

SHARE:

[Join Our Email List](#)



JANUARY GAZETTE | *Our 98th year!*

January 2021 - Vol 68, Issue 2

Inside the Gazette

Sponsors

Fundamentals of air system design

Personal development and leadership

You need to be intentional about growth

Passive House design principles

Upcoming webinar

ASHRAE Winter Conference

Quick Links

[Toronto Chapter Website](#)

[Meeting Registration](#)

[Past Gazette Issues](#)

[ASHRAE Society Website](#)

[Join Our Mailing List!](#)

Board of Governors (2020-2021)

President

[Brendan McDermott](#)

DMA Systems

President-Elect

[Abhishek Khurana](#)

Voyager Buildings

Vice-President

[Kurt Monteiro](#)

Smith + Andersen

Treasurer

[Beatriz Salazar](#)

VIEWPOINT

For the past 9 months our industry and our world has been under siege from the biggest global threat we have ever experienced and I am so very proud to have been at the helm of the Toronto ASHRAE Chapter as it rose up and faced this new reality. As the saying goes, "it takes a village" and the Board, Committee chairs and volunteers of your chapter have gone above and beyond this year to make it a success and to present a robust technical seminar program. I would like also to take this opportunity to thank our Sponsors. The donations each year from our sponsors go to ASHRAE Research Canada to fund domestic research projects. This year, even more crucially, many of these research projects are focused on mitigation of the spread of Covid-19. Everything may be difficult and everything may seem bleak, but ASHRAE is a community and community will bring us through to brighter days. Be strong, be safe.



Brendan McDermott, BAsC.
President ASHRAE Toronto Chapter
CEO/Founder

Smith + Andersen

Secretary

[Michael Genin](#)

Advance Industrial
Refrigeration (AIR)

Past President

[Antonio Figueiredo](#)

Modern Niagara Building
Controls

[Anne Marie Bundgard](#)

(Gazette Chair)
Engineered-Comfort

[Niss Feiner](#)

(History Chair)
Delta-T Designs

[Alekhya Kaianathbhatta](#)

(YEA RVC)
Smith + Andersen

[Dragos Paraschiu](#)

Humber College

[Thinusha Param](#)

Klenzoid Canada Inc.

DMA Heating and Cooling Systems Inc
C: 647-323-3620

UPCOMING TRAINING

**YEA Scholarship
for HVAC Design Essentials Training**

Presented by the ASHRAE Learning Institute, HVAC Design Essentials Training allows attendees to gain the fundamentals and technical aspects of design, installation and maintenance of HVAC systems.

To encourage attendance by young professional ASHRAE members, **YEA offers attendance scholarships to the HVAC Design training**. The full cost of registration to Level I or II of this training will be covered by ASHRAE! Any additional costs, such as airfare or hotel, are not covered by this scholarship. To apply, please click on this [link](#).

Criteria: All applicants must be ASHRAE members and 35 years of age or younger as of July 1 of the current society year (student members not eligible).

If you have any questions, please contact YEA at youngengineers@ashrae.org or (678) 539-1178. You can also reach out to ASHRAE Toronto YEA Chair Badri Patel, badri.patel@mail.ashrae.org

Badri Patel
YEA Committee Chair

DONORS AND SPONSORS

**ASHRAE Toronto Chapter thanks the following
companies for their support of the Gazette!**

Tim Muldoon, P Eng, LEED AP
Toronto Office Manager

tim.muldoon@spx.com
T +1 905 607 6446 x3
M +1 416 346 9541

SPX Cooling Technologies, Inc.
2425 Matheson Blvd., E., Suite 800
Mississauga, Ontario L4W 5K4, Canada
www.spxcooling.com



MARLEY



Brendan McDermott, BASc.

Brendan@DMA-Systems.ca
www.DMA-Systems.ca

T: 647-648-4778
C: 647-323-3620

251 Queen Street South #117 Mississauga ON L5M 1L7



**ADVANCE
INDUSTRIAL
REFRIGERATION**

MICHAEL GENIN, P.Eng.

mgenin@air-eng.com
+1 (647) 691-3831

**Modular Water Chillers
Packaged A/C Units
Heat Recovery Ventilation**

55 Northfield Dr. E. Suite 363
Waterloo, ON N2K 3T6

www.air-eng.com
Office: +1 (844) 837-3834



Glenn Kilmer
Partner & Technical Sales
www.kilmerenv.com

Applied HVAC Solutions, Service & Parts
Proudly serving Ontario since 1987

AAON RTUs, MAUs, ERUs, AHUs, Condensing Units & Heat Pumps
Condair (Nortec) Humidifiers, Evaporative Coolers & Dehumidifiers
Seresco Indoor Pool Dehumidifiers
RUKS Odour Control & Duct UVC



