



# The Indian Engineer

Value what you do, do what you value - Kumar Mangalam Birla

Two roads diverged in a wood - and I took the one less traveled by. That made all the difference. - Robert Frost

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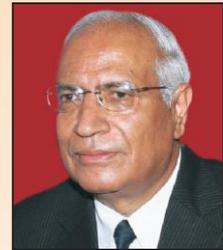
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## From the Chairman's Desk



ECI is completing ten years of its service to the Indian Engineering Profession on April 4, 2012. To commemorate the occasion, ECI has instituted an Eminent Engineer Award, to be given to a person with engineering background who has contributed significantly to any field of engineering such as academics, research, design, consultancy, project implementation, industry, or, has held top level engineering/management positions in corporate, government, industry, academic, research and other institutions, etc. S/he should have demonstrated innovative thinking and leadership qualities, have impeccable and unblemished record, not subjected to any disciplinary or criminal proceedings and have contributed significantly to sustainable economic development and social welfare. A top-level Jury has been constituted for selecting the candidate for the prestigious Award under the Chairmanship of Shri K.C. Pant, former Dy Chairman, Planning Commission. Dr Kirit S. Parikh, Chairman, Integrated Research and Action for Development (IRADe) and former Member, Planning Commission; Dr. V. Krishnamurthy, Chairman, National Manufacturing Competitiveness Council (NMCC) & former Member, Planning Commission and CMD, SAIL; Dr. R.A. Mashelkar, National Research Professor, National Chemical Laboratory, Pune and former Secretary, Department of Scientific and Industrial Research and DG, CISR; Shri B. Muthuraman, President, CII & Vice Chairman, Tata Steel Ltd.; Dr. P.V. Indiresan, former Director, IIT Madras and Shri A. C. Wadhawan, former Chairman & Managing Director, Hindustan Zinc Ltd., Chairman, Public Sector Enterprise Selection Board are its distinguished members. Nominations were invited from member associations, industry associations, concerned government agencies, leading public and private sector companies and leading engineering institutions. The Jury met on March 15, 2012 and considered about 25 nominations received for the Award and decided to confer this very prestigious Award in 2012 on Dr. E. Sreedharan, Principal Adviser and former MD, DMRC for his significant and distinguished contribution to building rail and mass rapid transport projects. The Award will be presented on April 4, 2012 at the 10th Foundation Day function.

Continuing with its focus on industry-related engineering education, ECI organized the 7th National Convention with the theme "Industry-Specific Engineering Education for Better Employability of Engineers - Contours of Reform" jointly with the ITM Universe, Vadodara and IIM, Vadodara Chapter on January 28, 2012 at Vadodara to get a consensus on the final contours of reform of the engineering education system. The proceedings are being prepared and will be circulated to all member associations. The 3rd EDP programme on Project Management was organized during February 21-25, 2012 at New Delhi. It was very well attended both from the public sector and private companies.

The draft Engineers' Bill has made some progress in the long journey till it is passed by the Parliament. ECI is following up this important matter almost on a regular basis with the Ministry of HRD.

  
(Uddesh Kohli)

### Thus Spoke Dr. E. Sreedharan

Dr. Sreedharan stated in an interview published in the Times of India on December 9, 2011 that :

*"The main reason why the engineering profession has not been able to reach international levels is because of a lack of a regulatory body, like the ones that are there in other professions like medicine..... We have raised this issue with the authorities but the government is going very slow....."*

### Forthcoming Programmes for Engineers

Continuing with the programme for multi skilling of engineers, ECI is contemplating to take up short EDP programmes on "Law, Economics, Communication, Statistics, Technology Management for Engineers. The details are being worked out and will be announced in due course.

### Breaking News

#### Dr. E. Sreedharan selected for the first prestigious Award of Eminent Engineer 2012 of Engineering Council of India (ECI)



Dr. E. Sreedharan was selected by a high-power jury from out of the 25 high-quality nominations received for the award. The award will be conferred on him at the Foundation Day Ceremony on April 4, 2012 at New Delhi.

**A Society of Women Engineers (India) (SWE(I))** is under formulation. Reader engineers are requested to kindly let ECI have information on working women engineers that they may have, which they may email on [director@ecindia.org](mailto:director@ecindia.org), [eci@ecindia.org](mailto:eci@ecindia.org) and [pnshali@gmail.com](mailto:pnshali@gmail.com). ECI contemplates to organize a day's seminar at New Delhi to discuss matters concerning women engineers for facilitating establishing the society.

### Amazing Double Headed Animals - It's Real

The oldest two-headed animal is a good 120 million years old. The fossil of this ancient lizard discovered in 2007 proves that animals with multiple heads are an ancient phenomenon. There are two variants – animals with two heads (bi/dicephalus) and animals with two faces on one head (diprosopus). These are all instances of congenital cephalic disorders, i.e. genetic disorders that lead to anomalies in embryos. Is pollution of natural resources playing a key role in increasing the number of such cases? There is yet no conclusive answer to the debate (via e-mail).

## From Editor's Desk

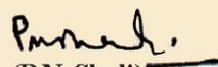


**Wake up, unite and resist engineers with full force the onslaught on your profession by the powers that be - as you are loosing professional jobs for which you are qualified day-by-day.**

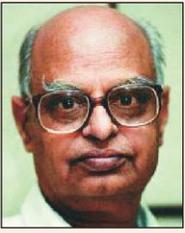
Discouraging and unfortunate news for engineers has come in. It is the recent cabinet approved of the new companies' bill. Vide this bill, only chartered accountants, company secretaries, cost & works accountants have been made eligible professionals to do valuation work including of land, buildings, plant, machinery, agriculture, etc. It is a very sad development for engineers. Till now only engineers were competent to undertake valuation jobs for industrial units, banks, financial institutions, etc. With this new companies' bill, engineers cannot be valuers - for which they are only competent. The chartered accountants, company secretaries, cost & works accountants are all basically commerce graduates as such.

