



May - June 2016

# ISHRAE NEWS

Linking ISHRAE Chapters Across India

Compiled and edited by Rakesh Kumar, Technical Editor, Air Conditioning and Refrigeration Journal

## Know Your HQ Team

**Sachin Maheshwari**  
National President



BE Mechanical and MBA Finance. Currently, Managing Director – Nicotra India Pvt. Ltd. and Director – Caryaire Group of Companies. Youngest National President of ISHRAE since inception.

**K. Ramachandran**  
National Immediate Past President



Mechanical engineer from College of Engineering, Trivandrum (1971). Worked in AC&R manufacturing, sales, commercial, projects, service and consultancy for 33 years. Director and Associate Consultant with Eskayem Consultants Pvt. Ltd.

**Vishal Kapur**  
National President-Elect



Mechanical engineer from IIT Roorkee (1991) and MBA from FMS, Delhi (1993). 46 years of age and engaged with the HVAC industry for the last 21 years. Managing Director of Meho-HCP Air Systems Pvt. Ltd.

**Nishant Gupta**  
National Secretary



Mechanical engineer from Bhopal University and post graduate in Marketing Management (MBA) from IMS, Indore (DAVV University). CEO of Degree Day Engineers, a multidimensional HVAC Engineering firm, and MD of Greencon Engineering Pvt. Ltd.

**Amitabha Sur**  
National Treasurer



Mechanical engineer with experience of 29 years in HVAC&R in the areas of sales and marketing and later in project execution. Presently CEO of Aircon Group of Companies.

## ADVOCACY

### ISHRAE Signs MoU with REHVA

REHVA, the Federation of European Heating, Ventilation and Air-Conditioning Associations, represents more than 100,000 experts from 30 member countries in the area of heating, air-conditioning, ventilation and refrigeration. To extend better service to members, ISHRAE has signed an MOU with REHVA. One of the features of the MOU is that ISHRAE members get access to REHVA publications at the discounted rate of €30 per year.

After logging in as a member to [www.ishraehq.in](http://www.ishraehq.in), you can see the REHVA banner. Click – Register – Pay €30. Within 24-72 working hours you will receive your user name and password for accessing the password-protected area on REHVA web site.

### National Secretary Visits REVAC

Nishant Gupta, National Secretary, visited Kuala Lumpur to attend REVAC, Malaysia's foremost HVAC&R show from May 23 to 25. He took the opportunity to interact with a whole lot of Societies present at the event: VISRAE (Vietnam), Myanmar Engineering Society, ASHRAE Singapore Chapter,



Nishant Gupta (second from right) interacts with leaders of other Societies

ASHRAE Hong Kong Chapter, ASHRAE Philippines Chapter and MACRA, CIDB, MASHRAE and TEEAM (all from Malaysia).

### Ranchi Chapter Holds Advocacy Program with Institution of Engineers

Ranchi Chapter organised a program with Institution of Engineers (IEI), Jharkhand State Centre (JSC) at Engineer Bhawan, Ranchi on June 5, World Environment Day.

M. R. Kumar, Joint Secretary, IEI (JSC) began with an introduction of World Environment Day. Shivananad Roy, Chairman, IEI (JSC) welcomed the gathering. After the lighting of the lamp, R. K. Singh, President, Ranchi Chapter apprised the gathering about the activities of ISHRAE and introduced ACREX 2017. This was followed by a guest lecture by Shankar Ghosh, wild life enthusiast and cryogenics engineer, on the subject of Illegal Trade in Wild Life.



Celebrating World Environment Day at Ranchi

The vote of thanks was delivered by M. Mukhopadhyay, Honorary Secretary, IEI (JSC). The program was attended by about 60 members of IEI and 15 members of ISHRAE Ranchi Chapter.

## ACREX Road Shows

The ACREX team is leaving no stones unturned to make a grand success of the next year's event. A number of road shows are being organised to promote ACREX India 2017, scheduled from February 23 to 25 at India Exposition Mart Ltd. (IEM), Greater Noida in the National Capital Region – a new venue for ACREX. Road shows have already been held at Delhi, Bangalore and Mumbai, and are planned at Ahmedabad, Pune and several other locations.

