

Efficient, High-Performance Buildings for Developing Economies Conference



Shaping Tomorrow's
Built Environment Today



April 24–25, 2014
Manila, Philippines

www.ashrae.org/Developing2014

Thursday, April 24

Thursday, April 24, 10:15 AM-10:45 AM

MASTER SESSION #1

The ASHRAE Building Energy Labeling Program

William P. Bahnfleth, Ph.D., P.E., Fellow ASHRAE, ASHRAE President, Pennsylvania State University, University Park, PA

Thursday, April 24, 11:30 AM-1:15 PM

BACK TO BASICS I: GENERAL SUSTAINABLE DESIGN

1. Energy Efficient Designs of Low Carbon Buildings in Developing Countries

Essam E. Khalil, Ph.D., Fellow ASHRAE, Cairo University, Cairo, Egypt

2. The Facade Odyssey: Solutions for Design of High Performance Buildings

Ashish Rakheja, P.E., Member and Sakshi Jain, P.E., AECOM India Pvt. Ltd., New Delhi, India

3. Energy Efficient, High Performance Building Situation in Argentina, an Emerging Country, and Its Possible Evolution

EMERGING TRENDS IN AIR-CONDITIONING: I

1. Energy-Efficient Chiller Sizing for HVAC System of a Library Building through Energy Modeling

Fu-Jen Wang, Ph.D., P.E., Member, Wei-Chung Lin, Student Member and Cheng-Han Shiau, Student Member, National Chin-Yi University of Technology, Taichung, Taiwan

2. Adaptive Approach and Low Emission Comfort Cooling Systems as Alternatives to Main Stream HVAC

Roddam Vijaya Simha, P.E., Fellow ASHRAE, Airtron Consulting Engineers Pvt. Ltd., Bengaluru, India

3. Next Gen “Green” Chiller (Presentation)

Philip Yu, PhD, Member, Trane Pacific, Hong Kong, Hong Kong

Thursday, April 24, 2:15 PM-3:30 PM

BACK TO BASICS II: NATURAL VENTILATION AND NOVEL AIR CONDITIONING APPROACHES

1. Study of Natural Exhaust Ventilation for Implementation of Turbo Ventilators in Power House Buildings

Anup Sinha, Bharat Heavy Electricals Limited, Noida, India

2. Potential Application of Vernacular Passive Cooling Techniques to Naturally Ventilated Modern Terraced Houses in Hot-Humid Climate of Malaysia

Doris Hooi Chyee Toe¹ and Tetsu Kubota, Dr. Ing.², (1) Universiti Teknologi Malaysia, Skudai, Malaysia, (2) Hiroshima University, Hiroshima, Japan

BUILDING DESIGN SOLUTIONS

1. Selecting Insulation to Prevent Condensation on Cold Surfaces in Hot and Humid Climates

Laurentino R. Punsalan, P.E., Fellow Life Member, ASHRAE Philippines Chapter, Makati, Philippines

2. Heat Flow through Window with a Completely Closed Shutter (Presentation)

Esam Alawadhi, Ph.D., Kuwait University, Safat, Kuwait

Thursday, April 24, 4:15 PM-5:00 PM

MASTER SESSION #2

Keynote Address by Oswaldo Bueno

Oswaldo di Siqueira Bueno, Oswaldo Bueno Engenharia e Representações Limitada, São Paulo, Brazil

Thursday, April 24, 5:00 PM-5:45 PM

LOCAL PRACTITIONER ROUND TABLE

Moderator: Victornino Lahoz

Panelists: Arnado de Jesus, Fernando Guevara, Laurentino Punsalan

Friday, April 25

Friday, April 25, 9:30 AM-10:30 AM

MASTER SESSION #3

Sustainable Cooling: Respect, Tradition and the Manipulation of Air

Karan Grover, Karen Grover & Associates, India

Friday, April 25, 11:15 AM-1:15 PM

BUILDING INTERACTIONS

1. Framework for Transforming Buildings Sector in Developing Economies Based on Lessons Learned from Energy Efficiency & Sustainability Initiatives by the US Federal Agencies and Cities

Om Taneja, PhD, PE, Member, US, General Services Administration, Manhattan, NY

2. Leveraging Innovative Technologies for Life Cycle Operational Efficiency and Improved Indoor Environment Quality in Developing Economies

Om Taneja, PhD, PE, Member, US, General Services Administration, Manhattan, NY

3. Matlab-Programmable and Look-up-Tabulated Cooling Load Estimation of Commercial and Residential Building Components in Damascus, Syria, Via the Radiant Time Series Method (Presentation)

Raed Bourisli, Ph.D.¹, Mariam Khalid Al-Ramthan² and Adnan A. Al-Anzi, Ph.D.¹, (1)Kuwait University, Kuwait, Kuwait, (2)Ministry of Defense, Kuwait, Kuwait

INDOOR AIR QUALITY AND WATER

1. Thermal Comfort in Classrooms in Tropics: An Analysis of Student Preferences

Asit Kumar Mishra and Maddali Ramgopal, Indian Institute of Technology Kharagpur, Kharagpur, India

2. IAQ in Rapid Urbanization and Its Constraints on Energy Efficiency

Barun Aggarwal Sr. and Kamal Meattle, Member, Paharpur Business Centre, New Delhi, India

3. Air Distribution Measurement in Buildings (Presentation)

Clifford Cooper, Member, VERTEX Air Quality Services, Kingston, NY

Friday, April 25, 2:15 PM-2:45 PM

MASTER SESSION #4

The Way Forward: From Green Buildings to Green Communities

Sean Chiao

Friday, April 25, 3:15 PM-4:15 PM

HOT/HUMID CLIMATES DESIGN GUIDE WORKSHOP

Frank A. Mills, P.E., Member, Low Carbon Design Consultants, Liverpool, United Kingdom

Friday, April 25, 4:45 PM-5:45 PM

INTERNATIONAL CODES AND STANDARDS

1.Modifying and Adopting High Performance Building Programs from Developed Countries to Developing Countries

T.M. Lawrence, Ph.D., Member, University of Georgia, Athens, GA

2.ASHRAE/IES Standard 90.1-2013: Cornerstone for High-Performance Buildings

John Hogan, P.E., Member, Consultant, Seattle, WA

3.A Contextual Approach to Green Building Regulation in Developing Countries

Ruggiero Guida¹, Ommid Saberi¹ and Autif M. Sayyed², (1)WSP, Dubai, United Arab Emirates, (2)International Finance Corporation, Jakarta, Indonesia

SUCCESS STORIES OF GREEN BUILDINGS

1.Healthy, Airside Solutions to Significantly Reduce Your Building's Carbon Footprint (Presentation)

Gordon Sharp, Member, Aircuity, Inc., Newton, MA

2.Humidity Control in Tropical Climate with Heat Pipes (Presentation)

Mohan Dhingra, InviroTech Malaysia, Petaling Jaya, Malaysia

3.Passive Desiccant Dehumidification Technology & Dedicated Outdoor Air System (DOAS) Configurations for Hot & Humid Climates (Presentation)

Varun Pahwa, Associate Member, Dessicant Rotors International, Gurgaon, India