Communique 2013-2014 May Edition a Dital



ASHRAE Ottawa Valley Chapter

DATE: Tuesday May 27, 2014

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

LOCATION: Algonquin College Restaurant International

1385 Woodroffe Ave, Building H, Room H100

THEME: **History**

PROGRAM: The City of Ottawa "A City Grows Up"

SPEAKER:

Alain Miguelez - City of Ottawa Program Manager, Planning and Growth Management Department

Alain Miguelez is currently the program manager of Zoning, Intensification and Neighbourhoods with the City of Ottawa's Planning and Growth Management Department. He is working on overhauls to the city's zoning by-law to reflect the new Official Plan, and oversees the Neighbourhood Connections Office as well as the internal multi-department Intensification Group. He worked for three years as Program Manager, Development Review for the Inner Urban Area. In that capacity he has overseen the approval of over 30 mid- and high-rise buildings, many of which presented complex urban design challenges; and has introduced the use of Section 37 of the Planning Act into Ottawa's planning approach. He has been with the City since 2002, starting in the Planning Policy branch where he worked on long-range population and housing forecasts for the City, the City's Residential Land Strategy, and the Annual Development Report. Prior to that, he was Senior Market Analyst for Ottawa at CMHC. He started out in planning with McNeely-Tunnock of Orleans and also consulted with Maxgroup Associates of Ottawa.

OVERVIEW:

Into its second decade as an amalgamated municipality, Ottawa has crossed into the league of 'big cities' thanks to a resilient economy, robust population growth and increasing visibility as a place of business, research, innovation, and culture. What do the next two decades have in store for us? From a city-defining transit project to a number of major and minor interventions on its urban space, Ottawa is looking to consolidate its status as a major Canadian city and strengthen itself as a vibrant urban community that keeps its human scale and high quality of life.

May Meeting Menu Menu - To be Announced

Restaurant International is happy to accommodate ANY dietary needs with one week's notice. Please get in touch with Sandy Taylor. sandy@ashrae.ottawa.on.ca If you are a vegetarian, ask the server for a list of options

> Chapter Members: \$40.00 Guests: \$60.00 Student Members: \$30.00 Life or Fellow: \$40.00 Space is limited so please register online at:

https://ashraeottawa.simplesignup.ca/en/471/index.php?m=eventSummary

Registration will close on Thursday May 21st. Pre-registration is required as the venue requires confirmed numbers that the chapter must commit to pay for at this time.

President's Message

I was watching "Pulp Fiction" again the other night and as I was doing so I happened to be enjoying a German lager - and it was made that bit sweeter because I was drinking it from one of the commemorative pint glasses we specialordered for the 60th Anniversary Meeting at the Mill Street Brew Pub. This was in September of 2012 and the occasion brought out many of our most cherished members - I am reminded that the late Paul Baker was Master of Ceremonies. Its theme was obviously History and this will again be the flavour for May's meeting - which hopefully will be another excellent evening for those attending. But I digress, back to the beer: in true historical fashion, we had the occasion lettering engraved on the side of the glass, along with the (beloved) original **ASHRAE** logo. On the base of the glass, the new logo was engraved so it appears when you finish your beer. A little bit of magic that I had forgotten about; come to think of it I had also forgotten how good a film Pulp Fiction is!

So the May meeting will yet again be Past-Presidents and Companions night, which means that I will be rolling off as your President. The year has flown by and it is hard to believe that it will be the eighth meeting already. A major plus for this year has been the move to Restaurant International at Algonquin College's Woodroffe Campus; there were a few teething problems at first, as expected, but these have largely been sorted out. In my opinion the food has been uniformly excellent and at the initial meetings I was wondering whether we were in the right place - five courses indeed!

I will be leaving the Chapter in very capable hands, with Steve Moons taking the helm, and Georges **Maamari** as his second. Many people have made this year a success, notably **Abbey Saunders** with her very reliable minutes always professionally written in a timely manner, and Sandy Taylor our Chapter Director with her continued work behind the scenes ensuring a tight ship. Another person worthy of mention is Richard Cameron, who took over the role of Newsletter editor with a great deal of enthusiasm, and is responsible for its fresh new look - a long-overdue facelift.

