore, in his speech, emphasized on the various issues viz. Government initiatives for energy conservation, 3-nested-energy dependency model of energy sustainability, world environment facts, the concept of 'Green Company', Energy Conservation Act and so on. 'The ground reality is that the manufacturing and power intensive industries do not wish to change from old energy consuming systems to new energy conserving devices, in spite of being made aware of the payback periods of such devices, due to initial investments', he added. In his presidential address, Dr Rakesh Saxena, Director, SGSITS emphasized that we shall be forced to look at alternate sources of energy, like solar and electric energy, in the near future for Industries. Earlier, the Convener of the program, Dr S K Jain, Managing Committee Member of the Centre introduced the Theme Speaker. Vote of thanks was proposed by Mr Dinesh Wadhwa, Honorary Secretary of the Centre.

## Kota

Mr C K S Parmar, Chairman of the Centre welcomed the august gathering. The Chief Guest, Mr L K Jain, Former GM, NTPC, mentioned that we have to use solar energy for future and save energy in every field. The Guest Speaker, Mr A K Gupta, Former Managing Director JVVNL Jaipur-Jodhpur, stressed on some important factors viz. use of efficient lighting, energy efficient electrical appliances, energy efficient computers, renewable energy etc. Mr D Chanda, Chief Superintendent RAPS 1&2, Rawatbhata, expressed his views that nuclear energy is the safest energy in the world and for future. The programme was concluded with the vote of thanks proposed by Mr Jasamat Singh, Honorary Secretary of the Centre.

## Kozhikode

Prof (Dr) K P Mohandas, Chairman of the Centre, highlighted the significance of observing the day. Mr Venugopal, Past Honourary Secretary of the Centre, delivered lecture on energy conservation. Dr A Achyuthan, Famous Environmentalist and former Director, Academic Staff College, Calicut University, in his inaugural address, emphasized on the indiscrete use of fossil fuels, consequent green gas emission which results in global warming and climatic changes and due to these reasons, natural disasters like the Okhee are occurred. Dr Kasthurbha A K, Associate Professor and Head, Department of Architecture, NIT Calicut presented a resource paper on 'Energy Conservation in Buildings'. This was followed by an interactive session on Energy

Conservation at home, kitchen, offices and public places and while driving vehicles.

## Meerut

On this occasion, Poster/Painting Competition was also organized in Radha Govind Group of Institutions, Meerut. Mr C P Gupta, Past Chairman of the Centre and Certified Energy Auditor graced the occasion as Keynote Speaker. Mr Gupta, in his speech, explained various techniques of energy saving and advised the gathering to inculcate the habit of saving energy in their daily life. The Director of host Institution Dr Neeraj Kumar, Director, and Head of the Department, Dr P K Singh also graced the occasion and expressed their views on conservation of energy. Mr S C Govil, Chairman of the Centre, summed up the deliberations and proposed the vote of thanks.



## Mysore

Mr M Chinnaswamy, Chairman of the Centre, welcomed the august gathering and presided over the function. The speaker of the day Mr Anil Kumar, Director, Rachana Energy Care, in his speech, stressed the need for saving energy. 'To attain an economic growth of 8-10 % per annum, we need about 8 lakh MW of installed capacity in next 25years whereas the present capacity is only 1.8 lakhs MW. We need to maintain our commitment to environmental issue also', he opined. He further clarified that the Energy Conservation Act enacted in 2001 and later amended in 2010, gives power to both states and central government to conserve energy and its efficient use. He mentioned that Bureau of Energy Efficiency (BEE) established in 2002 to facilitate effective enforcement of the Act and its role is to co-ordinate with the departments, agencies and identifying energy intensive consumers as designated consumers and make energy audit compulsory for them. Mr B V Ravindra Nath, Honorary Secretary of the Centre, proposed the vote of thanks.



## North Bengal

Professor Soupayan Mitra, Department of Mechanical Engineering, Jalpaiguri Government Engineering College, Jalpaiguri, graced the occasion as the Theme Speaker. Prof Mitra briefly discussed in detail about conservation of energy and suggested various ideas about energy conservation. Mr Subrata Bhattacharya, Mr Santanu Das, Mr U K Mondal, Mr Nimai Mukherjee, Executive Committee Member of the Centre, shared their views on conservation of energy. The programme was concluded with the vote of thanks proposed by Mr Asim Mahapatra, Honorary Secretary of the Centre.