The other development worth reporting is an advertisement which appeared in the national news papers recently inviting therein expression of interest from consultants for Conservation Management Plan for Rastrapati Bhawan and its Precincts from the Chief Architect, CPWD. The eligibility of expression of interest in this advertisement has been restricted only to architects and architectural firms, who can only apply. Engineers and consulting engineering firms, having experience in this field, have been left out of this. Excluding engineers and consulting engineering firms having experience in the work involved in the Conservation Management Plan for Rastrapati Bhawan and its Precincts discriminate against them. There are many engineers and consulting engineering firms qualified to take up such assignments, particularly specialized and experienced in restoration/conservation/ planning of landmark heritage properties. It is well known that many of their works have been widely acclaimed. One would also appreciate the fact that such projects require well coordinated contributions of specialized skills from several disciplines, mostly of engineering, and some architectural inputs as well.

So, engineers are loosing one-by-one their areas of work for which they are the competent professionals. Why is it happening? The answer to this burning question is that engineers are not recognized as professionals legally in India, as the other professions are which include, architects, lawyers, doctors, chartered accountants, company secretaries, cost & works accountants and even nurses. Engineers must unite for fighting these misplaced and counter productive steps that are being taking by the powers that be. Fortunately today, we have the Engineering Council of India (ECI), which was incorporated on April 4, 2002 as an apex body of engineers at the national level by coming together of a large number of professional organizations/institutions of engineers inter alia also for facilitating bringing in on the statue the Engineers Act for regulating engineering profession in India and take up policy issues concerning engineers from time-to-time with the concerned competent authorities. ECI took up issues of recognition of engineers in the Master Plan of Delhi as professionals and the demoralization of engineers following reports on commonwealth games. The council is also seized of the aforesaid issues concerning engineers; and it will be taking up these also with the competent authority.

  
(P.N. Shali)

## Eminent Indian Engineer : Dr P.V. Indiresan



Dr. P V Indiresan, an eminent and distinguished academician, fondly remembered by his students and colleagues, a very humble person, has created a niche for himself in the academic space of India, which is very well recognized in the country and abroad. Prof. P V Indiresan served as the Director of IIT-Madras for twenty years from 1978 till his retirement in 1998. He is considered as the best ever Director the Institute had. His students have built a hostel in his name at IIT Delhi. One of his former colleagues has donated a corpus to IIT Delhi to establish an annual lecture in his name. He started his career at the University of Roorkee and then joined IIT Delhi. Professor P.V. Indiresan has taught in the IITs for forty years. Prof. Indiresan is a prolific writer on societal, economic and development issues. He is also a regular columnist with national dailies like Hindu Business Line - for which he writes on alternate Mondays, the Hindu and the Indian Express. The Consultative Group of eminent senior scientists set up under the Chairmanship of Dr. A.P.J. Abdul Kalam, former President of India, has produced a Draft Technology Policy statement drafted by Dr Indiresan. He has also served the Planning Commission, Government of India.

### Present Positions Held

Currently, Professor Indiresan is the Chairman of the Netaji Institute of Science and Technology-an autonomous institution of the Government of Delhi, the National School of Management, Chennai, Director of the Indian Institute of Risk Management, and Director of the Indo-Sri Lanka Foundation set up jointly by the two governments, a member of the Consultative Group of Eminent Senior Scientists set up under the Chairmanship of Dr. A. P. J. Abdul Kalam, Former President of India

### Academic Positions Held

Professor Indiresan has been a Visiting Professor at the Imperial College, London, and a Fellow at the Wissenschaftskolleg at Berlin. He founded the School of Radar Studies, now renamed as the Centre for Applied Research in Electronics. He also served there as a Dean for Examinations and Undergraduate Studies.

### Professional Positions Held

Professor Indiresan is one among the two dozen Honorary Members of the Institute of Electronics and Electrical Engineers, USA, among whom a dozen are Nobel Prize winners. He has been the President of the Institution of Electronics and Telecommunication Engineers, the President and a Fellow of the Indian National Academy of Engineering, a distinguished Fellow of the Institution of Electronics and Telecommunication Engineers, and Honorary Fellow of the Indian Railway Society of Signal and Telecommunication Engineers. He has the rare honour of being made an Honorary Member by the Institute of Electrical and Electronics Engineers, USA.

### Awards & Recognitions

Professor Indiresan has won many prestigious awards and recognitions. The list is very large, indeed. Notably among these include: the Padma Bhushan conferred on him by the President of India. Lifetime Achievement Award by the Indian Institute of Science and the Honorary D.Sc. by the Karnataka Technical University. He was awarded twice the highest prize of the Inventions Promotion Board, Government of India.

### Books Authored

Professor Indiresan has written two books namely: Managing Development: Geographical Socialism, Decentralisation and Urban Replication as well as Vision 2020: What India Can Be and How to Make That Happen. He has also authored chapters in over thirty books. He has a regular fortnightly column in the Hindu Businessline. He has written several hundred articles on societal and technical issues in Indian journals. He prepared the final report "Driving Forces and Impedances" of the Vision 2020 series compiled under the direction of former President of India, Dr. A.P.J. Abdul Kalam.