April usually brings the Regional Planning Meeting and I attended this along with many of my Region 2 colleagues on Saturday April 26th



President & CRC Delegate
Roderic Potter
2013-2014 OVC President
Rodders CAS

E-mail: rod@rodders.com

in Toronto. The meeting was chaired by our Director and Regional Chair (DRC) **Isabelle Lavoie**, and all of the Regional Vice Chairs (RVC's) and Chapter Delegates or Alternates were present. I was there because I am assuming the role of RVC History from **George Menzies** of Hamilton Chapter. George has been RVC for many vears and remembers far too much from our past. There was discussion during the meeting of who will replace Isabelle after her final year as DRC (2014-15), and I leaned over and asked George if he had ever been DRC. He smirked and replied "yes of course - during the 1970's". This gives you some idea of his dedication to **ASHRAE** Region 2. I have my hands full taking over from him, but I will pledge to do my

Cheers from the desk of Rodders CAS









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What You Missed April Meeting

The April meeting took place at Algonquin College Restaurant International. The meeting was called to order by President **Rod Potter** at 6:35pm and attendees were seated for dinner.

The business session commenced with President Rod Potter introducing the Board of Governors and Executive followed by Abbey Saunders introducing the evening's guests. President Rod Potter then introduced the new members.

Adam Graham quickly reminded attendees of the upcoming Controls Seminar followed by Adrianne Mitani extending an invitation to applicable members regarding the YEA tour of the Diefenbunker.

Next representatives from Futech and Air Solutions introduced their Table Tops for the evening which included PLAD Engineered Pump Systems and Energy Recovery Ventilators.

Stephen Lynch introduced the nominations for the Board and Executive positions within the local chapter. **Glenn McLean** motioned for nominations to be closed with **Pierre Richer** seconding the motion.

During social hour the research promotion committee raffled off tickets for a Redblacks game, donated by **Don Weekes** and **Rod Potter**. The raffle raised \$190 for **ASHRAE** Research, with **Richard Lemelin** being the lucky winner. Following the business session, attendees enjoyed a multi-course à la carte menu which featured an assortment of delicious dishes that were well received.

The evening program commenced with **Mr. Kemp** introducing his presentation outline and reviewing the fact that ventilation systems for high rise MURBs (Multi-Unit Residential Buildings) are generally systems that present several

opportunities for improved performance from an energy and air quality perspective.

Next the history and evolution of ventilation systems for MURBs were discussed. Originally designed to provide corridor ventilation and smoke control, MURB ventilation systems have evolved over time to help deal with issues such as noise and odor migration. In addition, current MURB ventilation strategies can allow for a more diverse occupancy and life sytyle markets for the buildings.

Next **Mr. Kemp** reviewed that for air to flow through a building the following three elements must exist: a pressure differential, a path, and an air volume. These three elements are highly influenced by stack pressures acting on high rise buildings.

Technical challenges associated with high rise buildings that can attribute to increased energy costs, and poor air quality include: wind pressures (typically up to 300 Pa), stack pressures (typically up to 120 Pa) and mechanical pressures (typically on the order of 75 Pa). Consequences of improper stack effect management in high rise facilities include mold growth on higher floors and odors migrating through the building.

Next **Mr. Kemp** reviewed several real world examples with various problems and the various techniques and approaches that were implemented to mitigate these concerns.

Following the discussion of real world examples **ASHRAE** 62.1 was quickly reviewed as it applies to calculating acceptable ventilation rates for MURBs. Compartmentalization of spaces is a solution to many of the problems associated with stack effects in MURBs. Creating air locks at suite doors or elevator vestibules are two methods commonly utilized



Secretary
Abbey Saunders
2013-2014 OVC Secretary
NRC-CNRC

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to achieve compartmentalization. Compartmentalization is almost always successful in dealing with air movement problems and odor migration. Independent ventilation of the suites via the use of HRVs and integrated fan coil units for compartmentalization is not only a successful technique to eliminate issues associated with stack effect, but also in general reduces the quantity of ventilation air required for a building which helps to reduce overall energy costs when compared to conventional corridor ventilation systems.

In a perfect world zero leakage for air tightness targets is desired. However, in the real world we do the best we can with reasonable efforts for MURBs. The LEED values for air leakage are the generally accepted targets.

Next the Ontario Energy Code SB-10 was briefly discussed. **Mr. Kemp** outlined that although the code is one of the most stringent in the world, in terms of the mechanical system requirements it isn't that stringent. **Mr. Kemp** reviewed that the envelope requirements are quite stringent, however our typical envelope construction does not meet the intent of the code. **Mr. Kemp** did discuss that with improvements in mechanical systems the intent of the energy code can often be met for MURBs.

