



27 - 29 February 2020  
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## KNOWLEDGE - ENHANCING WORKSHOPS

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### TOPICS

- **Project Management  
Tools & BIM**
- **HVAC Commissioning -  
The right practices**



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# ACREX INDIA 2020 WORKSHOP

## SESSION 1 PROJECT MANAGEMENT TOOLS & BIM

DATE: 28 FEB 2020, FRIDAY

TIME: 1000 - 1300 hrs

VENUE: IEML, Greater Noida, Delhi-NCR

### WHO MUST ATTEND

Architect

Project Manager

HVAC Consultant

Building owner

Consultant

Facility Manager



### SECTION A: INTRODUCTION & BACKGROUND - PROJECT MANAGEMENT TOOL & BIM

#### DR. YASH SHUKLA

(CEPT University, Ahmedabad & Session Coordinator, ISHRAE)

Dr. Yashkumar Shukla is Technical Director at Centre for Advanced Research in Building Science and Energy (CARBSE), CEPT University. He has more than seventeen years of international experience in building energy-efficiency research and leads several energy-efficiency research projects at CARBSE. His current research includes calibration of simulation models, performance characterization of envelope and HVAC systems, net-zero energy buildings, and development of next-generation control algorithms.



### SECTION B: OVERVIEW OF PROJECT MANAGEMENT

The presentation provides overview of the key project management principles including terminologies, scope, time, and cost aspects of the project management.

#### Mr. Ajaj Kazi,

(Project Director, Voltas Limited)

Mr. Ajaj Kazi, Diploma in Mechanical Engineering, Graduate Diploma in Material Management and Qualified Project Management Professional from Project Management Institute, USA. Has been working with Voltas Ltd. Since 1998. At present, he is Past President of ISHRAE Job Junction Chair & ISHRAE Journal Team 2019-20. He has also served as Chapter Working Committee Member 2013-14 & 2014-15, Treasurer of Mumbai Chapter 2015-16, President Elect of Mumbai Chapter 2016-17, President of Mumbai Chapter 2017-18, Honors & Award Chair of Mumbai Chapter 2018-19.



### SECTION C: PROJECT MANAGEMENT CASE STUDIES

The presentation shares experiences of executing various project management case studies.

#### Mr. Praful Asatkar

(Director - Project Management Services, CBRE)

Praful Asatkar is associated with project management industry for over 20 years and is currently associated with CBRE for more than a decade. He is vertical head for Industrial and logistic project management business in India. During his tenure in project management business, he has executed many assignment which varies from corporate fitout works, to large green field assignments. Before joining CBRE, he worked for GE capital, JLL, and turnkey electrical contracting firm.

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## SECTION D: ARCHITECT AND MEP PERSPECTIVES OF BIM

The presentation will share architecture and engineering perspectives of using building information modeling.

### Mr. Kinshuk Aggarwal

(Studio Lead, Studio Sustain and Partner, SSSA Architects)

Following a Bachelor of Architecture graduation from USAP, Delhi, he attained a masters qualification from The Bartlett, UCL, London, in 'Sustainable Urbanism'. Before returning home, he worked on developing sustainable growth strategies for Nacka county in Stockholm, Sweden and consulted on niche projects in central London focussing on sustainable housing models and contemporary modes of construction using shipping containers, among others. An architect and urbanist by qualification and profession, Kinshuk's spectrum of experience, spanning almost 6 years, covers architectural commissions in India, the U.K. and urban sustainability research covering Indian and European contexts. Along with heading his own firm, Studio Sustain, he is the burgeoning third pillar of Delhi based SSSA Architects, an established architecture practice of 30 years. His focus has been on Building Information Modelling and Building Performance Simulation tools, with his Studio Sustain being a niche laboratory of sorts, for cutting edge design.



## SECTION E: BUILDING INFORMATION MODELING CASE STUDIES

The presentation will share case studies where building information modeling has been used in the projects.

### Mr. Bimal Patwari

(President, Pinnacle Infotech Inc.)