Professor Indiresan was educated in Presidency College, Madras, Indian Institute of Science, Bangalore and at the University of Birmingham, UK.

## A Tribute - Prof. S.V. Arya, by J. S. Bali (December 29, 1926-January 15, 2012)

Prof. Surendra Varma Arya, one of the brightest stars of agricultural engineering profession of India, passed away on 15th January, 2012. He celebrated his 86th birthday and 85 years of an illustrious life just a fortnight back on December 29. I used to describe him; right from the time I met him in 1947, as a person whose whole weight was that of brain. From a humble beginning in the village of Barwan in Hardoi district of U.P., he rose to the highest academic position of Vice Chancellorship of the Jabalpur Agricultural University. His six years of Vice-Chancellorship were preceded by as many as twenty years as the Dean in the same university. His comparatively small physical body always reminded me of the fact that many of the greatest men of the word had been small in size. In 1947, when I first met Prof Arya, he had already passed his B.Sc. in Agricultural Engineering, standing first-class-first and winning the University Gold Medal. But he was a student of B. Sc (Agriculture). Asked about the reason for this pursuit, he said he got his agricultural engineering at such a small age that he was younger than the prescribed minimum age for government service. Prof Arya was indeed a child prodigy. Prof. Mason Vaugh, Head of the Department of Agricultural Engineering, had rightly chosen him for his special favors. Prof. Arya later went to the USA and got his Master's degree. Our paths crossed again at the Department of Agricultural Engineering of the I.I.T. Kharagpur, through which passed many future stars of the profession. He



contributed immensely towards the development of the agricultural engineering profession in the country. He was prominently present at the birth of the Indian Society of Agricultural Engineering in 1963. He had also then acquired an interesting hobby of collection of world's coins. In general knowledge, nobody was his equal. He was indeed a man of many parts. Prof. S. V. Arya, was a successful man. He was a good student, good teacher, good father and above all a good friend. His wife, Sushila, passed away in 1992. Their residence was an open home for the needy. He leaves behind five sons and a daughter, all well-educated and well-placed. Like we say of the King, let us say of him: Prof S. V. Arya is dead, long live Prof. S. V. Arya. He served as one of the founder Teachers of the prestigious Indian Institute of Technology (IIT) at Kharagpur for nearly 14 years, before joining the Agriculture University at Jabalpur. We all are so saddened on the demise of a pioneering and one of the greatest agricultural engineers of India - Dr. S.V. Arya. He had moved from IIT Kharagpur when I entered the institute in 1966. However, he had left lasting impressions on the department. I never had a chance of working with him or attending his class. However, I have always heard great things about him from those who had the privilege and good fortune of working with him, attending his class and/or working or getting education under his leadership. I am sure his good deeds on the Earth have a seat reserved for him in the heaven. My deep hearted condolences for his surviving family members and prayers for peaceful rest for the departed soul.

## News Corner

### 3rd EDP on Project Management for Engineers



Continuing with the programmes taken up for multiskilling engineers, ECI organised the 3rd Executive Development Programme on Project Management for Engineers was held during February 21-25, 2012 at New Delhi.

Thirty six senior engineers, both from the public sector and private sector companies, attended the programme.

### 7th National Convention

Continuing with the discussions on the reform of engineering education for better employability of engineers, ECI jointly with the ITM Universe, Vadodra organized 7th National Convention on the theme:



Industry - Specific Engineering Education for Better Employability of Engineers-Contours of Reform on January 28, 2012 at the ITM Universe Campus, Vadodara, Gujarat. It was very well attended by

both the industry and academia. The Reliance Industries Ltd was the Principal Sponsor of the Convention.

### Bosch Group, has chalked out an ambitious plan to push its existing capacity in India

The Germany-based engineering giant, Bosch Group, has chalked out an ambitious plan to push its existing capacity in India matching local market requirements entailing an investment of Rs. 2,500cr. Out of the total targeted investment it plans to invest Rs. 150cr in setting up a manufacturing plant at Sanand in Gujarat for making electrical controls and drives and the unit is expected to become operational in 2012, Chairman Automotive Group, Bernd Bohr said. He added that apart from this, the group is also setting up a greenfield facility at Verna in Goa for packaging solution and another plant in Chennai for electrical drives. The investment plans also included capacity expansion of its existing plants at Jaipur, Nashik, in Maharashtra and Naganathapura in Bangalore. A major chunk of investment will be used to manufacture products for growing local demands as after having met Bharat Stage III norms with the inline pump, the company is putting in more efforts to upgrade these pumps for higher injection pressure to meet future emission norms. It is also investing huge funds in software engineering and developing power trains electronics for gasoline and diesel engines along with hybrid and electric vehicles. It has already acquired land in Coimbatore for setting up its own software technology development campus and engineering labs.

## View Points

### Role of Engineers in the 12th Five Year Plan - Dr Janardan Swarup, Former Senior Scientist, CSIR

Engineers, technocrats and scientists have a great role for the development of country mainly for rural areas. They have to work for the development of infrastructures like roads, housing etc, development of agriculture, irrigation methods, electrification, post harvest technologies, technologies for cottage, small scale and large scale industries. In this way they may work in many areas and may contribute for the development of India. In rural areas, main challenge is to provide such technological and engineering solutions which will help in their economic development and give solutions for their human welfare. For this purpose there is need to develop technologies which are based on natural resources and waste and implement such technologies in rural areas mainly for cottage and small scale industries. For energy, non conventional sources like wind energy, solar energy, small scale hydro electric units etc. (via e-mail).

