

ASHRAE

Ottawa Valley Chapter

DATE: Tuesday November 20, 2018

Social: 17:30, Dinner: 18:30, Program: 20:00

LOCATION: Centurion Conference & Event Centre

170 Colonnade Rd, Nepean, ON K2E 7J5

THEME: Student

PROGRAM: Humber River Hospital Design

Kurt Monteiro, P.Eng., HFDP, HBDP, **Smith + Andersen**, Toronto, Ontario, received first place in the new health care facilities category for **Humber River Hospital**, Toronto (2016). The building is owned by the hospital.

A 656 bed facility, the hospital is one of Canada's largest **acute care** facilities. The hospital leadership had a vision of "lean, green and digital," with a goal of reinventing patient care.

The facility achieved many milestones in meeting that vision, including:

- Being the first fully digital hospital in North America
- Largest modular green roof installation in Canada
- Largest installation of electrochromic glass in North America
- 100 percent outside air operation for improved indoor air quality and infection control

The building is designed to exceed **ASHRAE Standard 90.1-2007**, Energy Standard for Buildings Except Low-Rise Residential Buildings, by 40 percent. Several approaches were used to achieve this goal, including an integrated heating and cooling plant with highly efficient ventilation equipment and distribution; air side enthalpy recovery; enhanced building envelope design that incorporates automatically adjusting electromechanical glass to reduce solar gain during peak cooling times; and a lighting design featuring controls accessed via patient bedside computer terminal, which achieves a lighting power density 46 percent lower than Standard 90.1-2007.

To enhance infection control and indoor air quality, all air handling units supply **100 percent fresh air** with no recirculation. Design of **HVAC** systems with **energy efficiency** and **energy recovery** features reduced the energy impact of these **100 percent fresh air** systems.

The hospital **automated** 75 percent of deliveries, including laboratory specimen testing, linen and garbage transportation, guided vehicles to deliver supplies and food to patient rooms.

SPEAKER: Kurt Monteiro, B.A.Sc., P.Eng., LEED AP, HFDP, HBDP Principal, Smith + Andersen

With a career that spans 20 years, Kurt Monteiro has established a reputation that carefully balances innovation with client satisfaction. Kurt first started at Smith + Andersen as a co-op

Space is limited so please register online at the link below

Chapter Members: \$48.00 Guests: \$65.00 Student Members: \$35.00 Life or Fellow: \$48.00

Past President: \$0.00 Past President Companion: \$0.00

https://ashraeottawa.simplesignup.ca/en/3768/index.php?m=eventSummary

student, before graduating from the **University of Toronto** in 2000 with degree in Mechanical **Engineering**. Since then, **Kurt** has spent the majority of his career with Smith + Andersen and, over the last decade, has focused on healthcare and laboratory projects - particularly large P3 projects and renovations to existing healthcare facilities. Kurt has been an active member of the ASHRAE

Toronto Chapter for many years, serving on the board of governors and currently acting as Secretary of the Chapter's Executive Committee. He is a voting member of the **ASHRAE Certification Committee**, as well as a provisional corresponding member for several healthcare and laboratory technical committees. Kurt is also an active member of the CSA Medical Gas technical **sub-committee** that published CSA-Z7396.1 Medical

Pipeline Systems. Kurt led the **Smith + Andersen** team that won first place in the New Healthcare Facilities category at the 2017 **ASHRAE Society Technology** Awards for their work on the \$1.2-billion **Humber River Hospital** project in **Toronto**.

President's Message

As the 2018-19 **ASHRAE** season continues into Fall, I would like to begin by thanking everyone for joining us at the **Centurion Centre** on October 16th. The presentation by **Liam O'Brien** was both excellent and informative. The evening was also a great opportunity to connect with colleagues and friends and to form new connections.

Thank you very much Modern Niagara Ottawa for donating Sens tickets for the **Research Promotion** raffle held during the October meeting. **Mike Swayne** was the lucky recipient and is headed to the Club Bell seats! These raffles are an important part of our annual RP campaign and we appreciate any and all donations that are made.

The November program meeting is scheduled for November 20th at the **Centurion Centre** and we have a fantastic program lined up. Kurt Monteiro received an ASHRAE

Society Technology Award and was recognized at the Society Winter Meeting in 2017 for his winning project submission under Category III - Health Care Facilities, New. Mr. Monteiro will present the award winning project and review what led to the success of the project and the **ASHRAE Society** Technology Award.