A road show was held in Mumbai on June 9 to a full house at Sofitel. K. Ramachandran, Immediate National Past President and Chair, National Steering Committee for ACREX 2017 welcomed the participants and apprised them of the benefits of the new venue for the event. A single hall will be able to house all the stalls, making it convenient for the visitors.

Blue Star, the Titanium Partner for the event, made a corporate presentation. Shankar Bhattacharjee and Gulshan Kapoor of Blue Star spoke about VRF IV Plus, the fourth generation VRF that delivers 100% capacity at 43°C – the first Made in India 100% inverter VRF system.

Ashish Rakheja, Chair, ACREX 2017 made a presentation on *Rising India – Enterprising and Cool*. He gave more details about the event – South Asia's

largest exhibition on AC, V, R and intelligent buildings in its 18th edition with 30,000 sqm of display and a target of 500 exhibitors and 30,000 business visitors at the best venue in India. Adequate transport arrangements will be made for those travelling to the venue. There will be dedicated pavilions for Refrigeration and Cold Chain, and Intelligent Buildings – a new platform for the automation industry. Interactive seminars and workshops will be held on Indoor Environment Quality, Refrigerants and Equipment Testing Standards. More than 25 countries are expected to participate.



Pankaj Dharkar reveals bfa at Mumbai road show

A new initiative, christened *Big Five*, will be a highlight of the event. An inter-industry partnership

called the Build Fair Alliance (bfa) has been forged to hold 5 simultaneous shows: ACREX India, Fensterbau Frontale, Fire and Safety India Expo, ISH India (powered by Indian Plumbing Association), and glasspro India. The initiative towards integrated building solutions to forge bfa has been taken by ISHRAE.



Formal launch of bfa at Bangalore road show

In the road show at Bangalore on June 3, National President Sachin Maheshwari welcomed the delegates. Platinum and aQuest Partner Johnson Controls Hitachi made a corporate presentation. Ashish Rakheja briefed the audience about ACREX 2017, and launched the theme for the event. This was followed by the formal launch of bfa.

## PROGRAMS

### Symposia 2016 at Mumbai

ISHRAE Mumbai Chapter, in association with ISHRAE Thane Chapter and ASHRAE Mumbai Chapter, conducted its 5th annual national program on the theme 'Non-Conventional HVAC Systems' under the banner of *Symposia* on June 17 at Hotel Hyatt Regency.



Mumbai Chapter President Nandlal Singh lights the lamp for *Symposia* along with (L to R) Mihir Sanghvi (Programs Chair, Mumbai), Nivedita Jadhav (Thane Chapter President), Amod Dikshit (Convenor), Ajaj Kazi (President-Elect, Mumbai), Dr. Roshini Easow (President, ASHRAE Mumbai), Viral Shah (President-Elect, Thane) and R. N. Joshi (Co-Convenor)

Nandlal Singh welcomed the delegates numbering about 310. A. Vaidyanathan (Founder & MD, Personal Air Quality Systems, Bangalore) made the first presentation, on the topic *Multistage Air Conditioning Systems*. Anil Dev (CTO & CEO India, Climaveneta, Bangalore) made a presentation on *Non-Conventional HVAC Systems – Description and Integration*. Wes Livingston (Design Engineer, Eco-Max, USA) explained *Adsorption Chillers* in his presentation. Alberto Caporali (Schneider Electric Cooling, Italy) spoke about *Under Floor Air Distribution Systems*. Jagdeep Singh (MD, Rosemex Ecotech) made a presentation on *Geothermal and Radiant Cooling – Planning for the Future*.



