



AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS INC.

LONDON CANADA CHAPTER #116

<http://LondonCanada.AshraeChapters.org>

Mon March 30/2015

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Topic

WIRELESS BUILDING AUTOMATION

Speaker

Marc Bertolin

Regional Account Manager
Johnson Controls Inc

Meeting - Mon March 30/2015 MEMBERSHIP NIGHT

5:15 pm Social
6:15pm Dinner
7:15pm Speaker

ASHRAE Member/Guest \$50.00
Student Non-Member \$10.00

ADVANCED PAYMENT BEFORE MEETING
by using PAYPAL
use the chapter web site to register and pay
<http://LondonCanada.AshraeChapters.org>

location:

FOUR POINTS by SHERATON
1150 Wellington Road South
London, Ont

Presidents Message

Finally, after a long and frigid winter...Spring is here! The warmer weather and sunshine are replacing the cold temperatures and darkness. I hope you all enjoy a warm spring with your families and friends.

I would first like to thank **Mr. David Underwood** for being our distinguished lecture Speaker last month. The lecture was very informative and we received great feedback from all chapter members and guests.

The theme for our March chapter meeting will be **Membership Night**. Our Speaker this month is **Mr. Marc Bertolin**, Regional Account Manager of Johnson Controls. Marc will be speaking in regards to **"Wireless Building Automation"**. The meeting will be held at **Four Points by Sheraton** at 1150 Wellington Road South London. Our Chapter Membership Promotion Chair, **Jeff Watson**, will be speaking during our business session on our Chapter membership progress. In addition, he will welcome our newest Chapter members.

ASHRAE has recently introduced the new **High Performing Buildings** magazine (HPB) app with a redesigned website. It was created to make the publication more user friendly for the industry. First launched in **2007**, HPB now has more than **40,000** subscribers; mostly building owners, facility managers, architects and engineers. Each issue features case studies of the best performing buildings in the world. HPBmagazine.org features a new design as well as a faster and more accurate site search. The site is fully responsive on mobile devices. Content on the new site is organized by topics of interest to the industry such as: envelope, light, site and energy. To complement the redesigned site, ASHRAE has launched a free stand-alone app for the magazine. This app is available in the App Store, Amazon and Google Play stores. Users can find the app by searching **"High Performing Buildings"** or **"HPB Magazine"** in either store.

On **April 23rd** from **1-4 PM EDT**, our chapter will be hosting the **2015 ASHRAE Webcast** on **"New Tomorrows for Today's Building: Existing Building Commissioning"**. This webcast will feature industry experts who will define the benefits of existing building commissioning for the environment, occupants, operations staff, and overall ownership costs. Viewers will be able to recognize the varied scopes of commissioning, when to apply comprehensive versus focused commissioning, and best practices in existing building commissioning specifications & contracting. The webcast program will be hosted at **Baymar Supply London Office, 521 Consortium Court, London**. There will be a **BBQ lunch** served from **12 - 1 PM**. Please visit our local ASHARE London website (<http://londoncanada.ashraechapters.org>) for more information about the program, speakers, and registration.

On **Monday June 1st**, our chapter will be organizing our ASHRAE Golf day. Registration is open; please send an email with your group names and participants to our Chapter Golf chair **Jamie Kruspel** (jamie.kruspel@td.com) and our Chapter Vice-President **Jordan Foster** (jordan.foster@chorley.com).

I look forward to seeing you all at our upcoming chapter meetings. Thank you for your continuous support of your local ASHRAE Chapter.

Ibrahim M. Semhat
Chapter President 2014/2015
ASHRAE London Canada Chapter



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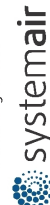
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SPEAKER

Marc Bertolin
 Regional Account Manager
 Johnson Controls Inc



Marc Bertolin attended Humber College for Environmental Engineering Technology. He has been in the HVAC/Building Automation industry for over 13 years. His career started with Siemens Building Technologies where he held various roles including technical field service and HVAC product sales servicing Eastern and SW Ontario.

For the last three and a half years, he has held a role as regional product account manager for Johnson Controls helping to manage the product business in Canada. He covers all of Canada and various channels the company has to market within the country.

Marc has been a member of ASHRAE since 2007, with chapter membership in Ottawa, Hamilton and Toronto throughout the years. He has also held Young Engineers in ASHRAE Chair and Membership Promotion Chair for the Toronto Chapter.

TOPIC

Wireless Building Automation

Wireless controls and sensors are becoming more popular when renovating a building's control system. A review of product features will be presented along with some design considerations. Why use wireless components and how the communication system work will be discussed. Problem areas and some project success stories will be reviewed.



