



# The Institution of Engineers (India)

U.P. State Centre

"98 Years of Relentless Journey Towards Engineering Advancement for Nation Building"

IEI NEWS

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## From Chairman's Desk



Dear Fellow Engineers,

I feel pleasure while expressing my gratitude for your cooperation during 2016-17 and also congratulate to you all for success of all the activities took place during past year. In the year 2018, we started our activities with a Lecture Meeting on 'Space: Satellite Communication & Beyond' on 24/01/2018, 69<sup>th</sup> Republic Day on January 26, 2018, A one day seminar on 'Engineering Interventions for Enhancing Profitability of Sugarcane Farmers' on 04/02/2018 in association with Indian Society of Agricultural Engineers Lucknow-Chapter, Holi Milan on 11.03.2018, One Day Seminar on 'Solid Waste Management & Technology' on 18/03/2018, World Water Day on 22<sup>nd</sup> March 2018 and very recently a Lecture on 'Integrated Management of Water Resources in Canal Command' on 26/03/2018. All the events took place with great zeal and enthusiasm of our honorable members, delegates, eminent academicians and industrialists show the interest in sharing their enrich experiences towards benefits of youngster and the social at large.

We are also planning to educate people at large about the awareness programme to curb the evil effect of climatic and global warming challenges by adopting 'Clean and Green Energy' as much as possible. It's our pleasure in informing you that we have a move to install solar power plant at our Engineers Bhawan of UP State Centre. We are striving hard to organise more and more technical activities in near future and seek your active and continued participation.

**Prof. (Dr.) Bharat Raj Singh, FIE  
Chairman**

## Forthcoming Events at IEI, U.P. State Centre

Sl.No.	Date	Event
1.	May 17, 2018	World Telecommunication Day
2.	June 5, 2018	World Environment Day
3.	June 17-18, 2018	Two day All India Seminar on 'Professional Ethics & Standards'
4.	Oct 2018	Two days All India Seminar on 'SPEED- 2018: Climatic Disturbances & Its Global Impact'

## Lecture on 'Space: Satellite Communication & Beyond'

The Institution of Engineers (India), UP State Centre, Lucknow organised a technical talk on 'Space: Satellite Communication & Beyond' on 24/01/2018. The Speaker Sri S.K. Pandey, Senior ISRO Scientist elaborated the importance of Space and it's various applications for the society. In today's world space has become most important asset and any country with an ambition to progress fast with optimal solution to society needs and looking for strategic solutions for a strong nation, cannot afford to stay behind in space technology. He emphasized that, for our country, it is must to utilize the space science & technology for country's progress. Today satellite communication, navigation, remote sensing, scientific missions, space vehicles and deep space programs of our country are aimed to provide solutions to society in all walk of life; whether it is agriculture, forestry, fishery, urban development, mountains, glaciers, water bodies study or ocean, weather, precise navigation or earth resources planning, exploration and study for integrated natural resources planning. Space technology is providing key solutions and data for all these areas. Satellite Communication has expanded applications like telemedicine, tele-education, village resource centres to reach the masses and providing space technology benefits to all. GAGAN & IRNSS/ NAVIK has provided much needed our own & dependable navigation system for all applications. Sri V.B. Singh, Council member and Past Chairman had conducted the programme and thanked the speaker for his thought provoking presentation and stressed to utilize the available higher end space technologies in all possible application areas. In his closing address he specifically sought to strengthen the policy to adopt space technologies and its available solutions in state like UP, where a big rural area requires the specialized telemedicine and tele-education services on priority. Earlier Dr Bharat Raj Singh, Chairman welcomed the guests. The seminar concluded with a vote of thanks by Shri R K Trivedi, Hony. Secretary.