A. Vaidyanathan



Anil Dev



Wes Livingston



Alberto Caporali



Jagdeep Singh

Corporate and product presentations were made by event partners: Dr. Prasanna Rao Don-tula (Senior VP, Energy Efficiency Solutions, ATE Enterprises), Rajkumar S. Iyer (Consultant, Project Sales – LE Division, Mitsubishi Electric India), Ashok Kumar Prusty (Executive VP, Bry-Air Asia) and Prem Kumar Perumal (Associate GM, Schneider Electric IT Business). Mihir Sanghvi made a presentation on ACREX 2017. Vikram Murthy (Past National Secretary) introduced Search-O. Mamata Rawat of IGBC Champions League (ICL) made a presentation on the IGBC Awareness Program.

The event concluded with an interactive session with all the speakers.



R. N. Joshi moderates the interactive session with the speakers

Apart from being very well attended, the program received considerable media attention. It was covered by Afternoon Despatch & Courier, Loksatta, The Free Press Journal and Dainik Bhaskar.

### Session on Industrial Refrigeration at Thane

A program on Industrial Refrigeration was organized on June 4 at United 21 in Thane under the auspices of ISHRAE Mumbai and Thane Chapters and ASHRAE Mumbai Chapter. The program was supported by International Institute of Ammonia Refrigeration (IIAR), Association of Ammonia Refrigeration (AAR), Refrigeration and Air-conditioning Trades Association (RATA) and Indian Association of Energy Management Professionals (IAEMP). It was a first of a kind program on this topic and was organised to address an area of interest hitherto neglected. Most programs in the past have been on comfort air conditioning and cold chain.

The program began with the lighting of the lamp by the special guests M. Gopikrishna, COO Voltas and Sachin Maheshwari, National President ISHRAE. Also present were K. Ramachandran, Immediate Past National President, ISHRAE; Harshal Surange, President IIR; Kapil Purandare, Advocacy Chair, ISHRAE; Diwakar Sawant, Regional Director West-1, ISHRAE; Amol Pradhan, Refrigeration Chair, ISHRAE Thane and the hosts – ISHRAE Thane President Nivedita Jadhav and Dr. Roshini Easow – President ASHRAE Mumbai Chapter.



(L to R) M. Gopikrishna, K. Ramachandran, Sachin Maheshwari, Harshal Surange, Dr. Roshini Easow, Nivedita Jadhav, Amol Pradhan, Kapil Purandare and Diwakar Sawant

M. Gopikrishna delivered the keynote address wherein he appreciated the efforts of ISHRAE and ASHRAE to highlight the criticality of refrigeration in many industrial processes. Raghavendra Dipali, General Manager (Mechanical), Aker Power Gas set the tone for the proceedings of the day with his presentation on *Guidelines for better package engineering execution*.

The next speaker was Nitin Pai, Deputy General Manager, Kirloskar Pneumatic Co. He presented the vast gamut of rotating equipment, and talked about *screw compressors and lubricating oil management*. Dr. Ashish Kadam, Senior Manager, Johnson Controls (I) delivered a lecture covering the static equipment – heat exchangers and pressure vessels. Sagar Lagad, Chief Manager, Instrumentation, Thyssenkrupp Industrial Solutions, Pune led the audience through a session on *Instrumentation in Refrigeration Applications*.

Any large system consisting of various components needs to be constantly monitored to check for faults and pre-empt any cause of failure. Sudip Das, Technical Sales Manager, GE Bently Nevada spoke about this in his session on *Asset Condition Monitoring*. Manish Kulkarni ended the day's deliberations with an overview of challenges in project execution.



A view of the audience in rapt attention

The table partner for the event was FX Multitech. The program was compered by Shrey Mahajan, YEA Chair ASHRAE Mumbai and Jason Fernandes, ISHRAE student volunteer.

### Mumbai Hosts VRF Mela

RATA India, along with ISHRAE Mumbai Chapter, held its annual program on the *VRF Business* on June 3 at Hotel VITS. The objective was to explain the opportunities available in the VRF market for trade members interested in expanding their services to VRF,



R. N. Joshi briefs the delegates on VRF business

explain quality standards that need to be maintained in the VRF business and to connect trade members to OEM brands and allied suppliers to help grow their business in an organized manner. Among the speakers were R. N. Joshi, Amod Dikshit and Vishal Nair (AGM – Customer Service, Daikin Air-conditioning).