### Quality of Engineering Education - A way forward - Shri S. Mohan Prasad, Project Management Consultant

Quality of education in the disciplines of engineering and engineering technology is based on the present "National Qualification Framework" for academic mobility pertaining to the regular academic education in the disciplines of engineering and engineering technology. This realizes the heuristic demand for quality and grade from academic perspective. But for realizing the vocation ability of engineers and engineering technologists, an holistic view incorporating industry and society from world class perspective along with the "National Qualification Framework" that is in prevalence for academic mobility in higher education in the disciplines of engineering and technology, could be a value addition in the facilitating process for an effective system in the educational curriculum of engineering and engineering technology. This can be achieved by incorporating the theory and vocational practice orientation of engineering and engineering technology that realizes the required quality in engineers and engineering technologist for national and international mobility.

A clear segregation between an engineering oriented and engineering technology oriented education program will further facilitate for world class characteristics for national and international mobility of engineers and engineering technologists. Since the technology oriented education is fast crossing the boundaries of engineering and

finds application in all types of sciences apart from engineering science, segregation of these finds more vitality in practice for engineers mobility and engineering technologists mobility from other disciplines of technology so as to enhance quality in the appropriate disciplines of engineering, engineering technology and other disciplines of technology. This paper provides a view that is of suggestive in nature for realizing the above objective by incorporating the required proven value additions from the prevailing vocational stream in the engineering and technology curriculum with practice orientation and are to be incorporated in the main stream curriculum as per "National Qualification Framework" for realizing the quality of human potentials in disciplines of engineering and engineering technology (via e-mail).



## Message

**Engineers and Technologists should come to the forefront says Shri S.C. Suri, Vice Chairman, The Indian Institute of Metals - Delhi Chapter & former Executive Director, SAIL.**

India is a land of tremendous talent and potential. We all desire that India should move towards being a global power. Unlike the west, India is familiar with good and bad times. It has been able to come out of the crisis successfully. The Indian economy is presently passing through a rough patch. Malaise of bad times has presently spread to India. We are facing problems in the steel, energy and infrastructural sectors. These sectors constitute the core of the Indian economy. Removal of infrastructure bottlenecks has the potential to increase the country's GDP by 2%.

Engineers play a significant role in design of buildings, roads and bridges, steel plants, ports and harbours. Other areas where engineers and technologists play a dominant role are energy and water security. It is difficult to imagine any developmental activity where engineers do not play a vital role. Achieving sustainable development is not possible without the full scale involvement of engineers and technologists. It is strongly felt that, be it in the area of decision making, strategy planning or project implementation, engineers and technologists should have a pivotal role. It will pay rich dividends and give a boost and impetus to the growth and development of Indian economy.

## News from the Member Associations

### Association of Consulting Civil Engineers (India), ACCE(I)

The Bangalore Centre of ACCE(I), in its constant endeavor to server the civil engineering fraternity, organised REDECON 2012 - the fifth National Seminar on current topics of interest and need during February 22-24, 2012 at Bangalore, Karnataka. The seminar brought together practicing engineers, scientists, researchers, and others from around the country to share their knowledge and experience on current developments in repair, rehabilitation and retrofitting. A review of the performance of structures and their material durability with a view to extending their life for maximizing economic return was in focus. The event has developed a tradition of combining research and development aspects with practical case studies aimed at identifying and communicating both tomorrow's technology and today's construction solutions. The event was a grand success.

### Broadcast Engineering Society (India) (BSI)

BSI organized EXPO 2012- Broadcasting Through Multiple Platforms during February 11-13, 2012 at Pragati Maidan, New Delhi. It was a grand success with participation both from the industry and academia. A very high quality exhibition was also a part of the event. A large no of people also visited the Expo.

BSI was established in 1987. It is the largest society of broadcast professionals in India. The Society aims at promoting the cause of radio and TV broadcasting in India through lectures, seminars, conferences and exhibitions. BES EXPO, an International Conference & Exhibition on Terrestrial and Satellite Broadcasting organised by the society every year, is a step in this direction. The Society has ten local chapters located in Ahmedabad, Bangalore, Bhubaneswar, Chennai, Hyderabad, Kolkata, Mumbai, Jaipur, Thanjavur and Thiruvananthapuram. At the time of going to the press, the Society had more than 2,000 individual and 40 corporate members on its rolls.

### Computer Society of India (CSI)

CSI is bringing out its newsletter published on 1st of every month and is a compilation of information from different sources with due acknowledgement to the respective sources. It is hoped that these would be of interest to ICT professionals, academicians and students and serve as reference Pl. No endorsement of products/services referred to in the newsletter is done. For the archives, visit <http://www.csi-chennai.org/csi-enl/csi-enl-archives.htm> or at <http://www.csiindia.org/web/csi/archives>. An international conference on "Recent Advances in Computing and Software Systems" (RACSS-2012) being jointly organized by the Dept. of CSE, SSN College of Engineering, Chennai in association with IEEE Madras Section, IEEE CS, CSI Chennai Chapter & Div IV during April . 25 - 27, 2012 at Chennai. For details contact: Dr. Chitra Babu. Phone: +91-44-27469700, Email: [racss2012@cse.ssn.edu.in](mailto:racss2012@cse.ssn.edu.in) Web: <http://www.racss2012.com>. An international conference on "Advances in Cloud Computing (ACC-2012)" is being organized during July 26-28, 2012, at Bangalore. For details visit <http://www.acc-2012.org/index.php>. The 3rd international conference on "Emerging Applications of Information Technology (EAIT 2012). Is being organized during November 29 - Dec 1, 2012 at Kolkata. For details visit <https://sites.google.com/site/csieait2012/>. The 47th Annual National Convention of CSI (CSI 2012). Is being organized during December 1-2, 2012 at Kolkata. For details visit: <http://csi2012.csi-kolkata.org>.

