

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

# LONDON CANADA CHAPTER #116

#### http://LondonCanada.AshraeChapters.org

Mon Mar 26/2012

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## Topic ENERGY EFFICIENCY IN THE ONTARIO BUILDING CODE

# WHAT YOU NEED TO KNOW

Speaker Bob Bach, P.Eng Energy Profiles Ltd

#### Meeting - Monday March 26/2012

UWO - WINDERMERE MANOR North Meeting Room 200 Collip Circle London

5:30pm Social 6:00pm-Dinner 7:00pm to 8:00pm - Program

\$45.00 for London Chapter dues paid members

SPECIAL RATE FOR THIS MONTH = \$45.00 for others

## http://www.surveymonkey.com/s/VYCM38L

please register at SurveyMonkey site if you plan on attending the meeting



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### Presidents Message

I don't think anyone is complaining about the weather. What a great week for the kids during March break to enjoy.

Thanks again to last months guest speaker Chip Morrow from The VMC Group and his talk on Vibration Isolation Wind & Siesmic.

This month we are having our meeting again at Windermere manor @ UWO and our guest speaker will be Bob Bach talking about "Energy Efficiency in the Ontario Building Code".

As the 2011- 2012 comes closer to the end its that time of year again to put forth nominations for the Board of Governors for the chapter so if any London chapter members would like to put forth their name for a position please let me know I will make an announcement at the meeting as well.

Next month ASHRAE has their annual Webcast on "Dedicated Outdoor Air Systems" which be held at Engineered Air's office here in London I would encourage as many of that can attend please stop by.

This week as most of you know is the CMX show held in Toronto at the convention centre from Thursday 22nd to Saturday 24th. ASHRAE with be offering training on Thursday 22nd "Complying with Standard 90.1 2010 HVAC / Mechanical" from 1:00 pm to 4:00 pm. On Friday the 23rd the course with be "Complying with Standard 90.1 2010 Envelope / Lighting from 9:00 am to 12:00 pm. The course fee is \$159.00 but for ASHRAE members its \$119.00 and you can register at www.ashrae.org/cmxcourses

I look forward to seeing all of you at the meeting.

Jason Vandenberghe Chapter President 2010/2012 ASHRAE London Canada Chapter

### <u>CMX-CIPHEX</u> ASHRAE Courses

Get in-depth training for real-world HVAC&R challenges from ASHRAE at the CMX-CIPHEX 2012 National Trade Show & Learning Forum held in Toronto. ASHRAE Learning Institute is offering two instructor-led short courses by industry experts on complying with Standard 90.1.

Each attendee receives course materials to facilitate learning and a certificate of course completion.

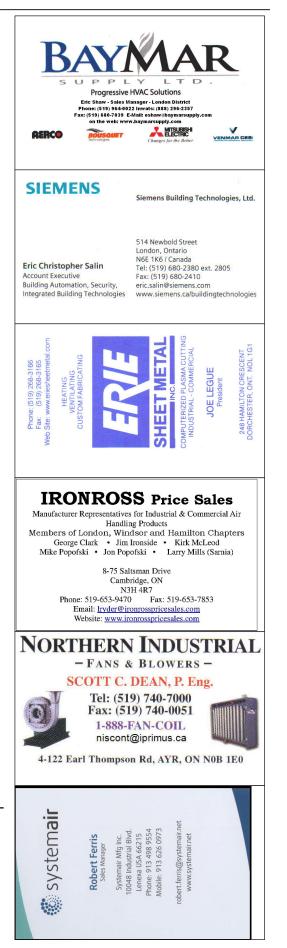
Mar 22, 2012 Complying with Standard 90.1-2010: HVAC/Mechanical

Mar 23, 2012 Complying with Standard 90.1-2010: Envelope/Lighting

for more information and registartion see: http://www.ashrae.org/education--certification/workshops/cmx-ciphex

## February Summary

Chip Morrow, Director os Sales, The VMC Group presented Vibration Isolation - Wind & Siesmic. Some general requirements along with applciations and photos was presented.