### DCI Conducts Workshop on Chilled Pipe Design



Dr. A.K. Ahluwalia addresses the audience

Delhi Chapter of ISHRAE conducted a half day workshop on *Chilled Pipe Line Design System* on May 21 at DIAL Training Centre, Terminal 3, IGI Airport. In all 31 delegates attended. The key speaker was Dr. A.K. Ahluwalia, Head of Department – Mechanical, G. B. Pant Institute of Technology, New Delhi.

The workshop started with membership promotion and ACREX 2017 promotion. Feedback from the delegates was positive. Pradeep Dua, Program Chair, DCI organised the event.

### Vadodara Arranges Product Presentation



Product presentation by The Supreme Industries

Vadodara Chapter arranged a product presentation by The Supreme Industries Ltd. on March 26 at Prakruti Resorts. Around 70 members attended the program.

### Talk on AC Systems for Industrial Processes at Ranchi

A technical talk was delivered by Rajesh Kumar Singh on May 18 at the Meeting Hall, Fluid Systems & Piping Division (FS&PD) Section, MECON, Ranchi on the topic *Air Conditioning Systems for Industrial Processes*.



Rajesh Singh, President, Ranchi Chapter interacts with the audience

The talk covered various factors affecting the calculation of air conditioning systems: typical chilled water air conditioning plant layout, factors affecting the air conditioning system calculation, typical P&I diagram and ducting layout.

### Installation and Product Presentation at Indore

The new Chapter Working Committee (CWC) was installed at Indore on April 25. The oath of office was administered by D. N. Shukla, RD West-2 and Nishant Gupta, National Secretary. The event took place at Fortune Landmark. Dr. Sharad Chaudhary was sworn in as the President, Pankaj Tiwari as the President-Elect,



Indore CWC taking the oath of office

## PROGRAMS contd...

Kanak Kothari as the Secretary and Sandeep Belsare as the Treasurer.

This was followed by a product presentation by Vikas Gupta, regional head, Daikin along with Rohit Saxena.

### Program on BMS and PLC at Kolkata

Partha Bhaumik (Country Industry Leader, Rockwell Automation) and Pankaj Arora (Segment Manager, Rockwell Automation) gave a presentation on *BMS and PLC in HVAC Systems* at Kolkata.



Participants with the faculty at the program on BMS and PLC

The speakers discussed the types of application where such a Building Management System could be used, and its advantages over the conventional BMS. They also discussed the energy management system with respect to specific applications like Mass Rapid Transport system (Metro) and the pharma industry. There were 12 participants.

### International Yoga Day at Mumbai



Mumbai President Nandlal Singh on the dais on Yoga Day

Mumbai Chapter, in association with Akhil Vishva Gayatri Parivar Yug Parivartan Sangh celebrated International Yoga Day at Radhakrishnan Hall, Dahisar (East) on June 21. The yoga session was directed by Dr. D. S. Tiwari, *yog guru* and lifestyle expert.

### DL Program at Meerut Sub Chapter

A DL Program by Meerut Sub-chapter was organized at Vidya Prakashan Mandir Auditorium on



Ashwini Mehra being introduced

May 23. Ashwini Mehra was the faculty. Members from the Sub-chapter and 46 executives of Vidya Prakashan Mandir from 72 districts of UP attended. President V.C. Rajpal, President-Elect S.K. Jain, Programs Chair Satish Kumar and Zonal Chair Student Affairs North M. K. Gupta were present from ISHRAE. Vikram Thakur, HQ Executive supported the software.

### DL Program at Guwahati Sub-chapter

A DL on the topic *Energy saving in refrigeration and air-conditioning systems through desiccant based cooling system* was organized at the Seminar Hall, Department of Mechanical Engineering, IIT Guwahati on April 27. Prof. Sanjeev Jain from IIT Delhi, a pioneer with extensive knowledge who is conducting research in the field of desiccant based dehumidification and cooling systems, delivered the lecture. The gathering was welcomed by Prof. P. Muthukumar, President, Guwahati Sub-chapter. The speaker was felicitated by Prof. Anoop K. Dass, Head, Mech. Engg.



