



# Rn 2019 CARST

WHAT'S ON THE HORIZON?

APRIL 28 - 30  
8<sup>th</sup> Annual Radon Conference

Sheraton Cavalier Saskatoon Hotel  
612 Spadina Crescent East, Saskatoon, SK, S7K 3G9



[www.carst.ca](http://www.carst.ca)





## SHERATON CAVALIER HOTEL

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## WHAT'S ON THE HORIZON?

CARST Radon Conference  
[www.carst.ca](http://www.carst.ca)

612 Spadina Crescent East  
Saskatoon, SK S7K 3G9

Canadian Association of Radon  
Scientists and Technologists (CARST)

CARST encourages you to consider becoming a member. We offer a variety of corporate packages, as well as discounts for partner associations. For more information on membership benefits and to join, visit [www.carst.ca](http://www.carst.ca)

CARST/ACSTR is a nonprofit organization dedicated to encouraging, supporting and educating radon professionals in Canada. Direct inquires may be sent to Pam Warkentin, CARST Executive Director, [p\\_warkentin@carst.ca](mailto:p_warkentin@carst.ca).

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### Additional Photo Credits:

#### Presidents Message

**Grasslands National Park**  
Chris Hendrickson Photography

#### 2019 Olympic Games

**Hockey, Curling, Skiing**  
- Greg Huszar Photography

#### Ice Sculpture

- Rob Weitzel Graphic Productions

## ▶ BOARD OF DIRECTORS



### **Alan Whitehead** - *President*

A founding member and current President of CARST, Alan Whitehead is also President and CEO of Radon Environmental Management Corp. and serves on the Coalition of International Radon Associations (COIRA). Alan has over 30 years' experience on executive boards and is passionate in making change happen. Dedicated to the prevention of radon-induced lung cancer, he serves as a board member of Cancer Survivors Against Radon.



### **Scott Cryer** - *Vice-President and Education Committee Chair*

Scott Cryer is the National Practice Lead for radon and Regional Practice Lead for Hazardous Materials at Pinchin Ltd. A professional Geoscientist (P. Geo.), Scott has over 25 years of experience dealing with environmental, health & safety issues. Scott is C-NRPP certified in both measurement and mitigation and provides consulting services to clients nationally regarding radon and hazardous materials issues.



### **Bill Rounds** - *Treasurer*

Bill Rounds is President of Radonova, a global leader in radon measurement and alpha track technology. Bill's responsibilities include coordinating Radonova's extensive international radon business and developing strategy to move the group forward. Based in the United States, Bill is an active member of CARST and AARST, and serves on the board of directors of the AARST Foundation.



### **Marcel Brascoupe** - *Secretary*

A founding member of CARST, Marcel Brascoupe is a "certified" general contractor specializing in the installation of radon mitigation systems since 2008. Marcel is also a bilingual C-NRPP national certified trainer for radon measurement, mitigation and CRNCH courses, Marcel also participated in the development of Health Canada's guideline document for radon mitigation and participated on or co-authored several scientific papers on radon mitigation.



### **Dr. Anne-Marie Nicol** - *Awareness Committee Chair*

Anne-Marie Nicol holds a PhD in Epidemiology from UBC, where she currently teaches Risk Assessment and Toxicology at the School of Population and Public Health. Her areas of interest include human health risk assessment, environmental health, and knowledge translation. Anne-Marie is currently running a citizen scientist program in BC to test radon in coastal mountain areas and is also a member of CAREX (CARcinogen EXposure) Canada; a multi-institution team of researchers working together to study carcinogen exposure in Canada. Anne-Marie also serves as the Media Relations and Marketing Coordinator for the Take Action on Radon (TAOR) program.



### **Colin Dumais**

After finding and mitigating radon in his family's home, Colin Dumais founded RadonWest Ltd; offering radon testing and mitigation services and radon resistant construction design. Passionate about renewable energy and energy efficiency, Colin works to raise radon awareness and ensure that mitigation systems are designed efficiently and economically using enhanced diagnostic methods and procedures. Colin is a C-NRPP trainer; certified in both measurement and mitigation.



### **Jeff LeBlanc**

Jeff LeBlanc is a certified radon mitigation professional who runs both Cottage to Castle Home Inspections and Radon Repair in the greater Moncton area. With past experience as a Realtor, Jeff is dedicated to increasing radon awareness in New Brunswick, Atlantic Canada and across the nation.



### **Rob Mahoney**

A founding member of CARST, Rob Mahoney has over 20 years' experience working in commercial HVAC design and Indoor Air Quality management. Rob has been working in radon remediation since 2007, when he participated in a Canadian Mortgage and Housing Corporation (CMHC) pilot project that has since become a Health Canada standard. Rob is C-NRPP certified and is the sole proprietor of Radon Works.



### **Mark Diplock**

Mark Diplock is the Senior Inspections Manager for Mike Holmes Inspections, and through this affiliation with The Holmes Group, he has been a driving force behind the public awareness campaigns on radon featuring Mike Holmes and Mike Holmes Jr. With over 15 years' experience as a home inspector, Mark is a strong advocate for radon awareness and improved radon protocols within the home inspection industry.