Mr. Bimal Patwari is the first generation entrepreneur and founder of Pinnacle Infotech Solutions, the acknowledged global leader in providing innovative BIM based engineering and architectural solutions with global delivery centers in India, USA, Dubai, London, Zurich and Italy. He has studied engineering from Indian Institute of Technology Kharagpur, India and MBA from IIM - Lucknow where he was awarded the 'Director's Gold Medal' for academic excellence. Bimal has extensively worked with Architects, Engineering Companies, Contractors and Government agencies in USA, Europe, Australia, India and Middle East. He is recognized for his visionary contribution to the innovative use of advanced BIM technology to improve efficiency, provide fast turnaround and reduce costs for the construction industry. Mr Patwari has widely traveled and has spoken at various international conferences like Autodesk USA, ASHRAE- USA, BIM Summit Barcelona and Paris RTC- USA, Universities and Global technology forums. He has received several awards and recognition from NASSCOM, Government, TIE and other industry associations for his entrepreneurship and pioneering contribution to the construction industry.



## SECTION F: REALITY MODELING SOFTWARE - 3D MODELING FOR BUILDING SERVICES RELATED CAPABILITIES

The presentation will share information of the reality Modelling Software as well as Digital Twin capabilities with specific applications for 3D modelling for HVAC - R, BIM, and Building Services related capabilities

### Mr. Sanchayan Chatterjee

Technical Support Engineer, Bentley Systems

Sanchayan Chatterjee, joined Bentley in 2017. He is working as a Technical Support Engineer II for Bentley's OpenBuildings platform. He has trained people from AECOM, WSP, Manipal Academy of Higher Education, Singapore Polytechnique University etc. Prior to Bentley, he had worked with Christopher Charles Benninger Architects as an Architect in both IIM Calcutta and IIT Hyderabad projects.



### Mr. C. Subramaniam

National Past President, ISHRAE

Mr. Subramaniam is the Principal Consultants, in SSS Consultants which offers design services in the field of Sustainability-Strategies-Solutions. He has graduated in Mechanical Engineering from IIT Madras and also a LEED Accredited Professional. He has been the National past president, ISHRAE.

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## SESSION 2

## HVAC COMMISSIONING - THE RIGHT PRACTICES

**DATE: 29 FEB 2020, SATURDAY**

**TIME: 1000 - 1300 hrs**

**VENUE: IEML, Greater Noida, Delhi-NCR**



### WELCOME ADDRESS

**Mr. Ajaj Kazi,**

(Project Director, Voltas Limited)

Mr. Ajaj Kazi, Diploma in Mechanical Engineering, Graduate Diploma in Material Management and Qualified Project Management Professional from Project Management Institute, USA. Has been working with Voltas Ltd. Since 1998. At present, he is Past President of ISHRAE Job Junction Chair & ISHRAE Journal Team 2019-20. He has also served as Chapter Working Committee Member 2013-14 & 2014-15, Treasurer of Mumbai Chapter 2015-16, President Elect of Mumbai Chapter 2016-17, President of Mumbai Chapter 2017-18, Honors & Award Chair of Mumbai Chapter 2018-19.



### KEYNOTE ADDRESS

**Mr. Aneesh Kadyam,**

Director - Operations, for a leading real estate services firm

Aneesh Kadyan, Director - Operations, for a leading real estate services firm, heads the operations of a large team of professionals in the building and facility management arena. He is a post graduate in Mechanical Engineering and has over 22 years' experience in management of services in technology intensive environments. His areas of interest include Maintenance management, corporate governance, and Strategic planning and technology interventions in Industry. Aneesh is a Professional Engineer (PE), a certified Energy Auditor and an IGBC Accredited Professional (AP). He is the president of the Delhi Chapter of ISHRAE for 2016-17.