## Roorkee

On this occasion, a unique event 'Quiz Competition' was organized among various schools of Roorkee. Mr Malvinder Singh, Chairman of the Centre, in his welcome address, highlighted the importance of energy conservation and its use in day to day life. Dr Atul Kumar Agarwal, Senior Principal Scientist, CSIR-Central Building Research Institute and Convener of the Quiz Competition, created awareness on energy conservation with objective type questions and answers amongst the school children. Dr Achal K Mittal, Honorary Secretary of the Centre, proposed the vote of thanks by quoting 'Save Energy, Save Mankind for Brighter Future'.





# IEI DIARY



## Aerospace Engineering Division

Thirty-second National Convention of Aerospace Engineers on **"Advances in Aerospace Sciences and Technologies"**

Ranchi, October 27-28, 2018

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, Ranchi 834002 [☎: (0651) 2491344; web: ieijsc.org; e-mail: jharkhandsc@ieindia.org]

## Agricultural Engineering Division

All India Seminar on **"Agro Big Data and Decision Support Systems in Agriculture"**

Hosur, January 08-09, 2018

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

Thirty-first National Convention of Agricultural Engineers on **"Engineering Interventions in Doubling the Income of Small and Marginal Farmers by 2022"**

New Delhi, February 2-3, 2018

The Honorary Secretary, IEI, Delhi State Centre, Engineers Bhawan, Bahadur Shah Zafar Marg, New Delhi 110002 [☎: (011) 23379052/23379948; Fax: (011) 23370489; e-mail: delhisc@ieindia.org]

## Architectural Engineering Division

All India Workshop on **"Advanced Computer Visualization Tools for Architectural Engineering"**

Salem, January 19-20, 2018

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

## Chemical Engineering Division

National Conference on **"Advances in Material Sciences: Bio-materials"**

Salem, February 27-28, 2018

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

All India Seminar on **"Bio-fuels, Bio-energy and Bio-economy"**

Guwahati, March 16-17, 2018

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

## Civil Engineering Division

One Day Seminar on **"Cost Effective and Eco-friendly Construction Technology"**

Salem, January 10, 2018

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

Workshop on **"National Building Code"**

Udaipur, January 18, 2018

The Honorary Secretary, IEI, Udaipur Local Centre, 128 Hiran Magri, Sector 11, Near Seva Charitable Hospital, Udaipur ☎: (0294) 2583702 [e-mail: udaipurhc@ieindia.org]

All India Seminar on **"Transit Oriental Development in Urban Areas"**

Hyderabad, January 19-20, 2018

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

Workshop on **"National Building Code of India – 2016"**

Salem, January 30-31, 2018

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

Workshop on **"Disaster Roof Construction and Other Risk Management Systems"**

Ghaziabad, July 15, 2018

The Honorary Secretary, IEI, Ghaziabad Local Centre, 15 Shopping Complex, ALTT Centre, Rajnagar, Ghaziabad 201002 [☎: 0120-2728699/2702673; e-mail: ghaziabadlc@ieindia.org]

All India Seminar on **"Concrete and Steel Structures – Care for their Health and Longevity"**

Bokaro, August 25-26, 2018

The Honorary Secretary, IEI, Bokaro Steel City Local Centre, Abhiyanta Bhavan, Sector 5A, Bokaro Steel City 827006 [☎: (06542) 267227 / 288972; e-mail: bokarolc@ieindia.org]

Thirty-fourth National Convention of Civil Engineers, on **"Innovative Trends in Civil Engineering for Sustainable Development"**

Pune, September 28-29, 2018

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]

## Computer Engineering Division

One Day Workshop on **"Programming in Big Data Analysis"**

Salem, January 03, 2018

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

One Day Workshop on **"Android Application Development"**

Solapur, January 16, 2018

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: solapurhc@ieindia.org]

One Day Workshop on **"Ethical Hacking and Cyber Security"**

Solapur, January 19, 2018

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: solapurhc@ieindia.org]

Thirty-second National Convention of Computer Engineers on **"Application of IoT in Rural Development"**

Ahmedabad, February 24-25, 2018

The Honorary Secretary, IEI, Gujarat State Centre, Bhaikaka Bhavan, Law College Road, Ahmedabad 380006 [☎: (079) 26400811; Fax: (079) 26561825; e-mail: gujaratsc@ieindia.org]

All India Seminar on **"Impact of Data Analysis on Business of Future through IoT & Social Media"**

