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ASHRAE LONDON CANADA CHAPTER #116

TOPIC:

Basics of Air Change Rates (ACH): Facts Versus Fiction

Presenter:

Kishor Khankari, Ph.D.

Fellow ASHRAE

ASHRAE Distinguished Lecturer

President - AnSight LLC

Monday, February 27th, 2023

5:00PM – Hosted IN PERSON!

Delta London Armouries

325 Dundas St. London, ON

[Registration link](#)

\$85 – Members | \$25 - Students

Please see presidential message on page 3 for a note about meeting costs year to date.



February Topic

Basics of Air Change Rates (ACH): Facts Versus Fiction

Air Changes per Hour (ACH) is often specified in ASHRAE standards, codes, design guidelines, and handbooks for required ventilation rate. Examples of such spaces are patient rooms, operating room, bathrooms, cleanroom, and laboratories. This presentation will systematically demonstrate the validity of popular notions regarding the ACH. The role of space volume in controlling and distributing the contaminant in the space will be discussed. This presentation will further demonstrate whether ACH can be a sole criterion for effective ventilation of critical spaces using the examples for patient room, hospital operating room, laboratory spaces, and cleanroom. A new concept for analyzing ventilation effectiveness for these spaces will be introduced to design and optimize the HVAC layout for healthcare, laboratory, and cleanroom facilities. In addition, a role of demand control ventilation in minimizing the ACH will be discussed. This lecture will provide valuable insights to architects, design engineers, and facilities managers into the design and operation of critical facilities.

GBCI Approved | 1 CE Hours | 0920020150
AIA Approved | 1 LU/HSW | BACR19

February Presenter

Kishor Khankari, Ph.D.

ASHRAE Distinguished Lecturer

Dr. Kishor Khankari, Ph.D. is President and owner at AnSight LLC in Ann Arbor. He provides engineering solutions and insights through CFD analysis. Kishor has 30 years of experience in providing optimized HVAC solutions to a wide variety of applications involving plume dispersion from stack exhaust and cooling towers, displacement ventilation, natural ventilation, radiant heating and cooling, and similar other HVAC applications. Dr. Khankari has developed a patented technology of a wind band design of exhaust fan assembly systems.

A noted expert in CFD, he has a Ph.D. from the University of Minnesota and has been regularly published in several technical journals and trade magazines. Dr. Khankari has made over 100 DL presentations worldwide on topics related to design and optimization of HVAC systems and also at various technical conferences and professional meetings.



Dr. Kishor Khankari is a Fellow member of ASHRAE and a recipient of ASHRAE Distinguished and Exceptional Service Award. He served on several ASHRAE committees. He is the past President of Detroit ASHRAE Chapter, past Chair of ASHRAE Technical Committee TC9.11 Clean Spaces, and the past Chair of Research Administration Committee (RAC). He is a voting member of Member of the ASHRAE Infectious Aerosols Position Document (PD) Committee and the ASHRAE Standards Project Committee SPC 129 – Measuring Air Exchange Effectiveness. He also leads a Multi Task Group (MTG) on Air Change Rates. He currently serves on the ASHRAE Board as Director-at-Large (DAL).



2023 Chapter President's Message

Hello All,

Happy New Year!. It was a great pleasure to reconnect with all members of London chapter again in 2023.

In 2022, we successfully completed a chapter golf tournament and two in person meetings. Thank you very much for your support.

In 2023, we have planned 5 in person technical meetings for the benefit of our membership. Topics and speakers are selected to provide insight into current industry trends, updated building codes and compliance and diverse applications in HVAC and Refrigeration subject.

After detail review of chapter operations and finances, board has decided to increase meeting fees to 85\$ per person from 70\$ per person from January meetings onwards.

This increase in fee is to offset increased costs of meeting space, food and audio visual equipment at venues in post covid period.

For example, At 70\$ per person, we lost around \$1000 per meeting on average in last two meetings.

I believe all members would extend their support to us so we can continue chapter operations in a smooth manner.