### Consultancy Development Centre (CDC)

A certification programme in Management Consulting was held successfully during January 22- March 25, 2012 at the office of CDC , New Delhi. CDC has also announced various other programmes including for the government officers. The TCDPAP Annual Conference on "Technology & Knowledge Transfer and collaboration among Consultants in the Asia Pacific Region" was successfully held at Colombo, Srilanka from 2-3 March, 2012. For details of all the future programmes of CDC, particularly for engineer consultants visit:

[www.cdc.org.in](http://www.cdc.org.in) or send a mail to: [pooja@cdc.org.in](mailto:pooja@cdc.org.in).

### Consulting Engineers Association of India (CEAI)

CEAI is organizing a National Seminar on "Rural Infrastructure - Need & Issues" on April 27, 2012 at New Delhi. It is supported by the Ministry of Rural Development and is likely to be inaugurated by the Minister of State for Rural Development. Representatives from various government organizations at the central and state level, NGOs, public & private sector will attend the seminar. A number of technical papers from eminent speakers have been received. A Souvenir containing technical papers, messages and other useful information will also be brought out and widely circulated to government departments, PSUs etc. The proceedings of the seminar will be prepared after the event and widely circulated for the benefit of consulting engineers. For details send email to Lt Col Arun Sharma, Retd. Director, CEAI on : [ceai.ceai@gmail.com](mailto:ceai.ceai@gmail.com) or visit website: [www.ceaindia.org](http://www.ceaindia.org)

### Construction Industry Development Council (CIDC)

4th CIDC Vishkarma Awards 2012 were conferred at a function held on March 10, 2012 at New Delhi. CIDC has announced its training programmes for the year 2012-13. For more information on these programmes, send a mail to [edp@cidc.in](mailto:edp@cidc.in); [cidcfbd@gmail.com](mailto:cidcfbd@gmail.com).

### Indian Association of Structural Engineers (IAStructE)

IAStructE has been organizing continuing education courses regularly on different topics for civil/structural engineering students, engineers, planners, contractors, suppliers and all stakeholders. An induction course on Structural Engineering Practice was organized in March, 2012 at New Delhi for fresh civil/structural engineers employed in government, public and private sector companies, and engineering consultancy firms. The 6th student essay competition for final year civil engineering students and the postgraduate (Structural Engineering) students has been announced. For further details on this, visit [www.iastructe.co.in](http://www.iastructe.co.in), send a mail to [iastructe@gmail.com](mailto:iastructe@gmail.com) or Fax your query on 011-24312183.

### Indian Concrete Institute (ICI)

ICI is organizing the Concrete Congress (Ukieri, 2013) on Innovations in Concrete Construction during March 5-8, 2013 at Dr B R Ambedkar National Institute of Technology Jalandhar - 144 011 (Punjab). The Congress will be honouring seven distinguished persons from world over who have made outstanding contributions in the area of science & technology, design and construction related to cement and concrete. India is a country of massive opportunities and potential and has become of strategic importance, globally. The congress will bring together global experts and providers of materials, design, techniques and innovations to this unique event; and it will act as sounding board for new ideas, knowledge exchange and experience in an environment that lends itself to communication and application resulting in genuine learning by doing and adoption. For details visit [www.ukiericoncretecongress.com](http://www.ukiericoncretecongress.com).

### Indian Geotechnical Society (IGS)

The prestigious 34th IGS Annual Lecture 2012 shall be delivered by Professor B.R. Srinivasa Murthy, Professor Emeritus, IISc, Bangalore at IGC-2012 being held during December 13-15, 2012 at New Delhi. The IGS-Ferroc Terzaghi Oration will be delivered by Prof. Kerry Rowe on 5th Oct' 2012 in Delhi. IGC-2012 and Terzaghi Oration, both prestigious events in IGS calendar are being organized by the IGS Delhi Chapter. Further, under the recent MOU between IGS and Korean Geotechnical Society (KGS), IGS is planning to have a one day workshop on "Urban Geotechnical Engineering" during IGC-12 at Delhi. A team of experts led by the President of KGS will be contributing in this. For details visit [www.igs.org.in](http://www.igs.org.in).

### Indian Institute of Chemical Engineers

No major activities undertaken during the period January-March, 2012 were reported.

### Indian Institute of Industrial Engineering (IIIE)

A workshop on project report writing, resume writing and interview techniques for IIIE engineering and management students was organized by the IIIE Belapur Chapter on January 29, 2012, at the NHQ of IIIE in Navi Mumbai. The workshop was co-hosted by the Lokmanya Tilak College of Engineering, Navi Mumbai. It was very well attended. The date and the venue of the 16th CEO's conference of Chief Executive Officers comprising Chairmen, Managing Directors, Directors at the Board Level, Unit Heads, Presidents, Vice Presidents, Sr. Executives in the Private and Public enterprises, Heads of Academic and Financial Institutions will be announced shortly. The conference, which is held every year since 1998, discusses papers and case studies from academicians, industrial engineers, business and corporate professionals on the related issues and sub-themes.