Ahmedabad, April 07-08, 2018

The Honorary Secretary, IEI, Gujarat State Centre, Bhaikaka Bhavan, Law College Road, Ahmedabad 380006 [☎: (079) 26400811; Fax: (079) 26561825; e-mail: gujaratsc@ieindia.org]

Thirty-third National Convention of Computer Engineers on **"Computer Cognitions and Intelligent Systems"**

Ghaziabad, February 15-16, 2019

The Honorary Secretary, IEI, Ghaziabad Local Centre, 15 Shopping Complex, ALTT Centre, Rajnagar, Ghaziabad 201002 [☎: 0120-2728699/2702673; e-mail: ghaziabadlc@ieindia.org]





## Electrical Engineering Division

### All India Seminar on “Recent Trends in Renewable Energy”

Chennai, January 03-04, 2018

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

### One Day Workshop on “An Overview of Substation Control System Engineering”

Chennai, January 24, 2018

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 “Hands on Training on Internet of Things and Its Applications”

Madurai, February 07-08, 2018

The Honorary Secretary, IEI, Madurai Local Centre, T M Jambulingam Bhavan, 1 Vivekananda Nagar, 100 Feet Road, Surveyor Colony, K Pudur, Madurai 625 007 [☎: (0452) 256 1783; e-mail: madurailc@ieindia.org]

### One Day Seminar on “Integration and Challenges on Renewable Energy System”

Kanchepuram, February 16, 2018

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 Seminar on “Recent Trends in Renewable Energy Application and Research”

Ahmedabad, February 16-17, 2018

The Honorary Secretary, IEI Gujarat State Centre, Bhaikaka Bhavan, Law College Road, Ahmedabad 380006 [☎: (079) 26400811; Fax: (079) 26561825; e-mail: gujaratssc@ieindia.org]

### All India Seminar on “Major Advances and Sustainable Developments in Renewable Energy Sources and their Applications”

Jamshedpur, February 23-24, 2018

The Honorary Secretary, IEI, Jamshedpur Local Centre, Pipe Line Road, Sakchi (Between Red Cross Society and TCE Building), Jamshedpur 831001 [☎: (0657) 2234316; Fax: (0657) 2230159; e-mail: jamshedpurlc@ieindia.org]

### All India Seminar on “Applications on Nano-materials on Solar Energy”

Madurai, March 07-08, 2018

The Honorary Secretary, IEI, Madurai Local Centre, T M Jambulingam Bhavan, 1 Vivekananda Nagar, 100 Feet Road, Surveyor Colony, K Pudur, Madurai 625 007 [☎: (0452) 256 1783; e-mail: madurailc@ieindia.org]

### “National Power Engineering Conference – 2018”

Madurai, March 09-10, 2018

The Honorary Secretary, IEI, Madurai Local Centre, T M Jambulingam Bhavan, 1

Vivekananda Nagar, 100 Feet Road, Surveyor Colony, K Pudur, Madurai 625 007 [☎: (0452) 256 1783; e-mail: madurailc@ieindia.org]

## Electronics and Telecom. Division

### One Day Seminar on “Recent Trends in Robotics and Automation”

Madurai, January 10, 2018

The Honorary Secretary, IEI, Madurai Local Centre, T M Jambulingam Bhavan, 1 Vivekananda Nagar, 100 Feet Road, Surveyor Colony, K Pudur, Madurai 625 007 [☎: (0452) 256 1783; e-mail: madurailc@ieindia.org]

### One Day Seminar on “Intelligent Control System for Industrial Automation”

Kanchepuram, January 17, 2018

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

### One Day Seminar on “Electronics and Telecommunication in Medical Application”

Salem, February 15, 2018

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

### All India Workshop on “Modern Fractal Antenna Design for LTE WIMAX Application”

Kanchepuram, March 06-07, 2018

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

## Environmental Engineering Division

### All India Seminar on ‘Harnessing Smart Urban and Rural Water Supply Networks through Cyber Physical Systems’

Mangalore, January 08-09, 2018

The Honorary Secretary, IEI, Mangalore Local Centre, 2nd floor, Opal Complex, Opp Bejai Church, Bejai, Mangalore 575 004 [☎: (0824) 2400112; email: mangalorelc@ieindia.org]

### One Day Workshop on “Project Management Cost & Time Overrun”

Ranchi, January 14, 2018

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, Ranchi 834002 [☎: (0651) 2491344; web: ieijsc.org; e-mail: jharkhandsc@ieindia.org]