### SECTION A: COMMISSIONING OF HVAC SYSTEMS - A HANDS-ON APPROACH

Why commissioning?  
Equipment commissioning  
Sequence of operation during commissioning

**Mr Prashant Desai**

Director, ELM Enterprises Private Limited

Prashant Desai is director at Elm Enterprises Private Limited, a company which specialises in design and build of pharmaceutical, healthcare and industrial HVAC systems mainly. He is a graduate mechanical engineer from IIT Kharagpur, 1981 batch and has worked with Voltas Ltd for 9 years, Blue Star for 1 year, 3.1/2 years with Johnson Controls and 20 years with Suvidha Engineers before founding his own company. He is an active member of ISHRAE and has served as the national chair for ISHRAE Certification Committee. He is on the panel of ISHRAE DL and lectures on topics related to Clean-rooms and Healthcare. His other passion is student quiz and he has been conducting the inter-collegiate engineering quiz contest for Mumbai & subsequently for aQuest.



### SECTION B: INTRODUCTION TO ISHRAE COMMISSIONING STANDARD

Current happenings in the market  
Why ISHRAE commissioning standard is important?  
Details of ISHRAE commissioning standard

**Mr. Selvarasu**

B.E., MBA

IGBC Fellow, LEED Fellow & Faculty, USGBC

An engineer by profession with 27 years of work experience in the areas of services design and sustainability, Mr Sanchayan Chatterjee is the founding member of World GBC and Indian Green Building Council. He has facilitated more than 800 buildings achieving green ratings in India and abroad and also played a pivotal role in bringing LEED to India. Mr. Chatterjee has more than 300 papers on sustainability across the globe to his credit. He is a recipient of several award to recognize his contribution to sustainability

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## SECTION C: TESTING ADJUSTING BALANCING - TAB

Processes and Procedures  
Measuring Instruments  
Best Practices

### Mr. Cliff Sarjeant

Technical Support Engineer, Bentley Systems

Mr Sarjeant has worked within the industry for 35 years with extensive knowledge of all HVAC& ELV system commissioning and commissioning management and M&E project management. He has been a commissioning project manager on many large projects liaising with both clients and engineers. Over the last few years he has had extensive experience on the commissioning of Multi Hall Data Centres, having commissioned over 40 Data Halls totalling some 100 MVA of technical space. He has worked extensively alongside clients, contractors and FM teams, to commission, witness and organise all aspects of the commissioning process from design to handover.



## SECTION D: IMPORTANCE OF 3RD PARTY CERTIFICATION IN HVAC COMMISSIONING

Objectives of 3rd Party Certification  
Best Practices  
Certification and Archiving

### Mr. Erick MELQUIOND

President, Eurovent Certita Certification

Erick is a thermal energy engineer who has worked on important commissioning projects. He has more than 20 years management-level field experience installing, revamping, commissioning and troubleshooting technical equipment. He is currently the President of Eurovent Certita Certification, leader in Europe for HVAC equipment third party performance certification. Dissatisfied with recurring building problems, he founded COPILOT Certification to deliver buildings that actually deliver their performance according to plan. He co-leads an EU project to help financial institutions invest in energy efficiency projects.



### Mr. K. Ramachandran

Director, Eskayem Consultants Pvt Ltd,

RAMACHANDRAN is a Mechanical Engineer from College of Engineering ( Batch of 1971 ) and has a Diploma in Management Studies from Mumbai University. He has more than 35 years experience in Air Conditioning and for the last 15 years is a Director of Eskayem Consultants Pvt Ltd, Mumbai. Ramachandran has edited 4th Edition of Mr P N Anathanarayanan's popular book on Air Conditioning published by Mc Graw Hill. He is an active member of ISHRAE and has served the society in various capacities including National President in 2015- 2016.



# KNOWLEDGE ENHANCING WORKSHOP



## ORGANISER

**ISHRAE**

ISHRAE, the Indian Society of Heating, Refrigerating and Air Conditioning Engineers, was founded by a group of eminent heating, refrigeration, air conditioning and ventilation experts in New Delhi in 1981. ISHRAE has 41 chapters and sub chapters in India with more than 28,780 professionals and students as members. The association organizes exhibitions and conducts seminars and workshops throughout the country to achieve its primary objective of advancing the sciences of heating, refrigeration, air conditioning and ventilation and the associated services. ISHRAE publications help readers to keep up to date, learn new techniques, improve old designs and introduce new equipment to improve the quality of air inside buildings.