## Report on 'Republic Day Celebration'

The Institution of Engineers (India), UP State Centre celebrated 69<sup>th</sup> Republic Dy. on January 26, 2018. The National Flag was hoisted by Dr Bharat Raj Singh, Chairman, IEI, UP State Centre at Engineers' Bhawan, Lucknow. In his address he urged the engineers to work hard with sincerity & honesty in order to make our country vibrant one. The gathering was also addressed by other members. At the end Er R K Trivedi, Hony. Secretary also urged the gathering to take the institution to new heights by their efforts and thanked the members who were present on the occasion.

## Report on One day Seminar on 'Engineering Interventions for Enhancing Profitability of Sugarcane Farmers'

The Institution of Engineers (India), UP State Centre in association with Indian Society of Agricultural Engineers Lucknow-Chapter organized a one day seminar on 'Engineering Interventions for Enhancing Profitability of Sugarcane Farmers' on 04/02/2018.



*Chief Guest lighting the lamp*

Chief Guest on the occasion was Dr. A. D. Pathak, Director, All India Cane Research Institute. Guests of Honour were Dr S.R. Singh, Former Vice Chancellor, Rajendra Agricultural University (Pusa) Bihar, Dr Bachchan Singh, Former Dean, College of Technology GB Pant University, Pantnagar (Nainital) and Dr Bangali Baboo, Former Director ICAR. On this occasion Dr. A D Pathak told that sugarcane crop is grown in 50 lakh hectare of land giving yield of 240 lakh tones per year. Livelihood of about 70 lakh farmers depends upon sugarcane cultivation. To achieve the target fixed by our Prime Minister regarding doubling the income of farmers by 2022, sugarcane is the most appropriate crop. He further told that All India Cane Research Institute have developed a new variety of cane, which will increase the production of sugarcane crop by 20%. Apart from it they have developed a new machine, by using which ratoon management will be better, which will in turn increase productivity of sugarcane. Dr S R Singh told the gathering about irrigation management in detail for sugarcane cultivation i.e. when, how much quantity and how to irrigate it. Dr Bachchan Singh elaborated about the use of different implements to be used in sugarcane cultivation, he also emphasized about the role of extension workers to educate the sugarcane farmers by using developed techniques.

Former Director of ICAR Dr Bangali Baboo told that problems of farmers can be solved by Govt. and Scientists working together. Since 10 papers/articles on following subtheme were presented by Scientists, IISR and Department of Agriculture-

1. Mechanization in Pre-Harvest Operations in Sugarcane Cultivation.
2. Mechanization in sugarcane Harvesting and Ratoon Management.
3. Post Harvest Technology and Value Addition.

Convener of the seminar was Dr Jaswant Singh, SCC member Agriculture Engg. Div. At the beginning, Dr Bharat Raj Singh Chairman of State Centre welcomed the guests & delegates; conveyed his happiness that India being agriculture potential country, scientists are doing very best. The programme was concluded with vote of thanks by Er R K Trivedi, Hony. Secretary.

## HOLI MILAN

Holi Milan was celebrated at the Engineers Bhawan, The Institution of Engineers (India), UP State Centre on 11.03.2018 jointly with members of MNNIT Alumni association, Lucknow Chapter.

Dr. Bharat Raj Singh, FIE, Chairman of the Centre welcomed the members and their families with great pleasure and the members present with their family exchanged the holi greetings by putting 'Gulal' on each other's forehead. On this occasion Er. D K Srivastava, Mr. Rajjan Lal, Ms Kalvinder Kaur, Ms Sunaina Jaisawal, Ms Sonali Srivastava, Mr Sanjeev Shukla etc. entertained the audience with their songs, poems and Jokes in accordance with the Holi mood celebration. Few of our veteran Engineers also entertained the audience by their songs and jokes.

The cultural program was convened by our member Er D. K. Srivastava also a member of Suraagan Kala Kendra very successfully. The program ended with a vote of thanks by Er R. K. Trivedi, Honorary Secretary.