Also for the November program meeting, **ASHRAE** Society President Sheila Hayter will present her presidential theme "Building Our Energy Future". **President Hayter** will discuss what buildings professionals need to know to prepare for changes to the electricity sector. The discussion will include a review of the electrical grid as we know it today, changes that are coming for the future and what we need to consider in order to get there.

Please go to our website at www.ashrae.ottawa.on.ca and click



President Daniel Redmond 2018-2019 **OVC President** Carleton University

E-mail: daniel.redmond@carleton.ca

on the registration link to sign up. The theme of the evening will be Students. The long term success of our industry relies on younger generations getting engaged and what better way for students to get informed about ASHRAE and to network with industry professionals than to attend the program meetings. We encourage all students to attend and also encourage our members working in the industry to consider **sponsoring** a student's admission to the program meetings.

Thank you and I look forward to seeing you soon!

ASHRAE Table Top Displays

What better way to display a new product, existing line, or share great ideas than to have a table-top display at our local OVC ASHRAE meetings? The **OVC** meetings provide a captive audience in the industry and exposure to 60+ people.

We currently have table-top openings at a variety of upcoming meetings. Get your table before they are all gone!

Please contact David Michelin (david.michelin@hts.com) to secure yours today!

Cost for a table-top is \$225 and spaces are filling up quickly, so book your table-top **today**!

Payment is to be made through the online system prior to the date reserved.

Follow the link below:



Table Tops David Michelin 2018-2019 **OVC Table Tops** HTS Engineering

E-mail: david.michelin@hts.com

https://ashraeottawa.simplesignup.ca/en/3654/index.php?m=eventSummary

November 2018 Capital Communiqué

2018-2019 Research Promotion

Thank you very much for your continued support of **ASHRAE Research Canada!**

ASHRAE Research plays an important role to improve the quality of life and to answer tomorrow's questions through research today. For every dollar raised towards Research Promotion in Canada, four dollars are invested towards research projects in Canada by ASHRAE Society.

The 2018-2019 RP Campaign Team includes: Rob Lefebvre, Frank Bann, Michael Swayne, Georges Maamari, Abbey Saunders, Adam Graham and Dan Redmond.

To date, the **RP campaign** has raised 21% of our \$35,000 goal for

2018-2019. We are in a great position to hit our target of 30% by December 31st.

Thank you to **Modern Niagara** for donating **Ottawa Senator** hockey **tickets** which help raise \$550 towards the **RP campaign**. Congratulations to **Michael Swayne** who was the lucky winner!

The following list of current 2018-2019 **RP campaign** donors will be provided in each monthly **newsletter** and updated on the **website**, so donate quickly to see your name appear!

Two of the easiest ways to make your donation to the 2018-2019 **RP Campaign** are by clicking either of the links below.



President-Elect Aaron Dobson 2018-2019 OVC President-Elect Ainsworth

E-mail: aaron.dobson@ainsworth.com

Should

you wish to donate by cheque, please make payable to **ASHRAE Ottawa Valley Chapter.** My contact details are below, and I will gladly make arrangements to pick-up any cheques if needed.

Aaron Dobson
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\$35000	ASHRAE Partner	ASHRAE Associate	Major Donor Silver
	\$5,000 - \$9,999	\$2,500 - \$ 4,999	\$1,000 - \$2,499
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	Major Donor Bronze	Major Donor Antique	Honor Roll Individua
	\$500 - \$999	\$250 - \$499	\$100 - \$249
	Modern Niagara	Aaron Dobson Dan Redmond	Frank Bann Chris Frauley Adrianne Mitani
\$7380		Mastron Mechanical	Michael Swayne Steve Moons
			Celine Baribeau Jacob Haugh
\$o	Special Thank-You to the following Donors for their contribution Darryl Boyce, Belimo Aircontrols (CAN), David Michelin		

ASHRAE Society link:https://xp20.ashrae.org/secure/researchpromotion/rp.html ASHRAE OVC link:https://ashraeottawa.simplesignup.ca/en/2594/index.php?m=eventSummary





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Sylvain Chenier, P. Eng., ing., LEED®AP Vice President - Mechanical Sylvain.Chenier@mckeeottawa.ca 1785 Woodward D rive Ottawa, ON K2C 0P9 CANADA Tel.: (613) **723-9585 x128** F3x: (613) **723-9584** www.mckeeottawa.ca

What You Missed

The October program meeting of the 2018/2019 ASHRAE season was held at the Centurion Conference & Event Center on Colonnade **Road**, and the theme for the evening was Research Promotion and Donor Recognition. The meeting was attended by fifty-six guests, which consisted of forty-seven members and eight guests. The program for the evening was Designing buildings for people. The speaker was Liam O'Brien, Ph.D. an **Associate** P.Eng, Professor at Carleton University's **Architectural Conservation and Sustainability Engineering** program.