Mr. Kemp finished off his presentation by reviewing additional real world examples, and after a brief question and answer period, President Rod Potter thanked Mr. Kemp for his participation. The meeting was adjourned at approximately 9:00pm.

Research Promotion

Hi Everyone,

It is hockey playoff season, and, even without the Senators in the playoffs, it has been a great first round of games with lots of comebacks, terrific saves, and, of course, great goals. We on the RP Team have a goal as well that we must meet this spring, and we need an overall team effort from all of you to make the Ottawa Valley Chapter research promotion goal for the 2013-2014 year. Please help with a donation of any amount, so that we reach our goal by the end of June, 2014.

Please contact any member of the RP team (see them below) to make a donation to this year's campaign. You can also make a donation

through the OVC website or through ASHRAE's Society website. Please follow the links at the bottom of this article.

At the April Chapter meeting, there was a raffle for Redblacks football tickets to rais funds for research promotion. The tickets were donated by **Rod Potter** and myself. Thanks to all of the ticket donors this year, your donations have been much appreciated! We are still seeking a donation of tickets or other items for the upcoming Chapter meeting in May. Please contact myself or **Steve Moons** if you have an excellent item to donate.

The May meeting is always a great event with the Past Presidents and our families present. I hope to see 9 6

Past President
Donald Weekes
2013-2014 Chapter
Research Promotion Chair
InAIR Environmental Ltd.

E-mail: don.weekes@inairenvironmental.ca you all there! Also, please sign up for the golf tournament in June, where the raffle proceeds will be donated to Research Promotion.

For this year, our RP team members are: **Donald Weekes** (co-Chair), **Steve Moons** (co-Chair), **Bob Kilpatrick**, **Cathy Godin**, **Christine Kemp**, and **Mike Swayne**. I am most grateful to the RP team for all of their efforts!

ASHRAE OVC link: https://ashraeottawa.simplesignup.ca/en/171/index.php?m=eventsList **ASHRAE Society** link: https://xp20.ashrae.org/secure/researchpromotion/rp.html







2014 ASHRAE Golf Tournament

The ASHRAE Golf Tournament is less than a month away!

The 2014 **ASHRAE** Golf Tournament is scheduled for Tuesday June 3rd, 2014 at the Marshes Golf Club.

This year's tournament will be returning to The Marshes Golf Course. Response for this year's tournament has been fantastic and there is only One Team Opening Left. Anybody interested in the last remaining team is asked to contact **Andrew Douma** at *andrewd@totalhvac.com*. Cost for this year's event is \$650 and includes the cost of golf with a cart and dinner following the tournament. Also included is access to the driving range, short game area and the locker room facilities.

While the golf portion of the event is almost sold out, there are still

plenty of Sponsorship Opportunities available. A sponsorship provides your company with a sign placed at either a green or tee on the course displaying your company name. In addition, your company will be mentioned during the dinner portion of the event and a display will be provided at each table. The cost of a sponsorship is only \$200 and is a great way to support **ASHRAE** Research while also getting your company name in front of 150 golfing members of the Ottawa Mechanical Construction Industry.

One added benefit of the Marshes is the opportunity to access Marchwood, the executive nine hole course on the same property. For those members who are not avid golfers but would still like a taste of golf here is your chance. If you are



Special Events
Andrew Douma
2013-2014 Special Events
Commitee Co-Chair
Total HVAC

E-mail: andrewd@totalh-vac.com

interested in a quick nine holes of Par 3 golf on the short course followed by dinner with the other participants please let us know. We would love to have the extra participants attend the event.

Should you have any questions about the Tournament or Hole Sponsorship please contact **Andrew Douma** at *andrewd@totalhvac.com* or by phone at *613.723.4611*.

Sincerely, Your 2014 ASHRAE Golf Tournament Organizing Committee

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News Update

ASHRAE PROPOSES TO MOVE ALL RESIDENTIAL IAQ RE-QUIREMENTS TO STANDARD 62.2

ATLANTA – Dwelling units of multifamily buildings of any height would fall under **ASHRAE**'s residential ventilation standard, 62.2, under a proposed change designed to provide consistency of ventilation requirements.

Currently, ANSI/**ASHRAE** Standard 62.1-2013, Ventilation for Acceptable Indoor Air Quality, has responsibility for multifamily residential buildings 4 stories or more, while ANSI/**ASHRAE** Standard 62.2-2013, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings, has responsibility for residential buildings 3 stories and less.