If anyone willing donate for ASHRAE research or sponsor a meeting or student meal or exhibit a product, please contact me at c116@ashrae.net

Thanks

Rajarajan.D, P.Eng.



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Professional Development

Need hours for your professional development requirements? Be sure to attend a chapter meeting. Professional Engineers Ontario requires members to have yearly professional development training recorded through the Practice Evaluation and Knowledge (PEAK) program. Other groups may also require continuing education.

Chapter Upcoming Meetings

Monday February 27th – Chapter Technical Meeting

Topic: Basics of Air Change Rates (ACH): Facts versus Fiction

Speaker: Kishor Khankari, Ph.D., Ansight LLC

Monday March 27th – Chapter Technical Meeting

Topic: CO2 Refrigeration

Speaker: Phil Boudreau

***** be sure to check web site for latest information *****

<http://LondonCanada.AshraeChapters.org>

ASHRAE Society Engineering Job Board

The ASHRAE society Engineering job is a publicly accessible job board where all companies can create job postings for HVACR related jobs. The resource is available at <https://jobs.ashrae.org/>

ASHRAE London Canada – 50th Year Anniversary

2022 is the 50th year since ASHRAE London Canada received its charter on May 8, 1972. The London chapter was formed when J. Vanstone, C.R. Morrison, J. Hoyle, F. Lucas, and J.B. Bisset meet in 1970/1971 to discuss starting a chapter which had the Hamilton Chapter offering to act as sponsor.

ASHRAE Concludes Successful Winter Conference

The ASHRAE 2023 Winter Conference concluded in Atlanta, with a strong focus on building decarbonization strategies. The conference took place February 4-8, with more than 3,000 HVAC&R industry professionals in attendance. The AHR Expo occupied 487,000 net sq ft. of exhibit space at the Georgia World Congress Center and showcased the latest technologies and services in the HVAC&R industry.

The 2023 ASHRAE Annual Conference will take place June 24 – June 28 in Tampa, Florida. The 2024 Winter Conference will take place January 20 – 24, and the AHR Expo, January 22 – 24, in Chicago.



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Place your business card HERE
Just \$100 for one year
and includes also on the chapter
web site

contact:

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Tom Pollard

tpollard@execulink.com

or

Treasurer

Jeff Armstrong

jeff.armstrong@trane.com



ASHRAE RESEARCH

Hello ASHRAE London Members,

My name is Jeff Armstrong and I am the Chapter Research Promotion Chair for this year. Our Research Promotion goal for this year is \$10,000 and look forward to reaching this goal through your continued support.

This year we will be recognizing donors at a RP Donor Recognition meeting by displaying individual and company donors prior to one of the technical presentations. Donors will also be recognized in the monthly newsletter and on the London Chapter website. To donate online please visit:

<http://www.ashrae.com/donate>

Current Donors:

Roberts Brothers Sheet Metal
Vanderwesten & Rutherford

Current Honour Roll Individual Donors:

John Xiang, Ibrahim Semhat, Glenn Kernaghan, Jeff Armstrong, Rob Davidson, Tom Pollard
Rajarajan Deenadayalan, Aaron Hampel, Eric Shaw

Current Honour Roll Corporate Donors:

Chorley & Bisset

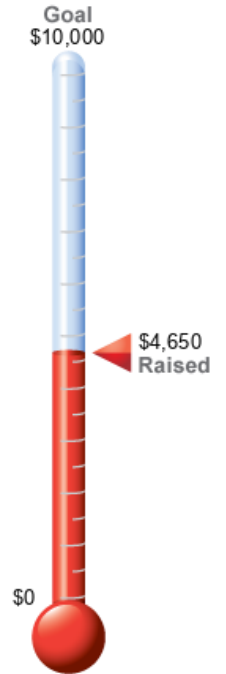
<u>Contribution Levels</u>	<u>Individual</u>	<u>Company</u>
Honour Roll	\$150 +	\$500 +
Major Donor (Bronze)	\$250 - \$999	\$500 - \$999
Major Donor (Silver)	\$1000 - \$2,499	\$1000 - \$2,499

If any questions, please contact:

Jeff Armstrong

519-453-3010 x.814

jeff.armstrong@trane.com





ASHRAE Announces Nominees for 2023-24 Slate of Officers and Directors

Doug Cochrane (Region II) was recently announced to serve as a Director-at-Large. Please see below announcement:

ATLANTA (February 6, 2023) – ASHRAE is pleased to announce its nominees for the 2023-24 slate of officers and directors. Nominations for officers and directors were made by the ASHRAE Nominating Committee from a list recommended by individual members and from Chapters Regional Conferences.