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Upcoming Chapter Meetings

April 23/2015 - ASHRAE WEBCAST, Retro-commissioning and the Life Cycle Cost Analysis

June 1/2015 - Golf Tournament

Other Meetings

June 27 to July 1, 2015 = ASHRAE Annual Conference - Atlanta, GA
 Jan 23 to 27, 2016 = ASHRAE Winter Conference - Orlando, FL
 Jun 25 to 29, 2016 = ASHRAE Annual Conference - St. Louis, MO
 Jan 28 to Feb 1, 2017 = ASHRAE Winter Conference - Las Vegas, NV

Professional Engineers London london.peo.on.ca

National Engineering Month (NEM) 2015 Events:

WindEEE Dome Tour: March 19, 2015, 3:00 pm – 4:00 pm

Woman in Engineering: Thursday March 26, 2015 at Garlicks restaurant at 7:00 pm

Guest Speaker: Marisa Sterling, P.Eng.

London Children Museum Engineering Activities: March 28th, 11:00 am – 2:00 pm

EIT Information Night: Tuesday March 31, 2015 5:30 pm, Western University
 Spencer Engineering Building Room 2202



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ASHRAE Webcast - April 23/2015

New Tomorrows for Today's Buildings: Existing Building Commissioning

ASHRAE's upcoming webcast, titled New Tomorrows for Today's Buildings: Existing Building Commissioning, will broadcast live on **April 23, 2015, from 1:00 – 4:00 pm EDT**. This FREE webcast is brought to you by the Chapter Technology Transfer Committee.

"The presenters will distinguish between new building commissioning, existing building commissioning, and retro-commissioning," said Nathan Hart, Chair of the CTTC Webcast Ad Hoc Committee. "Viewers will learn how to manage the commissioning process to minimize the impact on building functions and occupants, and how to integrate elements of existing building commissioning into the operation and maintenance staff's daily activities. The focus will be on maximizing energy efficiency and ROI."

The webcast presenters are:

Bob Baker, OPMP, Fellow ASHRAE | Managing Director | BBJ Consulting | Riverview, FL
Jim Vallort, Fellow ASHRAE | Practice Leader | Environmental Systems Design Inc. | Chicago, IL
Ron Wilkinson, P.E., CPMP | Commissioning Authority | Glumac | Seattle, WA

ASHRAE London Canada Chapter has arranged to view the webcast at **Baymar London office** with a lunch BBQ

Please visit our local ASHARE London website (<http://londoncanada.ashraechapters.org>) to register.

Business Card Ads

Place your business card HERE
contact:

Jordan Foster
<jordan.foster@chorley.com>

or
Tom Pollard
<tpollard@execulink.com>



Join us at ASHRAE's 2015 Annual Conference
June 27–July 1 | Atlanta, Georgia | www.ashrae.org/atlanta

Special first
time attendee
registration
fee available!

Join ASHRAE in its hometown of Atlanta! Take advantage of the opportunity to discuss and examine the latest topics in the building industry, such as high performing buildings and modeling, through the technical program; participate in technical tours; attend ASHRAE Learning Institute courses; sit for an ASHRAE certification exam; and earn professional development credits.

Conference Technical Program—includes the third annual Research Summit, which brings together researchers to present and discuss the latest research. Tracks focus on the design, construction and operation of high performance buildings, specifically advanced design guidance, modeling, operation and optimization, and indoor air quality. Laboratories, refrigeration, fundamentals, applications, systems and equipment round out the program.

Networking—share ideas and learn from fellow members from your hometown and around the world.

ASHRAE Learning Institute—choose from two full-day professional development seminars and seven half-day short courses to stay current on new HVAC&R technologies.

ASHRAE Certification—to gain a competitive edge, apply by June 9 to sit for an ASHRAE Certification exam.



ASHRAE has a warm southern welcome as the 2015 Annual Conference comes to the Society's hometown of Atlanta, Ga. It's been nearly 15 years since the last time ASHRAE hosted a conference here. And while the city and the Society have grown and changed, the hospitality remains the same. We look forward to seeing y'all!

Register NOW, before rates increase on April 26, at www.ashrae.org/atlanta.

The Headquarter Hotel is the Atlanta Hilton, 255 Courtland Street, NE. Rates are \$169. Click [HERE](#) to reserve your room there. Additional hotel rooms are available at the Sheraton Atlanta, 165 Courtland Street, NE. The Sheraton is 0.1 miles from the Hilton and approximately a 3 minute walk. Rates are \$149 plus tax. Click [HERE](#) to reserve a room at the Sheraton



ASHRAE/IES Publish Updated Standard on Energy Efficiency in Existing Buildings

ATLANTA – A newly revised standard from ASHRAE and IES seeks to provide greater guidance and a more comprehensive approach to retrofit of existing buildings for increased energy efficiency.