## EVENT PRODUCER

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NürnbergMesse is one of the 15 largest exhibition companies in the world and among the Top Ten in Europe. The portfolio covers some 120 national and international trade fairs and congresses and approximately 40 sponsored pavilions at the Nürnberg location and worldwide. Every year, around 30,000 exhibitors (international share 39%) and up to 1.4 million visitors (international share of trade visitors 22%) participate in the NürnbergMesse Group's own, partner and guest events. The group is present with subsidiaries in China, North America, Brazil, Italy and India. The NürnbergMesse Group also has a network of approximately 50 representatives operating in about 100 countries.

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**ACREX**<sup>®</sup>  
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# KNOWLEDGE ENHANCING SEMINAR

## SEMINAR 1

### HEAT PUMP TECHNOLOGY - FOR COMMERCIAL & INDUSTRIAL APPLICATIONS: ASIAN & INDIAN CASE STUDIES

DATE: 27 FEB 2020, THURSDAY

TIME: 1400 - 1530 hrs

VENUE: IEML, Greater Noida, Delhi-NCR

Asian Heat Pump & Thermal Storage Technologies Network



#### Inauguration and background

Mr. Vikram Murthy, National President, ISHRAE

#### AHPNW AND HPTCJ ACTIVITIES FOR THE DISSEMINATION OF HEAT PUMP TECHNOLOGY

Mr. Akihiro Takeuchi, Director, HPTCJ, Tokyo, Japan

HPTCJ is actively involved in the promotion and technological advancement of heat pump thermal storage systems as the only national center of Japan. In this Presentation, Mr Akihiro Takeuchi will introduce HPTCJ activities for the dissemination of heat pump and thermal storage systems, especially activities based on AHPNWTokyo declaration in 2017.

#### Recent Advances in Heat Pumps for Water Heating Applications

Mr. B B Kale, Head, Product and Marketing, Emerson

This presentation will focus on Heat Pump Market Trends in Asia, Advancements in Heat Pump Technologies, Energy Efficient Compressors for Heat Pump Applications, India Water Heating Challenges and Case study

#### Commercial and Industrial Heat Pump Technology and Case Studies in Japan

Mr. Koki Watanabe, Deputy Director, HPTCJ, Japan

Recently, heat pumps are receiving much attention as a technology for improving energy efficiency and reducing CO2 emissions. In this presentation, Mr Koki Watababe will introduce case studies of heat pumps in commercial and industrial sectors in Japan and explain advantages to be brought about by introducing heat pumps

#### Application of Heat Pump in Commercial Buildings

Ms. Kshama Jain, Managing Director, Kehems Technologies

Heat pumps are an efficient, when used in combination with other systems, they can greatly enhance the efficiency of a heating and cooling system, at a lower installed cost. This presentation discusses on the application of Heat Pump in Commercial Buildings

#### Concluding remarks and Way forward

Mr. R. Saravanan, Anna University, Chennai & Session Coordinator, ISHARE

## SEMINAR 2

### LOW GWP REFRIGERANTS AND ADAPTING OF LOW ENERGY TECHNOLOGIES ROUND TABLE DISCUSSION: INTERNATIONAL PARTNERSHIPS TO FACILITATE IMPLEMENTATION OF INDIA'S COOLING ACTION PLAN

DATE: 27 FEB 2020, THURSDAY

TIME: 1530 - 1700 hrs

VENUE: IEML, Greater Noida, Delhi-NCR

Dr. Reddy, DST, Government of India

Dr. Love, Ozone Cell, Government of India

Ms. Monica Axell, IEA

Representation from ISHRAE

Dr. Vaibhav Chaturvedi, CEEW

Dr. Satish Kumar, AEEE

Mr. Benjamin Hickman, UNEP

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# KNOWLEDGE ENHANCING SEMINAR

## SEMINAR 3

## LOW ENERGY COOLING & OCCUPANT HEALTH IN BUILDINGS

**DATE:** 27 FEB 2020, THURSDAY

**TIME:** 1000 - 1300 hrs

**VENUE:** IEML, Greater Noida, Delhi-NCR



### Cooling Energy - Impact On Building Value

Mr. Frank Hovorka, President, REHVA

Positive links between buildings' sustainability (like energy performance and GHG emissions) and financial performance and building value