The 2023-24 nominees are as follows:

President:

Ginger Scoggins, P.E., Fellow ASHRAE

President-Elect:

Dennis Knight, P.E., BEMP, Fellow Life Member ASHRAE

Treasurer:

Bill McQuade, P.E., LEED AP, Fellow ASHRAE

Vice Presidents:

Billy Austin, P.E., BCxP, BEAP, BEMP, CHD, HBDP, HFDP, OPMP, Fellow ASHRAE

Ashish Rakheja

Wade Conlan, BCxP

Chandra Sekhar, Ph.D., Fellow ASHRAE

Directors and Regional Chairs:

Scott Peach, P.E., FPE (Region VII)

Joe Sanders (Region VIII)

Jonathan Smith, P.E., CEM, LEED AP (Region IX)

Buzz Wright, P.E., FPE (Region X)

Mahroo Eftekhari (Region XIV)

Directors-at-Large:

Doug Cochrane, P.Eng., LEED AP

Corey Metzger, P.E.,

Heather Schopplein, P.E.

Alternate Director-at-Large:

Patrick Marks, P.E., Fellow ASHRAE

ASHRAE members will vote on the nominees via electronic ballot in May. Ginger Scoggins, P.E., Fellow ASHRAE, will serve as ASHRAE President for the 2023-24 Society Year.



Notice of Event – Toronto Hosted Learning Course – Fundamentals of Decarbonization Design Systems and Equipment Applications

Thursday, February 23 2023 - 2:00 PM to 5:00 PM ET - Online ASHRAE Instructors-led Course

This course provides an overview of the topic of building decarbonization with a focus on building heating systems with associated HVAC technologies in new construction. Carbon emissions associated with technologies found in various system designs in buildings are discussed. The course covers the options for low, and no carbon emissions and electrification alternatives.

This course will be presented through the GoToWebinar or WebEx platform. Course registrants will receive a confirmation e-mail with instructions on how to login to the course and how to obtain the course materials. The course presentation will be made available prior to the course date. Attendees will receive 3 hour online course, copy of presentation and 30 days access to recorded version.

Since January 1, 2023, continuing professional development (CPD) will become a required component for professional engineers and limited license holders to maintain their license every calendar year. This course is good opportunity to help license holders achieve these mandatory requirements set by the Professional Engineers Ontario (PEO).

ASHRAE is an approved Continuing Education provider for the American Institute of Architects (AIA) and Green Business Certification Inc. (GBCI). Electronic copies of the course evaluation form and Certificates of Attendance referencing Professional Development Hours (PDHs) will be made available to the course attendees.

Use of the materials is limited to the above course on the specified dates. Course materials may not be sold, shared or otherwise distributed independently of the above licensed course. Use of ASHRAE content may not be done in a way that will state or imply ASHRAE endorsement of any proprietary service or commercial product. This permission should not be construed that ASHRAE is waiving any copyright protection or other rights entitled to its intellectual property.

Register here - <https://www.torontoashrae.com/event-5122339>

ASHRAE Cold Climate Conference 2023

The ASHRAE Alaska Chapter warmly invites you to join us in Alaska in March 2023 for two amazing international conferences!

The first conference, the “ASHRAE and SCANVAC HVAC Cold Climate Conference 2023” is being co-organized by ASHRAE and SCANVAC and will be held in Anchorage from March 6-8th. For an additional registration fee, attendees can continue their arctic experience at the “Arctic Mini Conference”, in Fairbanks from March 9th-10th.