### One Day Workshop on “Environmental Management and Sustainable Development”

Thanjavur, January 24, 2018

The Honorary Secretary, IEI, Thanjavur Local Centre, Periyar Maniammal University, Periyar Nagar, Vallam, Thanjavur 613403 [e-mail: thanjavurc@ieindia.org]

### All India Seminar on “Integrating Climate Change Adaptation into Environmental Impact Assessment”

Kanchepuram, January 29-30, 2018

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 Seminar on “Energy Efficiency in HVAC & R”

Ranchi, February 10-11, 2018

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, Ranchi 834002 [☎: (0651) 2491344; web: ieijsc.org; e-mail: jharkhandsc@ieindia.org]

### One Day Seminar on “Sewage Treatment and Disposal”

Thanjavur, February 23, 2018

The Honorary Secretary, IEI, Thanjavur Local Centre, Periyar Maniammal University, Periyar Nagar, Vallam, Thanjavur 613403 [e-mail: thanjavurc@ieindia.org]

### All India Seminar on “Swachh Bharat Abhiyan – Creating and Enabling Environment”

Kolkata, March 07-08, 2018

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

### Thirty-fourth National Convention of Environmental Engineers on “Environmental Pollution and Climate Change”

New Delhi, August 10-11, 2018

The Honorary Secretary, IEI, Delhi State Centre, Engineers Bhawan, Bahadur Shah Zafar Marg, New Delhi 110002 [☎: (011) 23379052/23379948; Fax: (011) 23370489; e-mail: delhisc@ieindia.org]

## Marine Engineering Division

### Thirty-second National Convention of Marine Engineers on “Emerging Trends and Developments in Marine Technology”

Chennai, August 18-19, 2018

The Honorary Secretary, IEI, Tamilnadu State Centre, 19 Swami Sivananda Salai, Chepauk, Chennai 600005 [☎: (044) 25360614/64998729; Fax: (044) 25369433; e-mail: tnscc@ieindia.org]

## Mechanical Engineering Division

### All India Seminar on “Recent Development in Mechanical Engineering – Computational Heat Transfer, Fluid Flow and Energy Systems”

Thiruvananthapuram, January 19-20, 2018

The Honorary Secretary, IEI, Kerala State Centre, Visvesvaraya Bhavan, Opposite Kanakaunnu Palace, Thiruvananthapuram 695033 [☎: (0471) 2322991, 2322993; TeleFax: (0471) 2322992; e-mail: keralasc@ieindia.org]





### International Conference on “Future Material Handling Prospects – Opportunities and Challenges”

Ranchi, January 27-28, 2018

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, Ranchi 834002 [☎: (0651) 2491344; web: ieijsc.org; e-mail: jharkhandsc@ieindia.org]

### All India Workshop on “Optimization Tools and Intellectual Property Rights”

Kanchipuram, February 23-24, 2018

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

### Thirty-fourth National Convention of Mechanical Engineers on “Mechanical Engineering and Engineering Challenges for Manufacturing”

Delhi, September 01-02, 2018

The Honorary Secretary, IEI, Delhi State Centre, Engineers Bhawan, Bahadur Shah Zafar Marg, New Delhi 110002 [☎: (011) 23379052/23379948; Fax: (011) 23370489; e-mail: delhisc@ieindia.org]

### Thirty-fifth National Convention of Mechanical Engineers, on “Exploring Trends and Developments in Automobile Engineering”

Hosur, September 13-14, 2019

The Honorary Secretary, IEI, Hosur Local Centre, No.69, Kamaraj Nagar, Kumudepall, Near Adhiyamaan College of Engineering, Tamil Nadu, Hosur 635109 [e-mail: hosurhc@ieindia.org]

### Metallurgical & Materials Engg. Division

#### All India Seminar on “Mechanics, Design and Testing of Composites”

Madurai, January 04-05, 2018

The Honorary Secretary, IEI, Madurai Local Centre, T M Jambulingam Bhavan, 1 Vivekananda Nagar, 100 Feet Road, Surveyor Colony, K Pudur, Madurai 625 007 [☎: (0452) 256 1783; e-mail: madurailc@ieindia.org]

#### Thirty-first National Convention of Metallurgical & Materials Engineers on “Role of Stakeholders in Development of Roadmap for Steel Vision”

Kolkata, January 19-20, 2018

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

#### One Day Seminar on “Nano Composites Materials and Its Applications in Manufacturing”

Salem, February 01, 2018

The Honorary Secretary, IEI, Salem Local

Centre, 3rd Floor, SPC Bhawan, No.104/7, Manivannan Street, Opp to Salem New Bus Stand, Salem 636004, Tamilnadu [☎: (0427) 2332544; e-mail: salemhc@ieindia.org]