# March Topic

Energy Efficiency in the Ontario Building Code - What You Need to Know for 2012

The energy efficiency requirements in Ontario for both housing and buildings changed at the beginning of January, 2012 in a very significant way. Several options will be available for both, and it will be necessary for practitioners in both Part 9 and Part 3 buildings to understand these options and how to select the one that will meet the needs of their clients and the project. This overview will look at the options from both a design and a regulatory perspective.

Bob Bach has been involved with energy efficiency in the Building Code since 1993 when ASHRAE 90.1-1989 was introduced. He is a founding Co-Chair of the Building Code Energy Advisory Council and continues as Vice-Chair, Energy, of the recently renamed Building Code Conservation Advisory Council. He served as a consultant to the ASHRAE 90.1 Standards Project Committee, and has developed and delivered training programs on energy codes for architects, engineers, and building officials across Ontario. He was also a consultant to Natural Resources Canada on initiating the update to the Model National Energy Code for Buildings, resulting in the formation of the Building Energy Code Collaborative whose members included representatives from the governments of all the provinces and territories.

Bob is also a founding director of Sustainable Buildings Canada, a member and former Team Captain of the Canadian Team for the World Sustainable Building Conference most recently held in October 2011 in Helsinki. He has been Chair of the Mechanical Services Advisory Committee, a sub-committee of the Toronto Area Chief Building Officials Committee, since 2004.

### <u>ASHRAE WEBCAST</u> <u>April 21, 2011 – 1:00 p.m. – 4:00 p.m. EDT</u> "Ground Source Heat Pump Systems: Putting the <u>Earth to Work for You"</u>

ASHRAE's Chapter Technology Transfer Committee with support from ClimateMaster, Mammoth, Taco, the International Ground Source Heat Pump Association, and the ASHRAE Foundation will present a free Webcast, "Ground Source Heat Pump Systems: Putting the Earth to Work for You" on Thursday, April 21, 2011. The program will be archived online until May 5, 2011 for those unable to participate in the live webcast. Registration will be required to view the archived program.

## **Upcoming Meetings**

<u>April 19/2012</u> chapter presentation at: Engineered Air - London Office, 60 Meg Drive ASHRAE Webcast - DEDICATED OUTDOOR AIR SYSTEMS

April 30/2012 UWO Mindermere Manor Brian Monk, P.Eng , ASHRAE DL ASHRAE DISTINGUISHED LECTURER Annex Air Hospital Filtration Systems and Airborne Contaminant Control





-f-	\$11,000	ASHRAE Research Promotion Campaign – 2011/2012	Beinor, Engineering Inc. Innovative control solutions
		Our Mission: To improve the quality of life and to answer tomorrow's questions through research TODAY.	Arun Arora Account Executive Tel: 905-264-6372 Ext. 204
		The Research Promotion Campaign annually raises funds to support ASHRAE's research program.	Fax: 905-264-6432 aarora@belnor.com www.belnor.com
		It is conducted by the Society's membership through local chapter volunteers and receives over 7,000 contributions each year from the membership and companies associated with the HVAC&R industry.	
	\$2750	This annual support totals more than \$2 million annually at the society level to help fund over \$14 million in research projects and student grant-in-aids.	
	\$0	In the last few years, Region II (our region) has received research grants totaling more than ½ Million dollars in support of 6 local Region II projects.	
		Active research projects are conducted all around the world at various universities and organizations.	
		Contributions can be submitted with a Member's annual dues payment, by allocating all or a portion of their travel reimbursement, or by sending contributions to the Chapter's Research Promotion Chair or ASHRAE Headquarters.	
		We would be happy to accept your donations at our regular meetings, or can arrange to pick them up at your location at a time convenient to you.	
		Research investments sent directly to Headquarters should be addressed to: Research Promotion, 1791 Tullie Circle, Atlanta, GA 30329.	
		Cheques should be made payable to ASHRAE Research Canada. Individuals and companies are also able to submit their contributions online at <u>www.ashrae.org/contribute</u>	
		If you have made a contribution this year already, thank you for your support for ASHRAE Research.	
		100% of every invested dollar goes directly into the research program.	
		Regards, and thank you for your support in advance	
		Eric W. Shaw ASHRAE RP Chair - London ASHRAE Chapter	



### Membership Promotion Committee

Greetings from your Membership Promotion Committee,

We would like to welcome new members to the ASHRAE London membership

NEW MEMBERS Steven MacDonald Amer Djulbic Aleksy Chwiecko

We as the local Chapter continue to encourage our members to seek out anyone in the industry who may benefit from being connected with ASHRAE. Please contact me if you have any questions regarding membership.