Participants pose for a photo with the faculty

Prof. Sanjeev Jain introduced the participants to the field of desiccant based dehumidification systems, both solid and liquid, which are being widely used. He delved into desiccant based cooling systems and their importance in saving energy. He discussed some of the recent and ongoing research, highlighting its possibilities in today's world. He also discussed the opportunities, challenges and the need for research in this area.

Some insights were also shared by Prof. K. Srinivasan, Centre for Energy, regarding the avenues of desiccant based application. The vote of thanks was delivered by Amarendra Goswami, Advocacy Chair.

There were 48 participants, including members of Guwahati Sub-chapter as well as IIT Guwahati Student Chapter. Among them were Gautam Banerjee, President-Elect; Sarbendra Mukherjee, Secretary; Srikanta Senapati, R. Nithin Narmada, B. Kiran Naik, K. Vigneshwaran, Hakeem Niyas, D. K. Rabha, Gurpreet Singh Sodhi and Bhuvnesh Kumar.

### Surat Chapter Inaugurates New office

ISHRAE Surat Chapter opened its new office-cum-training centre at Majura Gate, Nanpura on June 25. Sachin Maheshwari, National President performed the inauguration in the presence of 125 member and invitees. The 2,000 sqft carpet area office has a seating capacity of 50. The interior has been designed with flexible seating arrangement. The office is equipped with air conditioning, projector, screen, desks, reception and a pantry.



Sachin Maheshwari cuts the ribbon



The fully equipped modern office at Surat

A CWC meeting was conducted on the same day in the presence of Sachin Maheshwari and all past presidents.

## ISHRAE CERTIFICATION PROGRAM

### ICP – Cleanroom Level 1 Planned at Mumbai in July

Mumbai Chapter is organising an ISHRAE Certification Program – Cleanroom Level 1 from July 13 to 16 (9 AM to 5.30 PM). The schedule for Level 2 will be announced later.

Level 1 is a 3½ day course followed by a written examination, which the candidate must pass in order to be certified. In the event a candidate does not pass the examination, (s)he will have the opportunity to retake the examination when Module 1 is conducted again, by paying the re-examination fee.

### Mumbai to Hold ICP – AC Design Level 1 During September - December

Mumbai Chapter is organising ICP – AC Design Level 1 for the first time in Mumbai, as per the following schedule:

Module	Dates (9 am to 5.30 pm)	Topics	Instructor
Module 1	Sept. 27 to Oct. 1	Psychrometry and Heat Load	Vishwas Navare
Module 2	Nov. 17 to 19	Equipment and Duct Design	V. Krishnan
Module 3	Dec. 8 to 10	Insulation, Water and Refrigerant Piping	Sangita Jhangiani

## STUDENT ACTIVITIES

### Student Member Benefits and Fee Revised

In the recent meet of National Board of Governors at Pune, a motion was passed for an increase in the student membership fee from Rs. 403 per annum to Rs. 550 inclusive of service tax. This comes into effect from June 16.

Student membership is now completely online and any student can become a member by simply logging on to [www.ishraehq.in](http://www.ishraehq.in), filling the form and making online payment.

- The enhanced benefits for student members are:
- All registered student members now get free access to the *e-Journal*, which is available on the home page of the student member web site.
- All student members will get the same discounts as regular members on ISHRAE publications and e-subscriptions.
- ISHRAE Job Junction enters its second year and will be even bigger; students can register directly from the student member web site.
- An online Job Portal is being planned for student members.
- There will soon be a facility for mass-mailing to the student members to involve them in more activities and workshops.
- The student research project grant budget has been increased this year.

- aQuest will reach out to more colleges and student members.
- The regular student programs organised by chapters will become bigger and better.