"The Standards 62.1 and 62.2 committees are proposing scope changes that would result in the dwelling units of all multifamily buildings being covered by Standard 62.2," Paul Francisco, chair of the Standard 62.2 committee, said. "Common areas would be covered by 62.1. This will provide consistency of ventilation requirements for dwelling units regardless of building height. For new construction, this will result in a change of requirements for dwelling units in 4+ story buildings. For the retrofit market, this change will result in coverage by ASHRAE ventilation standards for the first time in 4+ story buildings."

The proposed changes are being made via addendum a to Standard 62.1-2013 and addendum g to Standard 62.2-2013, which are open for public review from April 4 to May 4, 2014. For more information or to submit comments, visit the link at the bottom of this page.

The ventilation rates for dwelling units in Standard 62.1 are different from the rates in Standard 62.2, and this inconsistency has caused concern for some, according to 62.1 committee chair **Roger Hedrick**. Additionally, Standard 62.1 does not

address modest retrofits whereas Standard 62.2 does.

"The retrofit market is a major user of **ASHRAE** ventilation standards," he said. "This will allow for consistency across dwelling units and also allow application of **ASHRAE** ventilation standards to the multifamily retrofit market."

Francisco agreed, saying, "Given the growth of the retrofit industry in multifamily dwellings it is important to ensure that these situations are covered in **ASHRAE**'s ventilation standards."

ASHRAE 2014 ANNUAL CONFERENCE ANNOUNCED FOR SEATTLE

ATLANTA— While abundant rain and thriving evergreens keep the city of Seattle green and lush, the city has taken the concept of "green" to a whole different level. Sustainability is promoted in all aspects of life, which makes Seattle the perfect location for **ASHRAE**'s 2014 Annual Conference.

The Conference takes place June 28-July 2. For more information or to register, visit the link at the bottom of this page.

The Technical Program kicks off June 29, with interactive programs and a networking coffee break, and concludes July 2. The program addresses broad topics in the application of technology to practice, specific applications in ground source heat pumps, operations and maintenance and indoor environmental quality, as well as new reports on research taking place worldwide.

Featured is a track on Ground Source Heat Pumps State of the Art: Design, Performance and Research, which addresses all aspects of design that lead to optimally performing systems in addition to avoiding common pitfalls that lead to poorly performing systems.

The Conference also features the second annual **ASHRAE** Research Summit, which presents innovations in HVAC&R research with particular



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Governor

emphasis on high performance building design and its role in a clean energy economy, and brings together researchers to present and discuss the latest research. Researchers present papers, seminars and forums or participate in panel discussions. Also, highlights on ongoing **ASHRAE** funded research are presented.

Attendees also can take part in courses offered by the **ASHRAE** Learning Institute, including two full-day professional development seminars and seven half-day short courses. New is a course on building demand response and the coming smart grid.

ASHRAE also offers its Building Energy Assessment Professional (BEAP) and Building Energy Modeling Professional (BEMP) exams on July 1.

The keynote speaker is **Robert** Bryce, one of America's most prominent energy journalists and a senior fellow at the Manhattan Institute. He serves as the keynote speaker at the opening Plenary Session, held Saturday, June 28. Registration is not required to attend the session, which also features the Honors and Awards program. **Denis Hayes**, president and CEO, Bullitt Center, serves as keynote speaker at the Technical Plenary, Sunday, June 29. Conference registration is required to attend. In his remarks, Hayes discusses the problems and opportunities associated with "net positive" commercial construction, using the Bullitt Center as an illustration of what is currently possible.

Technical tours at the Conference include Federal Center South Building 1202; The Fred Hutchinson Cancer Research Center 1100 Eastlake Facility; The Bullitt Center; the Bill

ASHRAE 62.1 & 62.2 Changes Link: www.ashrae.org/publicreviews
ASHRAE 2014 Annual Conference Link: www.ashrae.org/seattle

and Melinda Gates Foundation
Headquarters; the University of
Washington Molecular Engineering &
Sciences Building; and the University of Washington Power Plant.
General tours include Tillicum Village; Show Me Seattle; Aircrafts,
Airpark and Aviation Artifacts;
Leisurely Lakes Cruise; Going Boeing; Cascades, Cabernets and
Chocolates; and Museum of History
and Industry (MOHAI).

The Conference takes place at the Sheraton Seattle and the Washington State Convention Center.