ANSI/ASHRAE/IES Standard 100-2015, Energy Efficiency in Existing Buildings, provides comprehensive and detailed descriptions of the processes and procedures for the retrofit of existing residential and commercial buildings in order to achieve greater measured energy efficiency. Appendices are included for life-cycle cost analysis procedures as well as identification of potential energy conservation measures.

"The total primary energy used in both residential and commercial building sectors is expected by the U.S. Energy Information Administration to rise each year for the next several decades in spite of aggressive efficiency improvements in new construction," Rick Hermans, chair of the Standard 100 committee, said. "In order to reduce the overall impact of energy used by residential and commercial buildings, the existing building stock must become more efficient. This revision to Standard 100 provides the means to accomplish that goal."

The standard addresses both residential and commercial buildings. It addresses single and multiple activity buildings with variable occupancy periods and identifies the approach for 53 building types in 17 climate zones/subzones. It identifies requirements for buildings undergoing retrofits that do not fall under the scope of either ANSI/ASHRAE/IES Standard 90.1-2013, Energy Standard for Buildings Except Low-Rise Residential Buildings, or ANSI/ASHRAE/IES Standard 90.2-2007, Energy Standard for Low-Rise Residential Buildings.

Standard 100 directly addresses a building's energy-use efficiency in a quantitative manner and provides a means to improve that efficiency with an objective benchmark created with the assistance of the Energy Information Administration, the Federal Energy Management Program and Oak Ridge National Laboratory.

Recognizing that the actual occupancy of the building plays a key role in its performance, the standard establishes the need for development of an energy management plan and an operation and maintenance program. It also addresses the requirements for ongoing commissioning.

The standard takes advantage of the fact that any building that has been in operation for at least twelve months can quickly determine its performance relative to some benchmark, which is defined in the standard as an energy-use intensity target. This concept is the new paradigm for energy conscious design, construction and operation of buildings, according to Hermans.

The revision of the standard, last published in 2006, also brings the standard in line with other published ASHRAE documents, specifically Standard 90.1-2013, Standard 90.2-2007 and ANSI/ASHRAE Standard 105-2014, Standard Methods of Determining, Expressing and Comparing Building Energy Performance and Greenhouse Gas Emissions.

The cost of ANSI/ASHRAE/IES Standard 100-2015, Energy Efficiency in Existing Buildings, is \$72 (\$61, 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.

ASHRAE Announces Spring 2015 Online Courses; New Course on Commissioning Process

ATLANTA – With the commissioning process becoming widely recognized as being critical to the success of high-performance buildings ASHRAE has added a new Learning Institute course focused on requirements in its first commissioning standard. Taught by Walter Grondzik, P.E., the course, "Commissioning Process and Standard 202" is being held March 25, 2015. It is one of 12 Spring Online courses being offered by ASHRAE. In 2005, ASHRAE Guideline 0, The Commissioning Process, addressed the commissioning process when it was a voluntary element of the building acquisition process. With the incorporation of mandatory commissioning requirements in standards, Such as ASHRAE/IES/USGBC Standard 189.1, Standard for the Design of High Performance Green Buildings, it was determined that a code-language description of the commissioning process was needed. That gap was filled with publication of ANSI/ASHRAE/IES Standard 202-2013, Commissioning Process for Buildings and Systems, which provides information on minimum acceptable commissioning process practices.

"The course reviews the commissioning requirements embodied in Standard 202 and links them to Guideline 0 and other technical support documents," Grondzik said. "We will provide an understanding of the commissioning process as described by Standard 202, explain how and why the Standard 202 commissioning process differs from that in Guideline 0, and explore how compliance with the standard is likely to evolve."

For registration costs and to register, visit www.ashrae.org/onlinecourses.

ASHRAE ON-LINE COURSES <https://www.ashrae.org/education--certification/2015-spring-online-courses>