We also continue to encourage membership advancement for any associate members that are eligible. Please contact me for more information.

Best Regards, Jordan Foster Chapter Membership Chair 2011/2012 ASHRAE London Canada Chapter

#### MEMBER BIO's

#### Amer Djulbic

New ASHRAE Member

Born in a small eastern European country called Bosnia. Lived in Canada for about 15 years now. In June of 2010, graduated from the University of Western Ontario with a degree in Mechanical Engineer. After looking for a job, I settled in with Johnson Controls (here in London) as a Project Engineer. I've been here ever since!

#### Bryan Flagel

#### New ASHRAE Member

Born in St. Thomas Ontario in 1977 and lived most of his life in the small town of Aylmer. In 2001 he Graduated Fanshawe College with an Industrial Design diploma. For the first 4 years after, he worked in the manufacturing field where he produced drawings & designs for 2 local companies. In 2006 he Joined Chorley + Bisset Consulting Engineers as a Mechanical Designer. In 2011 he gained his certification as a Certified Technician held with OACETT (Ontario Association of Certified Engineering Technicians and Technologists), and is in the process of upgrading to a Certified Engineering Technologist. In November 2011 he Joined ASHRAE and is looking forward to contributing and learning everything the society has to offer.



## <u>ASHRAE STUDENT AWARD</u>

My name is Mayank Sharma, and I am a student at The University of Western Ontario. I am in my fourth year of mechanical engineering, and after graduation I plan to look for work in the HVAC industry, and later pursue further education. I have thoroughly enjoyed all the HVAC related subjects in mechanical engineering and have also attended the ASHRAE meeting that was held in October 2011. I will find it to be an honour to contribute to the HVAC industry once I finish my studies as my interest in the field has continuously developed. I appreciate the honor and help that the ASHRAE Award has given me. My plan is to put the award to good use by further improving my academic standing in the university, and by devoting some more time towards community service. Having received the ASHRAE Award in Mechanical Engineering is also an encouragement to work harder in school and out side, and I appreciate your help whole-heartedly.

Thank you kindly, Sincerely, Mayank Sharma Candidate BESc. 2012 Mechanical Engineering



ASHRAE Recognizes Outstanding HVAC&R Industry Achievements

Thirty-six people are being recognized by ASHRAE for their contributions to the Society and the building industry at the Society's 2012 Winter Conference.

The Hall of Fame, honors deceased members of the Society who have made milestone contributions to the growth of HVAC&R technology.

The recipient is Presidential Member Roderick Kirkwood, Fellow ASHRAE, Life Member.

Fellow ASHRAE is a membership grade that recognizes distinction in the arts and sciences of environmental technology and is earned through achievement as a researcher, designer, educator or engineering executive. The Society elevated 13 members to the grade of Fellow ASHRAE:

•Constantinos Balaras is research director, Institute for Environmental Research and Sustainable Development, National Observatory of Athens, Greece.

•Van Baxter is senior research and development engineer, Oak Ridge National Laboratory, Oak Ridge, Tenn.

•Vin Gupta is senior principal engineer, 3M Company, St. Paul, Minn.

•Mark Modera is professor, civil environmental engineering, mechanical and aerospace engineering, and director, Western Cooling Efficiency Center, University of California at Davis.

•Darin Nutter is associate professor of mechanical engineering, University of Arkansas, Fayetteville.

•Tom Phoenix is principal and vice president, Moser Mayer Phoenix Associates, Greensboro, N.C.

•Arshad Sheikh is owner/principal consultant, SES Consulting Engineers, Lahore, Pakistan.

