

OTTAWA VALLEY CHAPTER

Capital Communique

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OCT 17 1994

AMERICAN SOCIETY OF
HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS

OCTOBER 1994

PROGRAM

DATE: October 18, 1994
THEME: RESEARCH
SPEAKERS: (JOHN) CHIA YU SHAW, Ph.D., P.Eng.
Senior Research Officer,
IRC Building Performance Laboratory

John is the Group Leader of the Ventilation Group. He joined the Institute for Research in Construction (IRC) in 1971. Much of his work at IRC deals with air leakage and air movement in buildings, which have a direct effect on the indoor environment. He has more than twenty years experience in tracer gas measurement techniques, ventilation for large buildings and houses, and smoke control. He also spent six years in the design of HVAC systems for office buildings and laboratories.

SUBJECT: AIR CHANGE RATES AND CARBON DIOXIDE
CONCENTRATIONS IN A HIGH-RISE OFFICE BUILDING

The feasibility of controlling ventilation rates using occupant-generated carbon dioxide as the control index, has been examined in a large high-rise office building with a constant volume HVAC system. Daily CO₂ concentration profiles throughout the building and air change rates, using SF₆ as a tracer gas, were measured for several outdoor air supply rates. Of particular interest was how well the CO₂ concentrations measured in the central ventilation system's return air plenum represented the average CO₂ concentration behavior in the building as a whole. CO₂ concentration profiles were also measured on individual floorspaces in the building to determine the range of variability in the concentration behaviour in occupied zones. The influence of fresh air supply rates on the speed of mixing the tracer gas (surrogate contaminant) was also examined. The practicability of using CO₂ as an active tracer gas to measure air change rates was also investigated.

MENU

Tomato Vegetable Cocktail
Braised Beef Stroganoff On
Buttered Noodles
Vegetables
Apple Pie Chantilly

SOCIAL - 17:30 Hrs
DINNER - 18:30 - 20:00 Hrs
PROGRAM - 20:00 Hrs

Phileas Fogg Metropolitan House
99 Bank Street, MacDonald Room

TOUR TOUR TOUR TOUR TOUR TOUR TOUR TOUR TOUR TOUR

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Table Top

James Mills



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PRESIDENT'S MESSAGE

Well, well... The first meeting under our belt. We seem to be firing on all cylinders! Attendance peaked at 93. Thanks very much to all those who saw fit to make it happen.

It's hard to pin down what makes the Ottawa Chapter such a steady performer. I think back on the first committee work I got involved in. First Education, then Program committee... there were always key players like Keith Murfin, Frank Vaculik or Mike Acton who would just exude the kind of spirit that makes it very meaningful and fun to participate.

Even in transition, the Chapter has somehow managed to keep this spirit alive.

Look around you at the next meeting and see who is having a good time. The people who are enjoying themselves the most are typically those who get involved. The rewards are many. I urge you to get involved.

One of our many priorities this year has been the development of first rate programs at the Chapter meetings. We are enclosing the complete slate so you won't miss the most relevant ones.

Pierre de Gagné

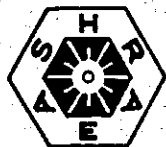
TOUR

WHERE: NRC TEST LABS
Building M-24
Montreal Road & Blair Road

WHEN: TUESDAY, OCTOBER 18, 1994 - Meet in Lobby
4:00 p.m. Thermal Insulation Laboratory
4:15 p.m. Environmental Chamber Laboratory
4:30 p.m. Ventilation and Indoor Air Quality Laboratory



CHAPTER DOES NOT ACT FOR SOCIETY



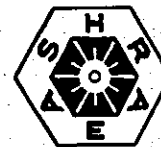

ASHRAE, Ottawa Valley Chapter Board of Governors
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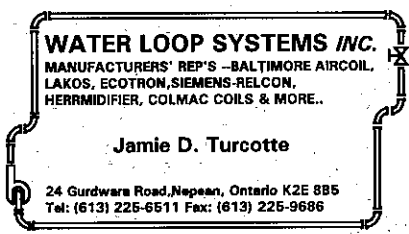
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ASHRAE OTTAWA VALLEY CHAPTER - MEETINGS SCHEDULE 1994/1995