President **Dan Redmond** called the meeting to order, and introduced the **Executive** and **Board of Governors**. Secretary **Adrianne Mitani** introduced the guests for the evening.

Student Activities Chair Elizabeth **Primeau** spoke about starting up the new Student Branch at Queens University and the Earl of March tour at Modern Niagara. Algonquin College's **ASHRAE** student project is also underway with Chris Frauley mentoring the President-Elect Aaron students. **Dobson** spoke about the current Research Promotion campaign, and the raffle for tickets to the Ottawa Senators' game November 4th in Club Bell, donated by Modern Niagara. The Research promotion has been formed and will soon be reaching out about donations to this year's campaign.

Aaron Dobson spoke about last year's **research promotion** campaign, and recognized companies and individuals from last year. The campaign results from the 2017-2018 year was a record for the chapter, and the **Ottawa** chapter was recognized as being one of the **top three** of all **ASHRAE** chapters

for funds raised.

Dinner was an assorted buffet with cake and coffee served for dessert. President **Dan Redmond** announced the program topic and introduced the speaker, **Professor Liam O'Brien**, who is a past recipient of **ASHRAE** research funding. Approximately \$100,000 of **ASHRAE** Research funding from over the years has gone towards **Carleton** graduate student projects, many who have gone on to become professors themselves.

The presentation was on **Designing Buildings for People**. The majority of **Liam**'s research incorporates using people as sensors, since building comfort is a subjective study. Building **controls** can be fully manual and controlled directly by building operators or users, or they can be fully automated with little input by those who operate or use them. Neither option is a perfect system, and the goal of the research is to **balance** between **automation** and **user input**. This is because people want control and are more comfortable when they are able to have control over their environment.

People were asked what makes a good workspace, both in studies and in online polling that went across **Canada**, and many responses varied widely. **Lighting** for instance for a workplace is recommended to be between 400-500 levels, but preferred values are a wide range of preferences that make it hard to give an exact number that will meet everyone's needs.

Thermal comfort as defined by **ASHRAE 55** is an adaptive model for preferred indoor temperature and humidity, which is dependent on the outdoor temperature. This is due to the way that people dress and what temperature ranges are normal based on the season.



Secretary
Adrianne Mitani
2018-2019
OVC Secretary
Smith+Andersen

E-mail:

adrianne.mitani@smithandandersen.com The **WELL standard**, similar to **LEED**, is a standard for buildings that takes into account the qualities of air, water, nourishment, light, fitness, comfort, and mind for the occupants of a building. These are important because in the end a building is for people to reside within. This leads to two models of building design, one with the occupants as a boundary condition to the building, the other is a two-way interaction between the occupants and the building which adapts to the requirements of the users.

When we look at **ASHRAE 55**, the definition of **thermal comfort** is inherently **subjective** and it is a condition of mind from the occupant to define what comfortable is. Therefore, without feedback from the occupant it can never be solved fully.

Therefore, **Liam** proposes concept of Humans as Sensors and the **feedback loop** of information from the occupant to the building automation and back. With system interaction with users to provide input, allow for logic of the building system to react, and to also provide feedback to the users to indicate that input is received and the system is reacting to accommodate. One of the problems with energy efficient and automatic systems, is that there is no feedback to the users, with low temperature water system, not warming quickly to the touch, or quiet HVAC systems don't hiss air or rumble when turning on.

When a building is normally fully occupied, **Professor O'Brien** stipulates that there is little benefit





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with individualized controls, small lighting zones, and demand ventilation, the benefit and savings only comes into effect when there are large swings in occupancy levels, and people constantly moving around which allows energy to be spent where the users are.