Raoul Gautreau, P.Eng.
Director of Business Development

150 Britannia Road East, Unit #1, Mississauga, Ontario L4Z 2A4
Toll Free: 1.888.220.5551 Tel: 905.568.1661 Fax: 905.568.2839
Cell: 416.518.1819 E-mail: RJG@cg-group.com

www.cgc-group.com



SPECIALISTS For:

- Radiant Floor Heating
- Snow Melting
- Solar Hot Water Panels
- Chilled Ceilings
- Hydronic Panels
- Boilers

Mark Euteneier, B.Sc.
www.klimatrol.com Mark@klimatrol.com
Tel: 905-454-1742
12 Bram Court, Unit 14 & 15
Brampton, Ontario L6W-3R6

Your Source for Hydronic Heating Comfort



CHRISTOPHER DESROCHES, P. Eng.

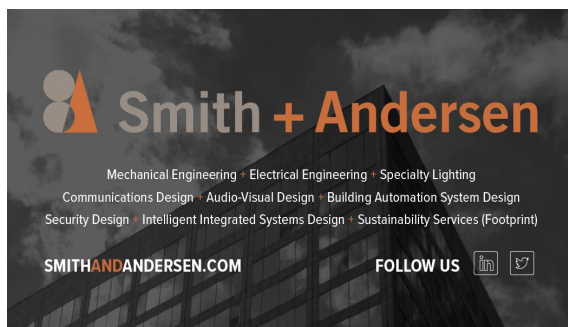
Applied Product Manager
HVAC Division

MITSUBISHI ELECTRIC SALES CANADA INC.
4299 14th Avenue, Markham, Ontario L3R 0J2 Canada
Direct: 905-475-3278 Cell: 647-273-1533
Main: 905-475-7728
Email: chris.desroches@mesca.ca
www.MitsubishiElectric.ca



Call today for more information on our products
and training sessions

ONTARIO • Tel.: (519) 744-7295 • smithenergy.com



Belimo Aircontrols (CAN), Inc.

5845 Kennedy Road
Mississauga, ON L4Z 2G3
Direct: +1 905-712-7921
Cell: +1 416-659-2191
Fax: +1 905-712-3124 com
www.belimo.ca

Contact
[Antonio Figueiredo](#) to post your business card here!

SUMMARY OF NOVEMBER 16th WEBINAR

Fundamentals of Air System Design

Ryan MacGillivray, P.Eng.
Principal Engineer, Daniels-Wingerak Engineering Ltd

**ASHRAE Distinguished Lecturer
and Member of ASHRAE Conference & Exposition Committee**

On November 16th, 2020, Ryan MacGillivray, an ASHRAE distinguished lecturer, gave a presentation online to ASHRAE Toronto Chapter on the topic of 'Fundamentals of Air System Design'. Ryan began the presentation by going over the basics of fundamentals of thermodynamics and fluid mechanics. Fundamentals such as Bernoulli's equation, Newton's Law of Motion, Continuity Equation, etc. were explained. He then later explained charts which are commonly used during air systems design such as the psychrometric chart, friction loss vs air quantity chart, and fan curve chart. Relationships of fan's RPM with power input, static pressure, and flow rate were described as power input \propto RPM³, static pressure \propto RPM², and flow rate \propto RPM.

The second part of the presentation focused on the components of air system design. The function of the fan in an air system is to provide sufficient static and velocity pressure. They are of centrifugal and axial type. Louvers are utilized at intake and exhaust terminals of ductwork. They are designed in a way to keep animals, birds, and stones out of the system. Filters are used to keep out bugs, bacteria and viruses. They are classified based on the MERV rating system as per ASHRAE. Cooling and heating coils are used to lower or raise the temperature of the air. Cooling coils are also used to dehumidify the air.

In the third part of the lecture, human comfort and air distribution were explained. ASHRAE standard 55 can be referred to for understanding conditions for human comfort, and ASHRAE standard 62.1 for ventilation rate for air quality. Factors such as clothing (clo value), activity level (met), air movement, relative humidity, etc. all affect the human comfort level. The last part of the lecture had an overview of various codes and standards such as ASHRAE 62.1, NECB 2017, SMACNA, etc.

Summary by Eshan Patil
Gazette Committee, ASHRAE Toronto Chapter

REVIEW OF YEA EVENT, NOVEMBER 23rd, 2020

Review of Personal Development and Leadership Workshop by Ralph Kison , November 23rd, 2020

2020 witnessed new challenges followed by successes. One new YEA committee event which turned out to be a great success, was the Personal Development and Leadership Workshop by Ralph Kison. This workshop provided a virtual networking platform for ASHRAE Toronto members and guests. YEA members were provided the opportunity for enhanced participation and networking.