### Indian Institute of Marine Engineers (I) (IIMEI)

IIMEI, Kolkata Branch organized its Annual Technical Paper Meet on "Safe Ship and Safer Shipping" on January 14, 2012 at Kolkata and its 41st Annual Contributory Dinner on February 18, 2012 at Kolkata. The WMTC: a world maritime technology conference & exhibition 2012 is being organised during May 29 - June 1, 2012 at Saint Petersburg, Russia. For details visit : [wmtc2012.org](http://wmtc2012.org)

### Indian Institution of Plant Engineers (IIPE)

No activity undertaken during January-March, 2012 was reported.

### Indian National Academy of Engineering (INAE)

INAE, an autonomous institution encourages and promotes pursuit of excellence in the field of 'engineering' covering the entire spectrum of engineering disciplines. INAE invites nominations for the following Awards /Scheme in the stipulated format contained in INAE website : [www.inae.org](http://www.inae.org). INAE Young Engineer Award 2012. The last date of receipt of nominations is May 31, 2012. Innovative Student Projects Award 2012. The last date of receipt of nominations is July 7, 2012. AICTE-INAE Distinguished Visiting Professor Scheme. The last date of receipt of nominations is April 30, 2012. For details visit : [www.inae.org](http://www.inae.org).

### Indian National Group of the IABSE (INGIABSE)

INGIABSE organized a seminar on Steel Structures- Design and Fabrication on January 6, 2012 at New Delhi. Shri C. Kandasamy Director General (Road Development) and Special Secretary, Ministry of Road Transport and Highways inaugurated the seminar which was very well attended both by the industry and academia. Consulting engineers also attended the seminar.

### Indian Society for Technical Education (ISTE)

ISTE organized an international conference on Control of Industrial Gaseous Emission during February 9-10, 2012 at Annamalai University, Department of Chemical Engineering, Annamalai Nagar, Tamilnadu. It was very well attended both by the industry and academia.

### Indian Society of Agricultural Engineers (ISAE)

ISAE organized jointly with the G.B. Pant University of Agriculture and Technology, Agricultural Machinery Manufacturers, Association, American Society of Agricultural and, Biological Engineers and the Canadian Society for Bioengineers 46th Annual Convention of the society and International Symposium during February 27-29, 2012 at G.B. Pant University of Agriculture and Technology, Pantnagar, Uttarakhand. The convention was convened to bring all stake holders of food chain and environmental concern at a single platform where they will inform, discuss, interact, brain storm the issues concerning all aspects related to Agricultural Engineering. A session on industry related issues was the highlight of the convention.

### Institute of Civil Engineers (India)-(ICE(I))

The 22nd executive committee meeting of the Asian Civil Engineering Coordinating Council (ACECC) was held in Tokyo, Japan, during 1st and 2nd March 2012. The Institution of Civil

Engineers (India) is the member of the ACECC representing India in this International August Body. The Chairman and the Director of the Institution of Civil Engineers (India) attended the Executive Committee Meeting as per schedule.



### Institute of Urban Transport (India)

The Workshop on Institutional Framework for Institute of Urban Transport is scheduled to be held during April 26 - 27, 2012 at ASCI, Hyderabad.

### Institution of Automobile Engineers (India)

The Automobile Society (India) has promoted Institution of Automobile Engineers (India). Engineering Council of India considers it a step in the right direction. It will facilitate to promote automobile engineering as a new sectoral discipline in engineering; and hence is very welcome development in the context of moving out of the conventional engineering discipline-wise engineering education to industry-specific engineering education. According to the Institute, automobile engineering has come of age in India. Automobile hubs and clusters are spread across the length and breadth of India. With the boom in the industrial sector, the education sector has witnessed the mushrooming of engineering colleges in the last two decades. The profession of automobiles, in addition to the skills, also requires the knowledge of research and development, artistic creativity in design coupled with leadership and business acumen. It also requires a broad understanding of scientific principles, knowledge of materials and fuels. An automobile engineer is a connoisseur who practices art, science and technology. The colleges offering the automobile programmes are very less in comparison with the other disciplines. The professional institutions to impart education are again too less in number to feed the growing hunger of automotive engineers who compete at the international arena. To fill up this void and to safeguard the interests of the automotive engineers, the Institution of Automobile Engineers (India), promoted by the Automobile Society (India) has come to exist.

### The Aeronautical Society of India (ASI)

The 63rd AGM of ASI along with a seminar on Theme - Physics and Heat Transfer, which was scheduled to be held on April 26-27, 2012 at Thiruvananthapuram, Kerala has been postponed due to some technical reasons. It will now be held along with the seminar in June, 2012. The new dates will be announced soon. The winners of the HAL & PHHL Essay Competitions-2011 have been declared. Shri Suresh Kumar has won HAL ESSAY Competition-2011 (Sponsored by Hindustan Aeronautics Ltd) for the subjects: Need for Integration/harnessing the internal resources available in the Indian Aviation Industry and New Performance challenges for Defence Sectors to cut costs and maintain high level of customer service. He has also won PHHL Essay Competition- 2011 (Sponsored by Pawan Hans Helicopters Ltd) for the subject: Evolution of Regulation for Helicopters in India. Sgt. Ajendra Singh has won the award in the same category for his subject: Challenge for Air Safety Investigators. ECI congratulates both of them for winning these awards.