•Edward Vineyard is group leader, building equipment research, Oak Ridge National Laboratory, Oak Ridge, Tenn.

• Iain Walker is scientist, Lawrence Berkeley National Laboratory, Berkeley, Calif.

•Brian Warwicker is consultant, Brian Warwicker Partnership, Ltd., London, U.K.

•Bill Worek is professor and director, Energy Technology Laboratory, University of Illinois-Chicago

•Xudong Yang is Chang-Jiang professor and deputy director, Institute of Built Environment, School of Architecture, Tsinghua University, Beijing, China

•Jianshun Zhang is professor and director, building energy and environmental systems lab, department of mechanical engineering and aerospace engineering, Syracuse University, Syracuse, N.Y.

The ASHRAE Technology Awards recognize outstanding achievements by members who have successfully applied innovative building designs, which incorporate ASHRAE standards for effective energy management and indoor air quality. Six projects received first-place ASHRAE Technology Awards:

•Roland Charneux, P.Eng., ASHRAE Fellow, ASHRAE Certified Healthcare Facility Design Professional, Pageau Morel & Associates, Montreal, Quebec, Canada in the new commercial buildings category for Mountain Equipment Co-op, Longueuil, Quebec, Canada. The building is owned by the co-op

•Ken Sonmor, Ecovision Consulting, Montreal, Quebec, Canada in the existing commercial buildings category for the IKEA Brossard Distribution Center, Quebec, Canada. The building is owned by IKEA Distribution Services.

•René Dansereau, Dessau, Longueuil, Quebec, Canada the new educational facilities category for the Université de

Sherbrooke—Campus de Longueuil, Quebec, Canada. The building is owned by the university.

•Paul Marmion, Stantec Consulting, Ltd., Vancouver, British Columbia, Canada in the new health care facilities category for Abbotsford Regional Hospital and Cancer Centre, British Columbia, Canada. The building is sponsored by Laing Investments Management Services and owned by the hospital.

•Blake Ellis, P.E., Burns & McDonnell, Kansas City, Mo. in the new industrial facilities or professes category for thermal energy storage at Texas Meidcal Center, Houston, Texas. The owner is Thermal Energy Corp.

•Luc Simard, Compressor Systems Control (CSC), Inc., Les Coteaux, Quebec, Canada in the existing industrial facilities or presses category for the Arena Marcel Dutil, St-Gédéon-de-Beauce, Quebec, Canada. The building is owned by the Municipalite St-Gédéon-de-Beauce.

The ASHRAE Student Design Project Competition challenged teams of students to create an integrated sustainable building design as well as select and design HVAC&R systems for the Drake Well Museum located in Titusville, Pa., the site where Edwin L. Drake drilled the world's first oil well in 1859 and launched the modern petroleum industry. First place in HVAC System Design is awarded to Holly Brink, Michael Crabb, James Dougherty, Andrew Gilliam and Gina Halbom of University of Nebraksa-Omaha. First place in HVAC System Selection is awarded to Lynn Gualtieri, Evan Oda, Kristin Porter, Navid Saiidnia, Jeffrey Wong and Cameron Young of California Polytechnic State University, San Luis Obispo, Calif. First place in the Integrated Sustainable Building Design is awarded to Qi Te, Zhang Qiqi and Chen Yuanyi of Tianjin University, China.

The John F. James International Award is given to an ASHRAE member who has done the most to enhance the Society's international presence. The recipient is Edward Ka Cheung Tsui, managing director, Intelligent Technologies, Ltd., Hong Kong, Hong Kong.

The E.K. Campbell Award honors outstanding achievements by engineering educators and is presented by the ASHRAE Life Members Club. The recipient is Wayne Helmer, Ph.D., P.E., professor of mechanical engineering, Arkansas Tech University, Russellville, Ark.



#### ASHRAE, IAPMO Sign MOU to Advance Built Environment Codes and Standards

ATLANTA ASHRAE and the International Association of Plumbing and Mechanical Officials (IAPMO) have entered into a Memorandum of Understanding (MOU) specifically detailing ways in which the two organizations can work together to advance and promote mutual interests in built environment codes and standards.