Ralph Kison

Speaker and Facilitator Ralph Kison is well respected within and outside ASHRAE Society, especially among YEA members. He brings experience, perspective, and passion to assist organizations and their employees to maximize their potential and impact.

Badri Patel, YEA Committee Chair, hosted the workshop. Mr. Patel began the workshop with a welcome message, then Ralph Kison facilitated the workshop in three segments. The first segment focused on **personal branding** including an Elevator Pitch exercise. Participants interacted during the breakout session and the discussions were summarized and presented by a member from each break-out group. Ralph discussed building strategic client relationships and the difference between being a **"rainmaker" versus "caretaker" of the account or client**; as well as a balanced approach to business development with the **"3 brains" technique** relating to the Head/Heart/Gut.

The second break out session demonstrated how to become an **effective networker in times of COVID and beyond**. During the last session, Ralph shared insightful content on developing habits for success by adopting an infinite minded leadership attitude, developing higher levels of Emotional Intelligence and planning our time by utilizing the Priority Matrix.

The workshop was wrapped up with Q&A and useful tips from Ralph for 2021. There was a great amount of participation from all who attended, and participants left with new knowledge and professional techniques to apply in 2021.

Badri Patel
YEA Committee Chair

SUMMARY OF DECEMBER 7th WEBINAR

Growth Just Does not Happen, You Need to be Intentional About it. Are You Putting the Work to be the Best Version of Yourself?

ASHRAE Distinguished Lecturer: Karine Leblanc

December 7th's webinar focused on helping our members achieve their full potential, by highlighting how personal development is the right tool to reach it. To help us learn about personal development, ASHRAE Distinguished lecturer, Karine Leblanc, demonstrated what it takes to discover your purpose, become a better human being, become a better spouse/parent, advance your career, reach your financial goals, and enrich your soul. The soft skills presented by Karine Leblanc, will help you become a more fulfilled individual by learning how to set intentions, develop self-awareness, improve your self-esteem, and analyse your bad experiences.

Karine focuses on highlighting 5 main topics, that must be addressed to effectively grow and help you live your best life, live to your full-potential, and determine what you want to be remembered for. These topics include:

1. **Intentionality:** Growth doesn't just happen.
2. **Awareness:** You must know yourself to grow yourself
3. **Self-Image:** How do you see yourself?
4. **Bad experiences:** Good management of bad experiences lead to great growth.
5. **The Rubber Band: Life begins at the end of your comfort zone.**

Many may find themselves wanting to improve their life, but few want to do the work necessary to get there. Karine warns about the growth gaps, that can prevent our personal growth, such as timing, knowledge or expectations, and how we can overcome these challenges through asking the big questions (where do you want to go in life? What is the furthest you can imagine going? ,etc.), becoming proactive in the moment, facing our fears, and transitioning from accidental growth to intentional growth.

In order to change, you must know yourself. Karine explains how self-awareness can push your personal growth to finding your passion and purpose. Through identification of your strengths, your weaknesses, your interests, the opportunities available to you, and comparing where you are to where you want to be, will allow you to be able to transition from someone who does not know what they would like to do, to someone who knows what they want, and does it.

Our self-imagining can prevent us from reaching our potential and sabotages the opportunities that we do encounter. Examining how you see yourself, your self-esteem level, how you compare yourself to others, and identifying obstacles we place against ourselves, are necessary in order to grow. To improve your self-esteem, Karine recommends: guarding your self-talk, stop comparing yourself to anyone, identify how you add value to others, and move beyond your self-limiting beliefs.

Every pain introduces a person to their self. The truth about bad experiences, explained by Karine, is that everyone has them, no one likes them, and few will make a bad experience a positive experience. In order to grow, Karine explains that it is necessary to have a positive life stance, embrace and develop your creativity, embrace the value of bad experiences, make good changes after bad experiences and take responsibility for your life.

Finally, Karine states, **"Growth stops when you lose the tension between where you are and where you could be"**. Her analogy of the rubber band to life and growth, showcases how it is necessary to step out of your comfort zone. This will allow you to reach for the goals you want to achieve and set new goals that will motivate you to grow further.

Summary of Webinar by:

Andy Valencia
Electronic Communications and Gazette Committee

SUMMARY OF DECEMBER 14th WEBINAR

Principles of Passive House Design

Michael Nemeth, P.Eng., LEED AP, Radiance Cohousing

For the webinar of December 14th, certified Passive House (Passivhaus) instructor Michael Nemeth explained the essentials of Passive Houses. The idea of a Passive House originated in the late 1980s/early 1990s, when designers sought to create a building standard that would maintain a comfortable indoor environment, while drastically reducing the amount of

energy needed for heating and cooling. Although the **Passive House concept** was codified in Germany, it **has Canadian roots**; the ultra-low energy **Saskatchewan Conservation House (built in 1977)** helped to inspire the Passive House standard.