### The Indian Institute of Metals (IIM)

The 50th National Metallurgists' Day (NMD) and the 66th Annual Technical Meeting (ATM) is scheduled to be held in November, 2012 at Jamshedpur. More than 1000 delegates from all over India and many of them from abroad are expected to attend the event. The 24th February is celebrated as the 'Foundation Day' of the IIM by all the chapters of the institute. Accordingly, chapter-level programmes were held to commemorate the day as such. The IIM Chapters Conclave is also scheduled to be organized at Jamshedpur on the eve of the NMD and ATM event, as in the past. Many Chapters of the IIM are likely to attend the conclave and discuss subjects of mutual interest. The IIM,

DC is organizing an International conference on Resurgent India-Vision 2020 in Metals & Minerals Sector along with 9th International Exhibition during September 27-30, 2012 at the Pragati Maidan, New Delhi. A seminar is being organized by the IIM, DC on Nana Technology on 5th May at the Jawahar Dhatu Bhawan, Tuglukabad Institutional Area, Mehrauli Badarpur Road, New Delhi. For details visit: [mmmmconferences.com](http://mmmmconferences.com), or send a mail to [iim.delhi@gmail.com](mailto:iim.delhi@gmail.com).

#### The Institute of Marine Engineers (India) (IMEI)

IMEI organized a Seminar on PASSAT-3 Stage Air Cooled Marine Air Compressor on Nov 11, 2011 at Mumbai. IMEI, Kochi Branch organised a seminar on Comarsem - 2011 during November 18-19, 2011 at Kochi. The Delhi Branch of the IMEI organized a seminar on Glass Reinforced Epoxy (GRE) PIPES on November 30, 2011 at New

Delhi. All these seminars were very attended both by the industry and academia.

#### The Indian Institution of Mechanical Engineers (India)

No major programme undertaken during January - March 2012 is reported.

#### The Institution of Surveyors

Continuing with the professional development of Surveyors, the Institution of Surveyors- a professional technical institutions of All India standing - is conducting regularly courses on subjects such as Land Surveying, Hydrographic Surveying, Cadastral Surveying, Mine Surveying, Building and Quantity Surveying, Valuation Surveying. For details on the future programmes visit <http://iosindia.org>.

## Letters to the Editor

Dear Shri Shali,

Thanks for the kind email and the invitation. Let me introduce, myself "Y. P. Kathuria" residence in Japan for the past 12 years, and presently as Visiting Professor in Aichi Institute of Technology Toyota Japan. Well, I read yours extended letter with great interest and of course some ideas coincides with mine. Having spent 12 years in Germany and another 12 years in Japan, worked both in industry and university and widely travelled to USA, I realized that compared to those countries the engineering education in India need an overhaul and technological input. Our young engineers must be more matured and should have a wide spectrum of the industrial market /technology and the trend within the country as well as internationally. I find that a student graduating from a German university is matured with the current situation in the industries. He knows where and what he has to do. Even he can venture for his own enterprise. Whereas in India it is much different, as Engineers coming out of an Institution (except probably IIT's) lack in technical experience as well as adoptability in a different environment. Well there are several points to make.

With best regards

**Y.P. Kathuria**

Visiting Professor

Department of Electrical and Electronics Engineering  
Aichi Institute of Technology  
Yakusa-cho Yachigusa  
Toyota, Japan

Dear Shri Shali,

I am extremely happy to learn that Engineering Council of India is organizing its 7th National Convention at Vadodara on 28th of January, 2012. I most sincerely compliment you for having chosen a very relevant theme for this event. The issue of lack of proper employability skills in the human resource available today and being churned out in large numbers by the various educational institutions in the country and its readiness and capability to meet the challenges of the 21st Century has always been of paramount importance and also a point of concern to me. My rich experience with industry and a short stint with academia has provided me with a good insight into this domain. I have delivered few invited lectures on the topic "The XXI Century Engineer" at Nirma University, MS University, Babaria Institute of Technology etc. I relish the pleasant memories of my

participation in the National convention on "Seamless Engineering" organized by you at Vadodara couple of years ago. I had a very meaningful interaction with you, Dr. Uddesh Kohli, Dr. K. Baba Pai, Prof. S.M. Joshi, Prof. Bhuvan Parekh, Dr. Anil Kane and other colleagues as an Invited Speaker and Panelist in the convention. Please accept my best wishes for the grand success of this important event and meaningful and useful deliberations on the theme during the convention.

Thanking you and with best regards,

**Prof. AK Singh**  
Vadodara, Gujarat

Dear Shri Shali,

In the recent past, an advertisement from government organization appeared in the print media inviting intent letter only from architects for their services in structural designs and geo technical investigations, etc, for the construction projects. Since the structural engineering and geo technical investigations are coming under the purview of engineers and architects are not technically competent and eligible to provide these services. We need to take up this serious issue concerning engineering and engineers with the competent authority at the earliest for redressing it. Engineers must be recognized in their specialized domain.

Sincerely

**Ratnavel Sanna**  
MD, SEBA Consultancy, Madurai  
Member BOG, Engineering Council of India

Dear Shri Shali,

Yes, I fully agree that there is really a need for an Industrial exposure to our just passed out engineers through a mandatory internship with an industrial unit of 6-1 year. We at Bharuch have a Bharuch Civil Engineers Forum since over 10 years & we feel the need of a good quality engineers at the field level. Hope the Govt. approves the proposal of introducing a mandatory internship of 0-1 years for just passed out engineers in the country. .

Yours truly,  
**D A Patel** (Via email)

## Obituary

Engineering Council of India and the Indian Society of Agricultural Engineers (ISAE) express heartfelt condolences on the sad demise of Prof S V Arya and Dr R. S. Devnani. Prof Arya, an eminent agricultural engineer, joined his heavenly abode on 15-1-2011. Dr R. S. Devnani, Ex-Director, CIAE, Bhopal, was a great agricultural engineer. His practical approach to problem solving helped CIAE to develop several farm machines and bring out important publications. He contributed immensely to the profession of agricultural engineering. We pray almighty to keep the noble and departed souls in eternal peace and give strength to their families, friends, colleagues and us all to bear this heavy loss.