Commissioning Process & Standard 202 - Wed, March 25, 2015, 1:00 pm to 4:00 pm, EDT
Troubleshooting Humidity Control Problems IAQ Practices - Wed, March 11, 2015, 1:00 pm to 4:00 pm, EDT
Advanced High-Performance Building Design ES Practices - Mon, March 23, 2015, 1:00 pm to 4:00 pm, EDT
IT Equipment Design Evolution & Data Center Operation Optimization - Mon, March 30, 2015, 1:00 pm to 4:00 pm, EDT
Commercial Building Energy Audits - 2 Parts - April 22/27, 2015, 1:00 pm to 4:00 pm, EDT
Energy Modeling Best Practices and Applications ES Practices - 2 parts - April 29/May6, 2015, 1:00 pm to 4:00 pm, EDT
Fundamental & Applications of Standard 55-2013 IAQ Practices - Mon, March 9, 2015, 1:00 pm to 4:00 pm, EDT
Complying with Standard 90.1-2013: HVAC/Mechanical ES Practices - Wed, April 8, 2015, 1:00 pm to 4:00 pm, EDT
Fundamental Requirements of Standard 62.1-2013 IAQ Practices - Mon, April 13, 2015, 1:00 pm to 4:00 pm, EDT
Understanding Standard 189.1-2014 for High-Performance Green Buildings ES Practices - Mon, April 20, 2015, 1:00 pm to 4:00 pm, EDT
Complying with Standard 90.1-2013: Envelope/Lighting ES Practices - Mon, May 4, 2015, 1:00 pm to 4:00 pm, EDT
Exceeding Standard 90.1-2013 to Meet LEED Requirements ES Practices - Wed, May 13, 2015, 1:00 pm to 4:00 pm, EDT

ASHRAE Publishes Revision of Ground Source Heat Pump Book

ATLANTA – When ASHRAE's original book on ground source heat pumps was published 17 years ago, such systems were used mainly in residential settings and designers who used them were seen as risk takers.

Today, the technology is much more widely used having been recognized for its benefits. The lessons learned during that time are incorporated in a newly published book from ASHRAE, "Geothermal Heating and Cooling: Design of Ground-Source Heat Pump Systems (GSHP)." The publication is a complete revision of "Ground-Source Heat Pumps: Design of Geothermal Systems for commercial and Institutional Buildings," published in 1997 and recognized as the primary reference for non-residential GSHP installations.

The new book was written by Steve Kavanaugh, professor emeritus at the University of Alabama, and Kevin Rafferty, a consulting engineer, Klamath Falls, Ore. Both have spent the last 25 years focused on geothermal/GSHP work.

"One of the realities of the GSHP industry is that, to some degree, it has been a victim of its own success," Rafferty said. "Years ago the struggle was to simply get design teams to consider using the technology. Though this is still an issue in some areas, nationally it is far less of an issue than 20 years ago. There is now fairly wide recognition of the benefits of GSHP systems, particularly on the part of building owners in the schools and office building sectors, where the technology has achieved its highest penetration rates. However, there also is a widely held view that anything bearing the name 'geothermal,' 'ground source' or 'earth energy' will produce the desired high efficiency/low operating cost. As a result, poorly designed systems are often installed and building owners expectations are unmet."

The book provides benchmarks, design strategies and information necessary for engineers to configure the most efficient and cost effective systems and avoid problems such as inefficient pumping, high cost ground loop designs, inadequate outside air provisions, unnecessarily complex control schemes and other common design errors.

In addition to cost and performance data, Kavanaugh provides building owners and their architects the information necessary to ask the right questions and accurately evaluate potential engineering consultants. The net effect is a more cost effective and efficient design and satisfied building owners.

"GSHP produces superior HVAC system performance and when properly implemented can be cost competitive with many (but not all) conventional systems," Rafferty said. "They can be operated with far simpler controls than traditional HVAC systems, and also can reduce equipment building space requirements, reduce duct work requirements and eliminate the need for external building mechanical equipment."

As part of the revision, seven of the original eight chapters and appendices were completely rewritten and now include coverage of close-loop ground (ground-coupled), groundwater, surface water, GSHP equipment and GSHP piping. Additional information on site characterization has been added including a new hydro-geological chapter. The final chapter was replaced and the new section contains results of recent field studies, energy and demand characteristics and updated information to optimize GSHP system cost.

The cost of "Geothermal Heating and Cooling: Design of Ground-Source Heat Pump Systems" is \$128 (\$109, 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.



New Tomorrows for Today's Buildings: **Existing Building Commissioning**

**open to all interested parties - Owners, Architects,
Engineers, Designers, Contractors, Building Operators**

FREE ASHRAE Webcast



Jim Vallort

Bob Baker

Ron Wilkinson

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Attendees may be awarded three (3) Professional Development Hours (PDHs). The webcast program has also been approved for three (3) AIA Learning Units (LUs) and three (3) GBCI Continuing Education Hours (CEs). Check with your Association for reporting requirements.

LOCALLY HOSTED BY: ASHRAE LONDON CANADA CHAPTER
at BAYMAR SUPPLY
521 Consortium Crt, London, ON

Webcast (free) - Thursday April 23/2015 1:00pm to 4:00pm
lunch \$20 from 12:00noon to 1:00pm
be sure to register on line
see: <http://LondonCanada.AshraeChapters.org/>