### Jaipur Student Member Wins REHVA Award



Robin Jain (third from left) with the other winners

Robin Jain, a student of Malaviya National Institute of Technology, Jaipur won the third prize for a paper based on his M. Tech. dissertation work, in REHVA World Student Competition (RWSC) 2016, organised during the international conference *Clima 2016*. The paper, titled 'Performance Analysis of Radiant Cooling System Integrated with Cooling Tower for Different Indian Climatic Conditions', was awarded prize money of €500.

REHVA had invited entries for RWSC 2016 from its partners ASHRAE, SHASE (Japan), CCHVAC (China),

SAREK (Korea) and ISHRAE, along with entries from REHVA (Europe). The subject of the entries had to be in the areas of HVAC technology, building services, indoor environmental control and energy performance of buildings. ISHRAE invited papers from students within the country. The entries were reviewed by a panel of experts and Robin Jain's paper was selected as ISHRAE's entry for RWSC 2016. The paper was presented at a conference at Aalborg, Denmark, held along with *Clima 2016*, where it was placed third amidst tough competition.

This unique feat has been widely applauded by the ISHRAE fraternity, and would surely be emulated by many student members.

### Technical Talk on AC Basics at Ranchi

Rajesh Kumar Singh, Manager, FS&PD, MECON delivered a talk on *Basics of Air Conditioning Systems*



A cross section of BITT students and faculty members

## STUDENT ACTIVITIES contd...

to members of BITT Student Chapter on May 21. It was attended by 24 student members and 6 faculty members.



Rajesh K. Singh replies to students' queries

The talk started with the definition and requirements of air conditioning systems, and covered the basic Carnot cycle and the refrigeration cycle, kinds of air conditioning systems: window air conditioners, split air conditioners and their various types, packaged air conditioners and centralised air conditioning plants. Factors affecting the calculation of air conditioning system, typical chilled water plant layout, typical P&I diagram and typical ducting layout were explained. Mention was made of district cooling system, chilled beam system and various types of refrigerants and their ODP.

### Industrial Visit of Ranchi BITT Students to Hotel Green Horizon

An industrial visit of students from BITT to Hotel Green Horizon was organised by Ranchi Chapter on May 28, following the technical talk on *Basics of Air Conditioning Systems* held on May 21. The visit helped the students to understand the theory. Twenty five students and 2 faculty members participated.

The visit was organized by a team of Ranchi Chapter headed by R. K. Singh, Anujeet Rituraj (Immediate Past President) and S. N. Bhagat (Chair-K12 and CWC member). The students were able to see the centralized chilled water system with air cooled condensers comprising 3 (2W+1S) x 33 TR + 1 x 44 TR scroll chillers, AHUs, air distribution system and insulated chilled water system.

### Talk on Recent Trends in Power Generation at Ranchi

A technical talk for students of BITT was delivered by D. K. Mishra, Senior Manager, MECON and CWC member of Ranchi Chapter on June 25. The topic was *Recent Trends in Power Generation*, and it was attended by more than 50 student members.



D. K. Mishra addresses the students

The talk covered the types of power generation, viz. renewable and non-renewable, and polluting and non-polluting. Sources of renewable energy were explained: hydel, solar, biomass, wind and geothermal. Sources of non-renewable energy were also explained: fossil fuels, coal, crude oil, natural gas (methane) and uranium. Typical functioning of a power plant cycle was described.

### Chilled – Summer Quiz 2K16 at Kolkata

MCKV Institute of Engineering and ISHRAE Kolkata Chapter conducted a two day technical quiz competition, Summer Student Quiz 2K16 named *Chilled* on April 26-27 at the MCKVIE campus. The event will be conducted by a different Students Chapter every year.



Watching over the quiz from the dais

An intra-college quiz competition was conducted on Day 1. Students of Mechanical Engineering and Automobile Engineering from 1st to 4th year participated – a total of 55 teams of 2 students each. Dr. Himadri Chattopadhyay, Associate Professor of Jadavpur University presided as the judge and delivered a lecture on *Thermo-Fluid Science in Engineering*. The winner of the event earned a direct entry to the final 10 teams battling it out on Day 2 in the inter-college quiz.