## For want of higher-order skills - Chandra Mohan Baloni

Engineering students are neither creative nor good at problem solving and hence fail to get jobs in the competitive global market. The Common Entrance Test (CET) Cell is all set to commence the counselling process for admissions to engineering courses from July 7. Students should be careful in their choice of college. The quality of teaching staff, lab facilities and other infrastructure vary from college to college and have a bearing on the process of learning and acquiring skills.

A recent research revealed that engineering graduates in the country are falling short of professional, core employability and communication skills. Engineers with such skills are in short supply in IT and infrastructure, power and water, and many other sectors.

The survey conducted by the World Bank - "Employability and Skill Set of Newly Graduated Engineers in India" (2011) - stated a majority of employers in India are not satisfied with the skills of newly hired engineering graduates. Only 64 per cent of employers said they are "somewhat satisfied" with the current engineering graduates. About 3.9 per cent of employers rate the skills as "not at all satisfied" while 16.1 per cent are "not very satisfied." The higher education system has responded to the increased demand for engineers by massively expanding production of engineers. For example, Karnataka alone provides admissions to 70,000 students in 184 engineering colleges. But the system has not addressed the issue of imparting quality education and the kinds of skills demanded by employers in the global market.

The survey report, authored by Andreas Blom and Hiroshi Saeki, found that engineering graduates were not good at problem solving, creativity, use of modern tools, system designing to needs, application of mathematics, science and engineering knowledge and customer



service. They lacked knowledge of contemporary issues too. The survey said that "Indian employers are less satisfied with their engineers compared to U.S. employers." There has been an average decline in the quality of students, said the Bank which surveyed employers in 20 sectors,

including IT, power and infrastructure. Half of the respondents were large companies with over 500 employees, with 40 per cent from North India, 27 per cent from the West and 19 per cent from the South. Interestingly, where the employers found the fresh engineering graduates most lacking in is critical thinking and problem solving. Besides professional skills, the employers look for (a) core employability skills, which cover generic attitudinal and affective skills such as reliability and team work; and (b) communication skills. Employability and communications skills are often referred to as soft skills. Engineers who are in high demand possess these sets. Employers are likely to perceive soft skills as more important than professional skills. However, engineering graduates with limited and weak professional skills are undesirable for employers. The report said memorising textbooks for examinations is not a skill appreciated by the employers. Many experts ask if the Indian engineering education system trains students to memorise science and engineering knowledge, without adequately emphasising the applicability, analysis and out-of-the-box thinking that employers look for (via email).

### Awards

Shri B. Muthuraman, Vice Chairman, Tata Steel, President, CII and the past President, the Indian Institute of Metals received the Padma Bhushan award from President Pratibha Devi Singh Patil for his outstanding contribution to the Industry



Dr I.K. Singhal, Director (R&D), Jindhal Stainless Steel, Essar and former CMD, MECON, National Council Member of the Indian Institute of Metals has been awarded Padama Shri by the President of India for his significant contribution to the field of Metallurgical R&D.



Dr. Sanak Mishra, Vice President of Arcelor Mittal, the largest steel company in the world, and Chief Executive Officer (CEO) of its Greenfield Projects in India, received the Platinum Medal of the Indian Institute of Metals at its Annual Meeting in November 2001, in recognition of his outstanding contributions to the metallurgical profession and metals industry. This is the highest Award conferred by the IIM. Dr. Mishra was the President of IIM during 2009-10. He has also received many more prestigious awards during his illustrious career. The list is very large, indeed.

*Our Congratulations*

### A Word of Wisdom

A good way to change someone's attitude is to change our own. Because, the same sun melts butter, also hardens clay! Life is as we think, so think beautifully (Unknown).

### Promotions/Appointments

Maj Gen A V Subramanian, VSM, Chairman, Advanced Maintenance Management Programme of the Indian Institute of Plant Engineers has been promoted to the Rank of Lt General. Major Gen. S.M. Mehta, SM, VSM, Life Fellow of IIPPE, has also been promoted as Lt General.



Prof. S V Raghavan has been elected president (2012-13) and Shri Mr. S Ramanathan has been elected Hony Secretary (2012-14) of the Computer Society of India. Dr B. K. Saxena has been elected President of the Institute of Marine Engineers (India) for the term 2011-13.

*Our Congratulations*

### Think it over

Imagine there is a puddle. When it rains, the puddle is filled with water. When it doesn't, the puddle dries up. Now compare that to the ocean. The ocean is so deep, it doesn't matter if it rains above or it is dry weather. Your inner depth should be as much as the ocean, so you are not fazed by the external praise or criticism. For that, you must truly do work that is meaningful to you, have love in your heart for others and help people. And when you achieve inner depth, the external world's rewards won't matter to you as much.

*Radhanath Swami*

The mediocre teacher tells The good teacher explains. The superior teacher demonstrates. The great teacher inspires - William A.

*Ward-Willam icare*

### ENGINEERING COUNCIL OF INDIA

3rd Floor, Jawahar Dhatu Bhawan, 39, Tughlakabad Institutional Area (Near Batra Hospital), M. B. Road, New Delhi-110062  
Tel: 65640356, 29963281, 29963282 Fax: 29963283 E-mail: eci@ecindia.org, ecindia@vsnl.net Website: [www.ecindia.org](http://www.ecindia.org)

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