## Report on One Day Seminar on 'Solid Waste Management & Technology'

One Day Seminar on 'Solid Waste Management & Technology' was organized at The Institution of Engineers (India), UP State Centre on 18/03/2018. The Chief Guest on the occasion was Dr Sushil Kumar Agarwal, FIE, Director Bansal Institute of Technology, Lucknow & Keynote Speaker was Dr. Y.P. Gupta, FIE, Technical Adviser, Naini Bridge Information Centre, Allahabad.



*Lighting the lamp*

On this occasion Chief Guest emphasized that in order to achieve Swachh Bharat Mission of Hon'ble Prime Minister; we have to switch over to integrated waste management instead of conventional method. Integrated Management includes reduction of solid waste, its recycling, reuse & disposal in low lying areas (land fills). He also dealt in details about converting bio-degradable waste, Plastic metals & electronic waste into useful materials so that it can be reused.

The Keynote speaker Dr. Y P Gupta in his address elaborated as to how the solid waste generated by industries, local bodies, agricultural & various other field, which are in the form of solid, liquid & Gas, can be recycled and converted in the form, of useable material, for example construction & demolition waste can be converted into aggregates for use in low grade concrete then to cast bricks similar to burnt clay bricks in India, similarly

polythene waste can be processed to convert it in the form of perforated, concrete type blocks or thick slab. These can be laid for rain water harvesting on drive ways, road sides, footpath etc.

The bio degradable waste like kitchen waste, agricultural waste & flowers can be converted to make manure for agricultural use. In all 7 papers/articles were presented.

All the speakers in their presentation dealt in details about waste generation, city & river waste analysis, management of waste, recycling of waste, process of non-bio degradable waste, Plastic waste and its recycling, construction of perforated concrete blocks using polythene waste, use of bio degradable waste in preparing manure, vermi compost, etc.

Technologies for recovery of useful material from waste were also discussed besides generating energy from bio- degradable waste.

While welcoming the guests and members, participants, Prof. Bharat Raj Singh, Chairman UP State Centre expressed that some positive solution for proper utilisation of Solid Waste may come out during this seminar. The convener of the event was Er. V B Singh, Council Member & Past Chairman of UP State Centre. The programme was concluded with vote of thanks by Er R K Trivedi, Hony. Secretary.

Recommendations on the basis of Seminar are given below-

- **The MSW are to be dumped somewhere which needs lots of free space or waste ground and corresponding transportation which means costs.**
- **Waste processing will not only clean but will also generate the availability of resources and employment.**
- **For such waste processing small scale units at outskirts of city or nearby areas or on the spot itself may be established for minimizing transportation cost.**
- **Extracting aggregate from demolition waste lying on Road sides or river banks can be used in making Aggregates and thus bricks.**
- **It will also help in establishing industry at nearby places.**
- **Compost or Soil improvers made by any one of the two or similar method will be very useful for Organic Farming (JAVIK KRISHI).**

Perforated Polymerized concrete slab or such blocks can be used for rain water harvesting from pathways, driveways etc.

### Report on 'World Water Day-2018'

World Water Day was organised by UP State Centre of IEI on 22nd March 2018 at UP State Centre. Er A. K. Ojha, Former Engineer-in-Chief and HOD UP Irrigation Department was the Chief Guest. Main Speaker on this occasion was Prof. Jamal Nusrat, Former Superintending Engineer of Irrigation Department, who, while speaking on the theme 'Nature for Water' elaborated in details about the role of Nature in solving water related problems. He told the gathering that today the Science has made computer, which works as a book, album, bank, wallet and have so many other features but alternative of water has not been discovered, neither it is possible. We all know the importance of water & there is no shortage as such but it is poor management due to which water is getting scarce.

Effective implementation of, ground water recharging, roof top harvesting & other measures for increasing ground water level, is not being done.