The MOU was signed during ASHRAE's 2012 Winter Conference held in Chicago.

"With ASHRAE's expertise in HVAC&R engineering, and IAPMO's expertise in plumbing and mechanical codes, our joint efforts will ensure that the design, construction, reconstruction and operation of buildings meet the built environment needs in codes and standards," ASHRAE President Ron Jarnagin said.

"IAPMO and ASHRAE enjoy a long history of working together in the interests of promoting health, safety and sustainability through the codes and standards that govern mechanical systems," said IAPMO President Dan Daniels. "I am pleased that this MOU will ensure our two organizations continue to strengthen each other and subsequently strengthen our industry."

"IAPMO is delighted to be working more closely with ASHRAE in our efforts to promote our standards and services throughout the world," said IAPMO CEO GP Russ Chaney. "This MOU provides both organizations with the basis to expand our already close and mutually beneficial relationship as we continue to collaborate together."

The MOU outlines several areas in which ASHRAE and IAPMO will work together, including:

• Collaborating on common public affairs goals, such as joint promotion of codes and standards at the local, state and federal levels; and promotion of mutually beneficial positions during the development and passage of state and federal legislation.

• Exploring opportunities to co-develop new courses or other training programs that take advantage of overlapping and complementary expertise.

• Fostering technical cooperation in areas of common interest by providing opportunities to participate in and comment on proposed standards, guidelines, policies and position statements developed on technical subjects as they relate to buildings and community developments; exploring ways to use ASHRAE standards in IAPMO codes, including derivative documents developed for use outside the U.S.; and investigating the feasibility of creating a coalition of U.S. codes and standard organizations to promote the international use of standards and codes developed by coalition participants.

- Promoting research in areas where research results will add to the body of knowledge in codes and standards.
- Disseminating research results quickly, focusing on high-impact findings.
- Identifying opportunities for research funding from other sources

#### New Book Offers Guidance on Implementing Energy Savings Plan

Guidance on increasing energy efficiency in existing buildings through measuring and tracking efficiency and implementing an efficiency plan is featured in a new book from leading built environment organizations.

"Energy Efficiency Guide for Existing Commercial Buildings: Technical Implementation" provides clear and easily understood technical guidance for energy upgrades, retrofits and renovations by which building engineers and managers can achieve at least a 30 percent improvement in energy performance relative to a range of benchmark energy utilization indexes. It features practical means and methods for planning, executing and monitoring an effective program, based on widely available techniques and technologies.

"Energy efficiency improvement in buildings is one of the greatest means to increase resource efficiency, improve environmental stewardship and save operating funds," George Jackins, who chaired the committee overseeing the book, said. "More importantly, energy efficient improvement should happen because it makes good business sense. Good planning and on-going commitment is essential to maximizing investments in energy efficiency."

Improving energy in an existing building is an iterative process, but first you have to know where you are starting from, according to Jackins. The book recommends some tips on how to begin the energy savings process:

- 1. Calculate energy use and cost
- 2. Set energy performance goals
- 3. Measure and analyze current energy use
- 4. Select and implement energy efficiency measures
- 5. Measure and report improvements
- 6. Continue to track performance and reassess goals

"Energy Efficiency Guide for Existing Commercial Buildings: Technical Implementation" is the second energy efficient guide for existing commercial buildings developed by the same group developing at the Advanced Energy Design Guide series for new buildings ASHRAE, the American Institute of Architects, the Illuminating Engineering Society of North America and the U.S. Green Building Council and supported by the U.S. Department of Energy. In addition, the Building Owners and Managers Association and the U.S. General Services Administration were involved in its development. The first, "Energy Efficiency Guide for Existing Commercial Buildings: The Business Case for Building Owners and Managers," provides the rationale for making economic decisions related to improving and sustaining energy efficiency in existing buildings.

The cost of "Energy Efficiency Guide for Existing Commercial Buildings Technical Implementation" is \$75 (\$64, ASHRAE members). To order, contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit www.ashrae.org/bookstore.