SUPPLY WATER TEMPERATURE CLASSIFICATION NEW ADDITION TO UPDATED GUIDANCE ON COOLING DATA CENTERS

ATLANTA— Data center rack heat loads are steadily climbing, creating a need for liquid cooling solutions to reduce the volume of airflow needed, as well as lower processor temperatures for better computer performance. "Liquid Cooling Guidelines for Datacom Equipment Centers," second edition, recently published by ASHRAE, provides best practice guidance for implementing liquid cooling systems in data centers.

"There is an increasing interest in liquid cooled IT equipment at the rack, equipment and component levels," Don Beaty, publication chair of Technical Committee 9.9., Mission Critical Facilities, Data Centers, Technology Spaces and Electronic Equipment, said. "There is also increased interest in reuse of the heat rejected from IT equipment. One of the more important changes to the second edition is the addition of supply water temperature classification."

Beaty claims that the addition of liquid classes can have a similar effect on the industry as the creation of supply air temperature classes did—which was the critical enabler to the use of economizers in data centers. "There are five water temperature classes with the highest temperature class being >45 C (113 F), which opens up possibilities for using the rejected heat for building heating systems," he said.

The guide bridges the liquid cooling systems by providing guidelines on interface requirements between the chilled-water system and the technology cooling system and on the requirements of liquid-cooled systems that attach to a datacom elec-

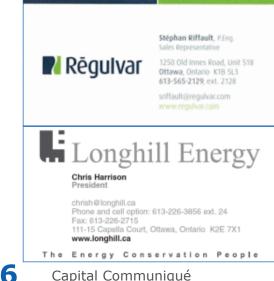
tronics rack to aid in data center thermal management.

Also included are updated references and further information on approach temperatures and liquid immersion cooling, plus guidance on water quality problems and wetted material requirements.

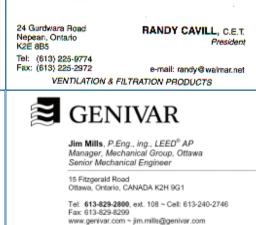
Additionally, the guide covers definitions for liquid and air cooling as they apply to IT equipment, along with an overview of chilled-water and condenser water systems and other datacom equipment cooling options.

This book is the fourth in the **ASHRAE** Datacom Series, authored by **ASHRAE** TC 9.9.

The cost of "Liquid Cooling Guidelines for Datacom Equipment Centers," second edition, is \$54 (\$46 ASHRAE members). To order, contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 678-539-2129, or visit www.ashrae.org/bookstore.







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Total HVAC Ownership Change

Total HVAC is pleased to announce the addition of **Steve Moons** & **Andrew Douma** as principals of the company. Steve and Andrew have been members of the Ottawa construction community for many years, and look forward to continuing to work with the industry to provide quality products and services.



Total HVAC has been professionally representing HVAC & R equipment manufacturers with exceptional sales, support, and accountability for over 17 years. Our policy of continuous improvement means we strive to offer a broad range of the highest quality and most energy efficient products that lead the marketplace in their sector. We are pleased to work with the Eastern Ontario construction community on all construction projects in this capacity.

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CEL is a leading consulting engineering form providing innovative building solutions for over fifty years and our stellar reputation has been built through our talented employees.

We are currently recruiting for a Mechanical Project Coordinator to work on a one (1) year contract (with possible extension) to represent CEL at a client site located in downtown Ottawa. In this role, you will be working with field staff to meet project deadlines, solve/track deficiencies and issues as they relate to the design of mechanical systems. If you have at least 3 years' related onsite experience, have the ability to work independently, and possess strong communication skills please forward your cover letter and resume to: https://document.com/html/project/rec/

For additional job details, please refer to the Career Adverts page on **ASHRAE**'s Ottawa Valley Chapter website for more information.

We thank all applicants in advance for their interest in our organization, but regret that only candidates under consideration will be contacted. We are an equal opportunity employer.

www.cel.ca

Career Adverts Link:

http://ashrae.ottawa.on.ca/ashrae-ovc_history/2013-2014/Careers/20140424_Crossey_20140424.shtml



Student Activities

Last month's annual Ottawa Regional Science fair was held at Carleton University, where **ASHRAE** sponsored a number of special awards for students in different age groups.

The senior prize was given to **Jalal** Ramadan for his Atmospheric Water Generator project. Jamal built a condensing unit to condense drinking water from relative humidity in the air, and performed the associated psychometric calculations.

The intermediate prize was given to Camille Grenier and Sara Laponsee for their Sites Adieu a Vos Marches Glissantes project. The girls built a radiant floor heating system to remove snow and ice.

The junior prize went to **Mohammad** Sindeed Islam and Omar Hashmi for their Engine of the Future project. They built a Stirling engine out of a pop can and tested different fuels.