<u>DATE</u>	<u>THEME</u>	<u>EVENING PROGRAM</u>	<u>TECH. SESSION/TOUR</u>
Sept.20	Awards & Membership	Case Study - LOEB Building - Nick Haitas	Tour of LOEB Building - Gil Belair, Nick Haitas
Oct.18	Research	Air change rates and carbon dioxide concentrations in high rise buildings - C.Y. Shaw (NRC)	Tour of NRC test labs - C.Y. Shaw
Nov.15	Membership	Information Highway - Vic DiCiccio	Tour of Canada Post building - Nigel High
Jan.17	Student Night	Biodome - Joan Falcon	Pumps/Fans - Fundamentals
Feb.21	Refrigeration	Compressors - Types/Technology	Update on CFC - John Smale
March 21	Government Affairs & Research	Ontario Building Code - Building Energy Requirements	ASHRAE 90.1 Electrical/Mechanical Aspects
April 18	Energy	Commissioning of EMCS, Third Party Financing	½ Day Seminar
May 16	History	Heritage Buildings History of Carrier Corp.	Tour of an Historical Building



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CHAPTER NEWS

TELEPHONE COMMITTEE VOLUNTEERS

The telephone committee is in need of volunteers for the upcoming year.

We need you or members of your support staff to make a maximum of 12 telephone calls per month to our Chapter members.

If you can help out please contact Mike Swayne at Tel: 828-2000 / Fax: 828-1011.

RESEARCH

Most people tend to groan a little when they think of canvassing on behalf of ASHRAE Research. They feel that they are asking for charity. **Nothing** could be further from the truth.

Making a donation to ASHRAE Research Canada is an INVESTMENT in **your** future. That's right. It will help keep your company competitive. **All** money received goes to applied research in areas that benefit ASHRAE members. Further, the money raised in Canada, plus additional foreign funds, **stays** in Canada. You see, our research facilities are first rate and are recognized as being such.

Support CANADIAN research by joining ASHRAE Research Canada today.

TABLE TOP DISPLAY

This month's Table Top display will be presented by Patrick Durkin & Associates, who, I am pleased to introduce Airdancer Inc., manufacturers of polypropylene and FRP fans for general exhaust, lab fume hood exhaust and corrosive air exhaust applications.

Contact Jim Mills at 828-2000 for more information on presenting a Table Top at upcoming meetings. The 1994-1995 rate is unchanged from last year at \$100.00 per display.

SPECIAL MEALS

We have been informed individual meals can be prepared for members and guests having special dietary requirements or requests. The catering office can provide meals suitable for diabetics, no pork, vegetarian, etc. Please note that a minimum of 24 hours notice to the catering office is necessary. Arrangements can be made through the telephone committee each month.

Our thanks to Morrison Lamothe catering staff for making this possible.

MEMBERSHIP IN THE ASHRAE SOCIETY

Each one who receives a copy of this publication is a member of the Society, and each of us knows or meets through association with others in our industry, others who would benefit from membership in our association. If you have a copy of a membership application form on hand, you could probably persuade that person to apply, and you could be the sponsor. This is an easy way of becoming part of our Membership Promotion team.

Application forms are available from Marc Carriere of Goodkey, Weekmark and Associates, Fax 727-5115, and will be available at the October meeting.

SOCIETY MEMBERS WHO ARE NOT CHAPTER MEMBERS

We would like to know why you are not a local chapter member, and whether you might join if we arrange to do some things differently. I can be reached at Fax/Phone 523-1651.

One reason could be that you are located too far from Ottawa where the chapter meetings are held. If there are 10 or more members, or prospective members in your area, it might be worth considering forming a Section of the Ottawa Valley chapter and having a few of your own meetings. A section could also be considered on a linguistic basis. In any case, you are the ones who have to request the formation of a Section, but you can count on positive support from the chapter.

Another reason that has been given is that the chapter programs are generally not of interest, or are not technical enough. One way to solve this is to join the chapter, become active on the Program Committee and thereby give the chapter members the benefit of your expertise. Alternatively you could offer your services as a speaker to bring more of the technical side of ASHRAE to the attention of our chapter members.

Dalton McIntyre, Membership Promotion Chair

IS YOUR ADDRESS CORRECT?

As our address information come from ASHRAE Society in Atlanta, Georgia, any corrections should be sent directly to them. Change of address cards are available at regular meetings.

Guy H J Bourbonniere P Eng
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See attached for further details

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SOCIETY NEWS

The ASHRAE Hall of fame, unveiled at the start of the Society's year long Centennial Celebration, honours deceased members who have made milestone contributions to the growth of environmental control technology. The following are the first three inductees.

F. PAUL ANDERSON - Under his leadership as the Society's director of the Research laboratory, the control zone of atmosphere was established.

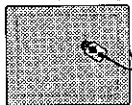
WILLIS H. CARRIER, PhD. - Carrier is widely known for his numerous, significant contributions to establishing air conditioning as an industry and psychrometrics as a science.

FRANCIS HUTCHISON, PhD. - His wide range of contributions in research to the industry included Solar Energy as a heat source, thermodynamics, heat transfer, insulating techniques for ship bound transportation of perishables.

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