*Chief Guest lighting the lamp*

Moreover there is lack of awareness among people due to which wastage of water is being done. Former Chairman UP State Centre & Council Member Er V B Singh who was the convener of the event intimated that in Israel average 10 centimetre rain fall occurs in a year but with its effective use, sufficient food grains are produced there, even they are exporting to other Countries, in India in spite of more than 50-60 c.m. of rain fall, we are not able to properly use this water in agriculture & other fields, because of lack of effective water management.

Chief Guest Er A. K. Ojha told the gathering that about two billion people in the World do not have excess to potable water, due to use of contaminated water about 22 lac people die every year. Whatever, we use or draw, we should return back to the nature, it should be our responsibility. In big cities like Mumbai & Chennai 25%-45% water is wasted in leakages & in Mumbai alone 50 lack litre of water is used daily in Car/Vehicle washing only.

This is time to take effective steps for ground water management otherwise within next 10 years acute water problems will crop up in the whole Country.

At the beginning of programme, Prof Bharat Raj Singh, Chairman, UP State Centre welcomed the guests, participants and told the gathering about the importance of World Water Day. The programme was concluded with vote of thanks by Er R. K. Trivedi, Hony. Secretary.

### Lecture on 'Integrated Management of Water Resources in Canal Command'

A technical lecture meeting was organized at The Institution of Engineers (India), UP State Centre, Lucknow on 26.03.2018 on the topic 'Integrated Management of Water Resources in Canal Command'. The Speaker was Dr P.K. Srivastava, Retd. Chief Engineer of UP Irrigation Department. Dr. Bharat Raj Singh, Chairman, UP State Centre while welcoming the guests and Keynote Speaker, emphasized on the need of integrated management of water resources as ground water recharge is hardly 25% of the total rainfall occurring during a year. Ground water recharge from rainfall is hardly able to meet out irrigation, drinking and Industrial requirement of water. Dr P.K. Srivastava stressed that

these canals were largely constructed to provide protection to crops from famines and droughts. The concepts in irrigated agriculture have changed since then to meet the food/fiber production needs of the ever-increasing population and from sustenance to intensive agriculture. This heavy dependence on groundwater resource for intensive cultivation, together with increased use of chemical fertilizers and pesticides has led to its overexploitation and consequent water table decline at an



*Speaker addressing the gathering*

alarming rate. Response of high yielding varieties is better with chemical fertilizers requiring more and frequent water application.

Moreover, water use for agriculture cannot be considered in isolation of other uses. This requires an integrated approach for sustainable water resources planning, management and operation under a river basin framework. Due to competition

from increasing demands for agriculture, domestic, power, industrial, environmental and other uses, allocation of water to different stakeholders in appropriate quantity and quality has become increasingly difficult. Freely spatial availability of ground water has increased its use very rapidly. In alluvium plains of Uttar Pradesh average annual rainfall is 900-1000mm and the excepted average ground water recharge is about 25%, that comes out to be only 225-250mm. The rates of recharge and evapotranspiration are the most difficult and uncertain components to estimate in groundwater budget, and they often vary spatially and temporally. Alone annually replenishable ground water from rainfall can never meet out irrigation requirements for all the three seasons and other drinking and industrial requirements. It will always reach in overexploited category and ground water will start depleting and energy cost in lifting ground water will go on increasing and this will create extra overburden on small land holding farmers, thereby decreasing their gross margin for livelihood. Spatial sustainability of annually replenishable ground water resources is manageable only at field level by considering the actual land cover and using canal water in conjunction with ground water reservoir. An integrated approach considering surface water and ground water is imperative at field level incorporating modelling output. The seminar concluded with a vote of thanks by Shri R K Trivedi, Hony. Secretary.

### Request for Invigilation Work for AMIE Examination

Members are requested to send their willingness for Invigilation Work in AMIE SUMMER-2018 Examination to be held from 2nd to 8th June, 2018. A remuneration as sanctioned from the HQ shall be paid.

**Er. R. K. Trivedi**  
Hony. Secretary

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