The goal of the conferences is for Built Environment engineers, practitioners, researchers, scientists, owners and government officials working in Cold Climate regions to share recent solutions and advancements addressing changes in climate; while experiencing the warmth, hospitality and culture of Alaska.

The technical presentations will provide relevant and practical solutions to handle the challenges of today as well as tomorrow in the Changing Arctic. Our goal is to ensure all attendees leave the conference with new tools and ideas that they can implement in their designs and communities, as well as excitement and inspiration for solutions yet to come.

Come to network with professionals from across the Arctic and learn what other nations are doing in our industry to address these challenges. Now more than ever, it is important for the People of the Arctic to share current Best Practices and collaborate on innovative solutions.



Beyond the technical scope, we Alaskans are known for our hospitality, just as Alaska is known for its natural beauty. We've made this conference one that will be remembered for decades!

Dates and Locations:

March 6-8, 2023—Anchorage

March 9-10, 2023—Fairbanks

Conference Website:

ashrae.org/2023hvaccoldclimate

ASHRAE Recognizes Excellent Achievements of Members at the 2023 Winter Conference

Recognizing Canadian ASHRAE accomplishments there were 3 Canadian technology awards given which are included below. For the full list please go to <https://www.ashrae.org/about/news/2023/ashrae-recognizes-excellent-achievements-of-members-at-the-2023-winter-conference>

ATLANTA (February 5, 2023) – ASHRAE recognized the excellent achievements and contributions of members to the Society and the built environment industry during its 2023 Winter Conference in Atlanta.

Award of Engineering Excellence

The Award of Engineering Excellence was created in 1989 to recognize a first-place winner of the Society-level Technology Award competition for an outstanding application of innovative design and effective energy utilization. The recipient of the Award of Engineering Excellence will have demonstrated the best overall compliance with the judging criteria.

First place recipients of the Award of Engineering Excellence are:

- Lianne Cockerton, ing. and Martin Roy, ing., new institutional buildings category, Local 144, Point-aux-Trembles, Quebec, Canada. The building is owned by Association Unie Local 144.

The ASHRAE Technology Awards

The ASHRAE Technology Awards recognize outstanding achievements by ASHRAE members who have successfully applied innovative building designs. Their designs incorporate ASHRAE standards for effective energy management and indoor air quality and serve to communicate innovative systems design. Winning projects are selected from entries earning regional awards.

- Simon Kattoura, P.Eng., existing industrial facilities or processes category, Hood Packaging Corporation, Montreal, Quebec, Canada. The building is owned by Hood Packaging Corporation.
 - Adrienne Mitani, P.Eng., residential facilities category, 70 Gloucester, Ottawa, Ontario, Canada. The building is owned by Claridge Homes.
-



ASHRAE Pocket Guide 10th Edition

Now available in the ASHRAE Bookstore! The ASHRAE Pocket Guide 10th edition serves as a user-friendly, offline reference for engineers without easy access to complete ASHRAE Handbook volumes. This latest edition has been revised to include updates from the four current volumes of the ASHRAE Handbook series, from the 2019 editions of ASHRAE Standards 15, 34, 62.1, 62.2, and 90.1, and the 2020 edition of Standard 55. Learn more about what is included in the 10th edition and purchase your copy today.

<https://www.ashrae.org/technical-resources/bookstore/ashrae-pocket-guide-for-air-conditioning-heating-ventilation-refrigeration-10th-ed>

New ASHRAE Certification Study Guide

Now available in the ASHRAE Bookstore

The **NEW Certification Study Guide: Building Commissioning Professional (BCxP)** joins the growing suite of ASHRAE Certification tools to help you reach your professional goals.

Looking for something else? Also available are the **Certification Study Guides for Certified HVAC Designer (CHD)** and **Building Energy Modeling Professional (BEMP)**.

Tune-in to the ASHRAE Journal Podcast

Tune into conversations between leading ASHRAE experts as they discuss what HVAC engineers need to know to design better systems and grow the HVAC&R industry. Available on all podcast platforms.

<https://www.ashrae.org/news/ashraejournal/ashrae-journal-podcast>