There are five basic principles of Passive House design: (1) a super-insulated, compact building envelope; (2) high-quality windows with solar orientation; (3) airtight, draft-free construction; (4) avoidance of thermal bridging; and (5) ventilation systems with heat recovery. A sixth, supplementary principle is renewable energy; the addition of renewable energy generation - for example, solar photovoltaic panels - can bring a Passive House to the net-zero energy standard. Nemeth emphasized that a good building envelope can allow for a simplified mechanical system, and that Passive House principles ultimately derive from thermal analysis, psychrometrics, and the study of moisture transfer. It was interesting to see these basic building blocks come together to form a complex standard. The central elements of Passive House design derive from simple, intuitive principles, but together they allow for sophisticated benchmarking in the world of low energy design and construction.

For a photo of Saskatchewan Conservation House and four others (from the Saskatchewan Research Council webpage) click [HERE](#).

Summary of December 14th's webinar by

Monica Brands
Electronic Communications and Gazette Committee

UPCOMING WEBINAR - FEBRUARY 1st

Take it from a Millennial: Generation Differences in the Workforce

Distinguished Lecturer Pam Duffy, P.E.
Owner of Spark One Solutions

February 1st, 2021,
6:30 PM - 8:00 PM



Pam Duffy, P.E.

Generational differences in the workplace go far beyond the occasional pop culture references. Employees from different generations have different expectations of the workplace. This presentation will cover how generation differences impact the manager/employee relationship as well as team dynamics. The presentation will also cover what employers can do to recruit, retain, and mentor millennials to become their next leaders. Other tough questions will be discussed, such as how to balance tried and true strategies while not stifling new ideas.

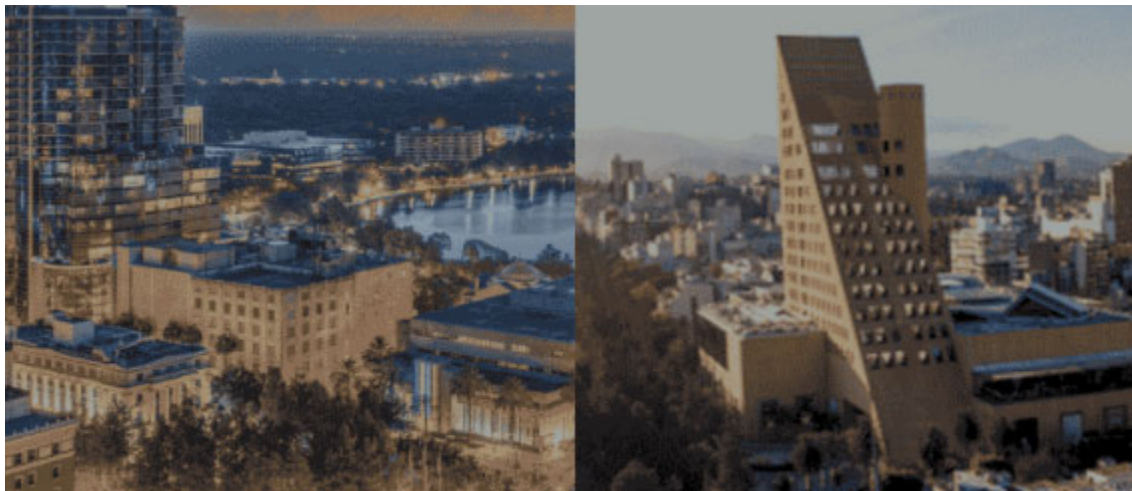
Sponsored by Student Activities / YEA / Diversity Committee

Cost:

Free for Toronto Chapter Members; \$5 for Participating Region 2 Chapters Members
\$10 for Non-Members

To register, click [HERE](#)

ASHRAE WINTER CONFERENCE (VIRTUAL)



ASHRAE VIRTUAL WINTER CONFERENCE

▶▶▶ February 9-11, 2021

What to Expect:

- Three days packed with learning and live discussions with top experts
- Special sessions covering the latest on the COVID-19 pandemic
- 8 Tracks with 40 live and more than 80 on-demand sessions (most with PDHs), available for 18 months
- Updates from Society leaders, Women in ASHRAE keynote presentation and recognition of ASHRAE Honors and Awards recipients
- Virtual technical tours, social events, meet-ups, and networking opportunities

For more information click [HERE](#)



Get your ASHRAE Toronto news and more, instantly on social media!

Join the conversation on Twitter, Facebook, Instagram, LinkedIn or Youtube!

We want to hear from all members of the industry and are excited to share HVAC/building system news and current chapter events.

Have some thoughts on social media content? Email: [Eshan Patil](mailto:Eshan.Patil@ashrae.org)



Statements made in this publication are not expressions of the Society or of the chapter and may not be reproduced without special permission of the chapter.