There were ten questions for the speaker, including questions about an active cooling chair, overhead versus task lighting, with task usually preferred to be able to

customize requirements. Heating and cooling people versus buildings, in the example of the individual heating and cooling chairs, which was a ongoing study and does not have enough data. He was asked about **user interfaces** and the ability for users to understand, which brought up the energy literacy problem. This is why **feedback** to the user is important to ensure that the user is also learning how the system is working not just the system reacting to the user.

President Dan Redmond thanked Liam O'Brien and gave him a gift on behalf of the chapter, and reminded attendees of the survey which will be emailed. The next meeting is November 20th at the Centurion Conference and Event Center with presentations from ASHRAE President Sheila Hayter and Kurt Monteiro on a Canadian ASHRAE Technology Award winning project.

Student Activities

Hey students!

Next month's **chapter meeting** will be a big one for **students**. We will provide rides to students, or we will pay your transit to come out to the monthly meeting from any campus in **Ottawa**, including from **Queens** in **Kingston**. Please contact me directly to take advantage of this offer.

In other news, the **Ottawa Valley Chapter** is happy to announce a new **scholarship** of \$3,000 for a student from the **Ottawa** region. This has been years in the making for our chapter and we are very excited to be able to award it for the first time.

The information can be found at the following link:

https://www.ashrae.org/communities/student-zone/scholarships-and-grants/ashrae-society-chapter-scholarships.

This scholarship is for students from a qualified undergraduate mechanical, architectural, sustainability, or building science engineering or engineering technology program.

The student must be enrolled **full-time** to qualify. For any questions, please feel free to contact



Student
Activities
Elizabeth
Primeau
2018-2019
OVC Student
Activities Chair
Total HVAC

E-mail: *elizabthp@totalhvac.com* me at elizabethp@totalhvac.com.

Good luck to all applicants!

Liz Primeau

YEA

HI OVC!

We have had our first **YEA** event of the year at the **Redblacks** game and it was a sell out! It was an exciting game that saw the **Redblacks** come from behind to beat **Hamilton** 35-31. Thank you to our sponsor **Total HVAC** and to everyone who came out, the turnout was amazing!

These social events are a great way

to meet other members. We are planning on having our second event being **Archery Tag** in **December** to kick off the holiday season. I will be sending out an invitation to all members through the chapter **website** with more event information once details are confirmed.

Thank you all for the continued support!



Committee
Chair
Jordan Hansen
2018-2019
OVC YEA Chair
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News Update

ASHRAE and ASPE Strengthen Partnership with Signing of New MoU Agreement

ATLANTA (Oct. 12, 2018) – **ASHRAE** and the **American Society of Plumbing Engineers (ASPE)** have signed a new Memorandum of Understanding (MoU) formalizing the organizations' relationship.

The MoU was signed by 2018-2019 ASHRAE President-Elect Darryl Boyce, ASHRAE Executive Vice President Jeff Littleton, 2016-2018 ASPE President Mitch Clemente, CPD, FASPE, and ASPE **Executive Director/CEO Billy** Smith, FASPE, on Oct. 1. The agreement defines parameters on how the two societies will collaborate more closely to continue furthering and promoting the advancements of sustainable built environment.

These include but are not limited to: general advocacy; research; technical committee coordination; joint conferences and meetings; training and education programs; publication distribution and chapter collaboration.

"We are excited about exploring collaborative ventures with ASPE, says Sheila J. Hayter, 2018–2019 "Many **ASHRAE** President. **ASHRAE** members work in firms that a full provide spectrum mechanical, electrical, and plumbing (MEP) services. The water-energy nexus in buildings is becoming more pronounced as we push buildings to perform using integrated building design tools and techniques."

"Working with other professional societies in the broader engineering community is critical in today's world of evolving fast-paced technologies and engineering methods," says Smith. "We look forward to working together with promote **ASHRAE** to ongoing education, best practices, networking and new technologies for a more sophisticated and sustainable indoor environment."

ASHRAE Announces New HVAC&R Student Competition

ATLANTA (Oct. 11, 2018) – ASHRAE has announced a call for entries for its 2019 HVAC&R Student Paper Competition.

The competition is aimed at students working on their **Bachelor** or **Master's** degree who are members of **ASHRAE**. The winning entry will represent the Society at the **2019 HVAC World Student Competition** to be held in conjunction with the **2019 CLIMA Conference**, **May 26-29**, in **Bucharest**, **Romania**.