### Low Energy Cooling Technology - Radiant & Ventilation

Mr. Jaap Hogeling, Director, EPB Center

Passive cooling technologies which use low energy and are very efficient

### Case Study On Radiant Cooling - Indian Application

Mr. Madhusadan Rapole, M.D., Oorja Energy Engineering

Application of Radiant cooling in Indian conditions

### Low Energy Cooling Technology: Multi Stage Evaporative Cooling

Mr. Richie Mittal, President Elect, ISHRAE

Passive cooling technologies which use low energy and are very efficient

### Filters & Purifiers For Good Health In Residential Applications

Mr. Bjarne Olesen, Proff. International Centre for Indoor Environment and Energy,  
Department of Civil Engineering, Technical University of Denmark

Various filtration technologies, air purifiers and their application in residences

### Project Lecavir: Low Energy Cooling & Ventilation In Indian Residences

Dr. Yash Shukla, CEPT, University Ahmedabad.

A research project for typical Indian residences

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# KNOWLEDGE ENHANCING SEMINAR

## SEMINAR 4

### INDOOR ENVIRONMENTAL QUALITY - GLOBAL SCENARIO & INDIAN CHALLENGES

DATE: 28 FEB 2020, FRIDAY

TIME: 1400 - 1700 hrs

VENUE: IEML, Greater Noida, Delhi-NCR

#### Looking inside the ISHRAE IEQ Standard

Mr. Ashish Rakheja, AEON Integrated Building Design Consultants LLP.

#### IEQ Global Scenario and Responsibility of HVAC Engineers

Mr. Bjarne Olesen, Prof. International Centre for Indoor Environment and Energy, Department of Civil Engineering, Technical University of Denmark.

#### IEQ - GLOBAL ALLIANCE

Mr. Vishal Kapur, MD, Meho-HCP Air Systems Pvt Ltd.

#### IEQ in nZEB SCHOOLS : REHVA - ISHRAE GUIDEBOOK

Prof. Livio Mazzarella, Prof. of Building Physics and HVAC Systems Full Professor at Politecnico di Milano, Department of Energy – Milan, Italy,  
Dr. Nitin Deodhar, Chief Designer, N M Deodhar Consulting Engineers.

#### From Green Buildings to Healthy Buildings,

Mr. Nitin Dani, Project Director, GIGA Founder & Director, Green Initiatives.

#### Case Studies on IAQ monitoring

Mr. Priyans Murarka, Co-Founder and CTO, ActiveBuilding,  
Mr. Louie Cheng, Chapter director of the China Chapter of the Indoor Air Quality Association.

#### Panel discussion - Implementation of IEQ Standard: Challenges and Solutions

Dr. Jyotirmay Mathur, Professor, Mechanical Engineering Department, Centre for Energy and Environment, and Head, MNIT Innovation and Incubation Centre Malaviya National Institute of Technology

## SEMINAR 5

### HIGH PERFORMANCE BUILDINGS IN INDIA - CASE STUDIES OF HVAC SYSTEM EFFICIENCY

DATE: 28 FEB 2020, FRIDAY

TIME: 1400 - 1700 hrs

VENUE: IEML, Greater Noida, Delhi-NCR

Building	Award	Speaker
Reliance TC 22 Bldg	ACREX INDIA Hall of Fame 2018	<b>Mr. Keyur P Shah</b> In charge – RPMG Core HVAC Department Reliance Industries Ltd.
ITC Grand Chola	ACREX INDIA Hall of Fame 2019	<b>Mr. Rahul Prabhakar</b> Chief Engineer - ITC Grand Chola ITC Hotels Ltd.
Infosys EC 53	ACREX INDIA Hall of Fame 2017	<b>Mr. Guruprasad Sastry</b> Regional Head - Infrastructure Infosys Ltd.
Mumbai Airport T2	ACREX INDIA Hall of Fame 2016	<b>Mr. Ketan Soni</b> Head – MEP Operations – West Blue Star

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