On Day 2, a total of 50 students took the preliminary exam, from which 9 teams were shortlisted, and the winner of the intra-college quiz joined them in the final. Utpal Biswas, Chapter President; Manoj Chakravorti, President Emeritus; Subhasish Dasgupta, Zonal Student Chair, East; Prabir Sen, Zonal Chair Training; Pratik Dutta Roy, Senior ISHRAE Member and Nilanjana Mukherjee, Member, Kolkata Student Chapter were among those present. Manoj Chakravorti delivered a lecture on *Sustainability of Buildings & Building Tips*.



The final inter-college round in progress

The quiz was conducted by eminent Quiz Master Rajib Shanyal. Team *Coolants* from Jadavpur University emerged victorious after several rounds.

### DCI Installs DCRUST Student Chapter

The third installation ceremony of Deenbandhu Chhotu Ram University Student Chapter was held on May 3. The oath to the new team was administered by Pradeep Dua, Zonal Chair Membership Promotion, North-1. As many as 62 new members were enrolled during the installation.



Student office bearers with DCI representatives

Pradeep Dua motivated the students to come forward and join ISHRAE and actively participate in all its activities. The faculty and students expressed satisfaction with the Job Junction that was organised at Manav Rachna International University.

Executive Secretary Vikram Maini organised the event.

### SVIT Students Visits Cold Storage in Vadodara

Vadodara Chapter organised an industrial visit to Amar Ice and Cold Storage, Anand for SVIT Student Chapter on April 22.



Students observe cold storage functioning

### Technical Talk for SVIT Students at Vadodara



Dhiren Vyas addresses SVIT students

Vadodara Chapter held a technical talk on *Basics of Insulation and Selection of Insulation Materials* for SVIT Student Chapter. A total of 43 participants were present. The talk was meant for final year students of mechanical engineering. Dhiren Vyas was the faculty.

### Spectrum 2016 organised by IEM Students at Kolkata



Posing for a group photo at Spectrum 2016

Institute of Engineering & Management (IEM) hosted a one day technical event, Spectrum 2016 on April 23 at IEM campus. There were various inter-college events like paper presentation, poster presentation, model presentation, treasure hunt, general quiz and gaming. Students from different colleges and universities came to participate. The highlight of the event was a seminar on *'Emerging Trends in Indian Cold Chain'*, organised by IEM Student Chapter and delivered by senior ISHRAE member P. K. Sen.



P. K. Sen delivers his lecture

Chapter President Utpal Biswas, Prof. Arun Kumar Bar (HoD, Mechanical Engineering, IEM) and faculty adviser Prof. Gunjan Kumar were present on the occasion. More than 120 participants thronged the hall.

### Guidelines for Reports in eNews

It is heartening to see the number of reports submitted for publication in **eNews** going up exponentially. It reflects the rising competition among chapters to carry out activities in line with the Society's objectives, and shows increasing member engagement.

Here are some simple and useful guidelines for the reports to help **eNews** become a powerful catalyst of chapter activities:

- The deadline for receiving reports is the last day of the relevant period. For example, for publication in the July-August issue, the deadline is August 31.
- Please send or copy reports of events to [news@ishraeq.in](mailto:news@ishraeq.in)
- Please send a Word file containing a brief report of the event: **what, when, where, who** and any other relevant information. **Word file is preferable to pdf or ppt.**
- Relevant photos in jpg format should accompany the report. Each photo should have a **caption describing the occasion and giving the full names of persons** in the photo from left to right. Only first names or only last names are not enough. (In case of large group photos, e.g. a batch of 20 participants in a training programme, all names are neither feasible nor necessary. Key names would do in such cases.)
- In addition to the jpg files, photos may also be copy-pasted into the Word file at relevant places, with captions below each photo.
- While "a picture is worth a thousand words", **only pictures** do not constitute a report. A Word file describing the event must accompany the pictures.

ISHRAE Membership Toll-Free Number: 1800 3000 4245