"The ASHRAE HVAC&R Student Competition seeks to recognize creative accomplishments of student members," said William Bahnfleth, ASHRAE Presidential Member and chair of the ASHRAE CLIMA 2019 Steering Committee.

"In addition to presenting high quality **ASHRAE** student work to the Society, the top entry will represent the Society in the **HVAC World Student Competition**, a



Governor
Jacob Hough
2018-2019
OVC Program
Committee
Total HVAC

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competition against students from other organizations. **ASHRAE** will fund the entrant's expenses to attend and present at **CLIMA 2019**," **Bahnfleth** said.

A key component of the requirements is the preparation of a paper that is based on an accepted BS or MS thesis. The paper's topic must be in the area of **HVAC** technology, building services, indoor environmental control or energy performance of buildings.

Entrants for the **2019 ASHRAE HVAC&R Student Competition** are asked to do the following:

- Submit a six-page maximum length paper that is based on an accepted BS or MS thesis by Nov. 30.
- Give a 10-minute oral presentation on Monday, Jan. 14, during a session scheduled during the ASHRAE 2019 Winter Conference in Atlanta, Ga.
- Prepare a poster for discussion between the entrants and jurors.
 Entrants will be notified shortly after the presentations of the competition results.

For more information about the **2019 ASHRAE HVAC&R Student Competition** or to submit an entry, visit ashrae.org/StudentCompetition.





Steve Moons Principal

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6

Membership Update

Greetings Everyone,

November is upon us and so too is our third meeting of the year. It's important to give thought to our continued growth as a chapter.

As a whole we are strong, but there is always room to improve. November 20th we have a great

agenda planned. Grab a **colleague** that doesn't know what **ASHRAE** is all about and bring them along. I hope to see you there.

I would like to welcome the following new members:

- David O. Fanset
- Brad W. Neitzel



Membership Promotion Andrew Brown 2018-2019 OVC Membership Committee Master Group

E-mail: aabrown@master.ca

2018 OVC Bowling Social

Ladies and Gentlemen,

Just a reminder that the 2018 **ASHRAE Bowling Social** will be held on

Wednesday November 21st, 2018 at the **Merivale Bowling Center** (1916 Merivale Rd., Ottawa, www.merivalebowlingcentre.com). Registration will run through to the 14th of November, so sign up soon!

The format will be three games with 4 people per lane. 7:00 pm start. Please show up at 6:30 pm to register. The entry fee is \$200 per foursome, or \$60 per individual. The entry fee includes warm-up, 3 games, shoe rental and plenty of nachos/wings/pizza. Individual

participants will be assigned into groups of four.

This is intended to be a social event to promote the camaraderie and fellowship of **ASHRAE**, please consider attending. Registration can be done **on-line** via the link below.

Registrations will be confirmed via email receipt. If you have any questions, or need more information, please don't hesitate to contact me.

https://ashraeottawa.simplesignup.c a/en/3800/index.php?m=eventSum mary

Payment can be made during the online registration.



Treasurer
Adam Moons
2018-2019
OVC Treasurer
Master Group

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Capital Communiqué November 2018

VENTILATION & FILTRATION PRODUCTS





2019 ASHRAE WINTER CONFERENCE JANUARY 12–16 //AHR EXPO JANUARY 14–16

2019 ASHRAE Winter Conference

The 2019 ASHRAE Winter Conference & AHR Expo in will be held in Atlanta from January 12-16, 2019. The ASHRAE Winter Conference is centrally located in downtown Atlanta at the Omni CNN Center, neighboring the AHR Expo at the Georgia World Congress Center. This is the event of the year for professionals in the HVAC&R industry.

The Conference Technical Program offers over 100 sessions within 8 tracks

Track 1.Systems and Equipment Track 2.HVAC&R Fundamentals and Applications

Track 3.Refrigeration

Track 4. Construction, Operation, and Maintenance of High Performance Systems

Track 5. Common System Issues and Misapplications.

Track 6. The Convergence of Comfort, Indoor Air Quality, and Energy Efficiency

Track 7. Building Integrated Renewables and Natural Systems

Track 8. The Engineer's Role in Architecture

The **AHR Expo** is from Jan. 14-16 and directly across the street from the conference hotel. The Show will host more than 2,000 exhibitors and 65,000 industry professionals. When you register for the **ASHRAE Conference**, your **ASHRAE** badge will give you access to the **AHR Expo**.