There were some fantastic projects this year. Thanks to Carleton students Dryden Trivett and Colin **Knox** for coming out and helping judge the students projects!

April was also the very first engineering outreach in the classroom event that we have been able to organize to help promote engineering and science in the classroom. This first presentation was for a class of enthusiastic first graders at St Martin de Porres in Kanata. We spoke to the class of Nancy Conway about what engineering is and performed an electricity experiment to tie in with their science unit. If you are interested in helping with future outreach please contact **Adrianne Mitanni**.

If you have any questions, or would like to help in any of this year's activities please don't hesitate to contact us.

Check This Out: ASHRAE Student Zone: Scholarships and Grants to Careers and Internships... http://www.ashrae.org/students/

Committee Co-Chair Adrianne Mitani 2013-2014 Student Activities Committee Co-Chair Smith + Anderson

E-mail: Adrianne. Mitani@smithandandersen.com

Committee Co-Chair Richard Cameron 2013-2014 Student Activities Committee Co-Chair & **Publications Committee Chair Goodkey Weedmark** E-mail: r.cameron@gwal.com

ASHRAE Scholarship Program http://www.ashrae.org/students/page/1271

ASHRAE Smart Start Program (20-50-50) – Student members can pay student prices after graduating! http://www.ashrae.org/students/page/703







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Grassroots Government Activities

The Grassroots Government Activities Committee GGAC is a new standing committee started this year.

We plan to create a contact list of important people within various government agencies/departments who are responsible for or have influence on policies on important codes and standards like ASHRAE 90.1 on energy, ASHRAE 62 on Ventilation and ASHRAE 189.1 on High Performance Buildings.

I request our members (particularly Consulting Engineers, Contractors, Manufacturers' Reps etc who routinely interact or do business with various levels of Government) to contact me with contact information on any person(s) who are responsible for either decision making or implementing such initiatives. This may range from a City of Ottawa Building Inspector, Provincial/Federal Government officials or others.

Some of the priorities **ASHRAE** has identified include Energy codes & Standards and advocating making it as the jurisdictional standard, advocating for qualifications based selection process in government rather than lowest cost, energy efficiency and sustainability in the built envi-



Committee Chair Kashyap Desai 2013-2014 Grassroots Governement Activities Committee Chair **PWGSC**

ronment and reasonable tax incentives for energy efficient/sustainable initiatives.

Moving forward we should also strive to have more collaboration with other industry and trade associations

We welcome members to be a part of this new and exciting program.

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Capital Communiqué

President-Elect Steve Moons 2013-2014 President-**Elect & PAOE Committee** Chair **Total HVAC**



Advertising career opportunities on the 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.

Advertising

E-mail: Stevem@totalhvac.com

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.

Rates for career opportunities ads are as follows:

Chapter Member: \$50/month Non-member: \$250/month

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. For payment and other information contact Steve Moons at stevem@totalhvac.com.

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.

ASHRAE Table Top Opportunity

We currently have table-top availability for several of the 2013-2014 **ASHRAE OVC** meetings.

Cost for a table-top is \$200 and spaces are starting to fill up.

Please let Adam Graham (adam.graham@hts.com) or Steve Moons (stevem@totalhvac.com) if you are interested and we will ensure that you are booked in accordingly.

Rod Lancefield 2013-2014 Publicity Committee Co-Chair HTS Engineering Ltd. E-mail: rodl@htseng.com



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 \$225.00 for the year. Please contact **Rod Lancefield** at rodl@htseng.com for more details.

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2013-2014 **Roderic Potter President-Elect** Steve Moons **Treasurer** Georges Maamari Secretary **Abbey Saunders** Governors Patrick Albert Chris Fudge Adam Graham Daniel Redmond **Past President Donald Weekes**

> **Committees Attendance**

Sandy Taylor Audit

Stephen Lynch

Capital Communiqué

Richard Cameron **CRC**

> Roderic Potter **CTTC**

Daniel Redmond

Grassroots Government

Affairs

Kashyap Desai

Financial Sandy Taylor

Greeter

Miker Swayne

History

Aaron Dobson

Membership

Promotion

Adam Moons

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Robert Kilpatrick

PAOE

Steve Moons Publicity

Richard Cameron

Research

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Roster

Georges Maamari **Special Events**

Chris Healey Andrew Douma

Student Activities Richard Cameron

Adrianne Mitani Table Top **Derek Atkins** Website

Roderic Potter