#### International Conference of Metallurgical & Materials Engineering Division on “Synthesis, Characterization and Application of Nanomaterials [SCAN]”

Kolkata, November 01-03, 2018

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

### Mining Engineering Division

#### Twenty-ninth National Convention of Mining Engineers on ‘Sustainable Open Cast Mining at Small Mines’

Salem, February 22-23, 2018

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

### Production Engineering Division

#### All India Seminar on “Unconventional Machining and Modern Production Techniques”

Bhubaneswar, February 09-10, 2018

The Honorary Secretary, IEI, Odisha State Centre, Sachivalaya Marg, Unit IV, Bhubaneswar 751001 [TeleFax: (0674) 2390630; e-mail: odishasc@ieindia.org]

#### All India Seminar on “Challenges and Advances of Rapid Prototyping in Production Engineering”

Tiruchengode, February 02-03, 2018

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

#### All India Workshop on “Six Sigma Fundamentals and Applications”

Kolkata, March 16-17, 2018

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

#### Thirty-third National Convention of Production Engineers on “Advances in Manufacturing and Systems Engineering”

Bhubaneswar, May 19-20, 2018

The Honorary Secretary, IEI, Odisha State Centre, Sachivalaya Marg, Unit IV, Bhubaneswar

751001 [TeleFax: (0674) 2390630; e-mail: odishasc@ieindia.org]

### Textile Engineering Division

#### Thirty-first National Convention of Textile Engineers on “Indian Textile Industries: Future Direction”

Hosur, February 17-18, 2018

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

### Interdisciplinary Coordination Committee

#### All India Seminar on “Excellence in Manufacturing and the New Horizon”

Ranchi, January 12-13, 2018

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, Ranchi 834002 [☎: (0651) 2491344; web: ieijsc.org; e-mail: jharkhandsc@ieindia.org]

#### One Day Workshop on “Communication and Personality Development for Engineers”

Ahmedabad, February 10, 2018

The Honorary Secretary, IEI Gujarat State Centre, Bhaikaka Bhavan, Law College Road, Ahmedabad 380006 [☎: (079) 26400811; Fax: (079) 26561825; e-mail: gujaratsc@ieindia.org]

#### All India Seminar on “Making India Self Reliant – Emerging Technologies”

Ranchi, February 24-25, 2018

The Honorary Secretary, IEI, Jharkhand State Centre, Engineer Bhawan, Nepal Kothi Campus, Ranchi 834002 [☎: (0651) 2491344; web: ieijsc.org; e-mail: jharkhandsc@ieindia.org]

#### International Conference on “Emerging Technologies for Sustainable and Intelligent Technologies for HVAC & R Systems”

Kolkata, July 20-21, 2018

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

### National Languages Promotional Committee

#### One Day Seminar on “The System of Running & Rectification of Defects of a Turbo Generator in Eastern India” (in Bengali)

Durgapur, January 15, 2018

The Honorary Secretary, IEI, Durgapur Local Centre, Nehru Avenue, ‘B’ Zone, Durgapur 713205, [Fax: (0343) 256 4770; e-mail: durgapurhc@ieindia.org]

## Notification for IEI YOUNG ENGINEERS AWARD 2018-2019

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 121 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, 2018** 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](mailto:award@ieindia.org) by **March 31, 2018**. 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, 2018**:

**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 2018-19' and name of the engineering division under which the applicant desires to be considered for the Award.



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## Superannuation from IEI



Mr Prabal Sengupta, an employee of the Institution HQ will be superannuated from the services of IEI on January 31, 2018. He joined the Institution on March 24, 1980 and rendered his services to the Institution for a period of over 37 years.



Mr Asish Kumar Chakraborty, an employee of the Institution HQ will be superannuated from the services of IEI on January 31, 2018. He joined the Institution on September 3, 1990 and rendered his services to the Institution for a period of over 27 years.



Mr Ramakant N Shukla, an employee of Pune Local Centre of the Institution will be superannuated from the services of IEI on January 31, 2018. He joined the Institution on April 1, 1978 and rendered his services to the Institution for a period of over 39 years.

IEI wishes Mr Prabal Sengupta, Mr Asish Kumar Chakraborty and Mr Ramakant N Shukla and their family a happy and healthy life in future

# IEI NEWS

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