Additional conference activities include technical and general tours of Atlanta, social events like the Welcome Party and Members Night Out, and of course ASHRAE Learning Institute Courses, Certification exams, and more.

Keynote Speaker: **Grant Imahara** (Former Host on Discovery's "Mythbusters" & Animatronics Engineering Expert). For almost a decade, **Grant Imahara** was one of the hosts of Discovery Channel's **Mythbusters**. Using a blend of science



President
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and fun, he put urban legends to the test, sometimes with explosive results. **Grant** tested hundreds of myths, and in the process, swam with sharks, hung from the skids of a helicopter, fired cheese out of a cannon into the **San Francisco Bay**, sliced a car in half using a rocket sled, destroyed so many cars he's stopped counting, and built many, many robots, all in the name of science.

ASHRAE has prepared some documentation to assist members in requesting support from their employers to attend. If interested, please follow the links to the <u>Justification Toolkit</u>. If you have questions let us know, or you can email meetings@ashrae.org.

See you in **Atlanta!**

Capital Communiqué November 2018

Advertising

Advertising career opportunities on ASHRAE Ottawa Valley Website makes good business sense. We offer a unique way to reach technical professionals and make your ad dollars work hard for you.

To discuss your needs, contact one of our chapter officers, via our "This Year" page. Increase the impact of your advertising through the **ASHRAE Ottawa Valley Website** today. **E-mail**: amoons@master.ca



Treasurer Adam Moons 2018-2019 **OVC Treasurer** Master Group

Rates for **career opportunities** ads are as follows:

Chapter Member: \$50/month \$80/2 months \$100/3 months

Non-member: \$250/month

Note: Purchase of additional months will only have a discounted rate if purchased up front. Otherwise the standard rate will apply for additional months.

Placement of an Ad

We suggest that you complete and submit our advertisement form to speed up the processing of your request. If you have provided your e-mail address, a confirmation receipt e-mail will be sent to you for reference.

Please note that ads require prepayment made to the treasurer. Please register and pay through the online system and contact Adam Moons (amoons@master.ca) with any questions. Follow the link below for payment.

The ads will appear on the website until the end date for publication provided in the submitted form. To extend the ad, please resubmit the form with the new publication dates and the required prepayment amounts.

Link: https://ashraeottawa.simplesignup.ca/en/2590/index.php?m=eventSummary Link: https://ashraeottawa.simplesignup.ca/en/2593/index.php?m=eventSummary

Business Card Ads

You can support your chapter and promote your business by placing your business card in the Capital Communiqué. It will also appear on the chapter website.

The cost is \$250.00 for the year. Please contact Rod Lancefield at rod.lancefield@hts.com for more details.



Publicity Rod Lancefield 2018-2019 Publicity Committee Co-Chair HTS Engineering Ltd.

E-mail: rod.lancefield@hts.com

Payment will be made through the online system. Follow the link below for

https://ashraeottawa.simplesignup.ca/en/2591/index.php?m=eventSummary

Ads will **now require prepayment**. All of last year's ads will appear in the Communique for the first month of this year to allow time for payment for the upcoming year. Ads will be refreshed accordingly in the second Communique.

Publicity 2018-2019 Publicity Committee Co-Chair HTS Engineering Ltd.

E-mail: rod.lancefield@hts.com

President Daniel Redmond President-Elect Aaron Dobson Capital Communiqué **Government Affairs**

2018-2019

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Treasurer Adam Moons Secretary Adrianne Mitani **Governors** Chris Frauley Joe Della Valle Jacob Hough Celine Baribeau Peter Shaw-Wood **Past President** Adam Graham Committees **Attendance** Sandy Taylor Abbey Saunders **Evans Mutua Daniel Redmond** Jacob Hough **Grassroots** Adam Moons **Financial** Sandy Taylor Greeter Chris Frauley History Ryan Dickinson <u>Membership</u> **Promotion** Andrew Brown Nominations & Awards Abbey Saunders Steve Moons Aaron Dobson Program James Pady Research **Promotion** Aaron Dobson Roster Georges Maamari Special Events Colleen Fox Joe Della Valle Rod Lancefield Adam Moons **Student Activities** Elizabeth Primeau Table Top David Michelin Jordan Hansen Website Ryan Dickinson