### **Bob Wood - C-NRPP Liason**

A founding member of CARST, Bob Wood is a Radiation Safety Officer and a C-NRPP certified Measurement and CRNCH trainer. In addition to founding Mr. Radon®, Bob has also launched the Kyle Wood Radon Relief Program. This program aims to raise funds to allay the cost of radon mitigation materials for lung cancer patients and their families living with high radon levels.



### **Mark Donohue**

Mark Donohue is Vice President of the Building Science Group at le Groupe Gesfor Poirier Pinchin Inc, and has over 23 years' experience with environmental issues, building envelope science, and occupational health and safety concerns. Mark is C-NRPP certified in both measurement and mitigation and has designed and implemented radon mitigation systems in schools and large commercial buildings throughout Quebec.



### **Bruce Decker, CET, ROHT**

Bruce Decker is the Senior Indoor Environmental Specialist at BGIS with over 22 years' experience in the Environmental, Health & Safety and Building Science consulting industries. Bruce is C-NRPP certified in measurement, mitigation and CRNCH and heads a national radon testing and mitigation team specializing in commercial buildings for corporate clients across Canada. Bruce brings technical committee and Director experience to CARST from his involvement with CSA and EIA (EACO).



THE WORLD'S #1 RADON FAN MANUFACTURER

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**PRO SERIES**



### RP145 RADON FAN

RadonAway® Pro Series fans install white and stay white. The RP145 is the #1 fan in the radon industry, offering high air flow, energy efficiency, and effective radon reduction, and it is double snap-sealed to inhibit radon leakage.



### AIRAIDER™ 433

The AiRaider™ 433 models remove radon and VOCs from well water through a multiple stage aeration process. These non-sweating, remote air intake systems provide 99+% radon reduction.



### GM 1-2

The GM 1-2 is designed for radon professionals, with two diagnostic devices in one: Radon Grab Sampler to find radon sources and Micro Manometer to measure pressure field extension.



### AT-100 TEST KIT

This dosimeter records radon level over 3-12 months, as suggested by Health Canada. Rated as the most accurate dosimeter by a leading consumer advocacy group.



### CLS-100 TEST KIT

This 2-4 day radon in air liquid scintillation test is U.S. EPA verified and analyzed by our C-NRPP listed laboratory. Next business day results; ideal for real estate transactions.



### RS800i

The C-NRPP listed RS800i is a top-of-the-line continuous radon monitor, measuring hourly radon, temperature, and relative humidity. Nominal sensitivity: 0.65 CPH/Bq/m<sup>3</sup>.

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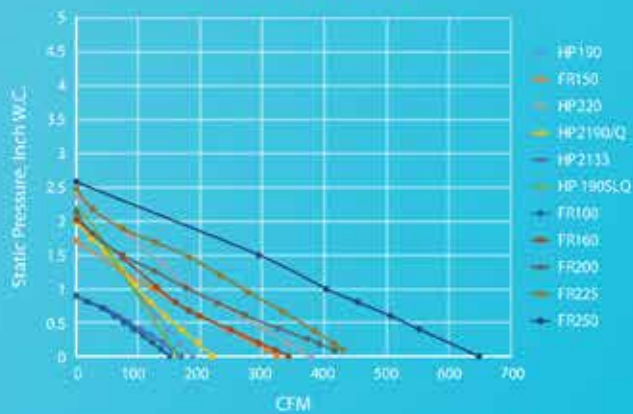
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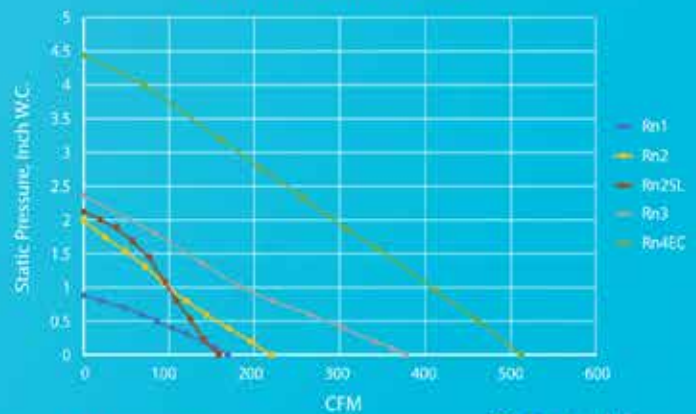
Come see us at the CARST  
 2019 Conference to see  
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 radon fan design.

### Leading the way in radon fan technology

Old Radon Fan Curves



New RN Fan Curves









## ► WELCOMING MESSAGE

It gives me great pleasure to welcome everyone to our 8th Annual Conference of the Canadian Association of Radon Scientists and Technologists. This is our first visit to Saskatchewan and we are excited to be hosting the conference in Saskatoon, which has been described as the “Paris of the Prairies”. Hopefully you will find some time to explore the city’s many parks and museums and the campus of the University of Saskatchewan, one of Canada’s leading research institutes.



CARST continues to be a leader in raising public awareness and education of radon and an advocate for legislative change, to reduce exposure to radon gas in the home, schools and workplaces. Your association’s management team and board of directors had another busy and eventful year in 2018, representing CARST at many public events and trade association conferences across the country. We were also honored, along with our partners the Canadian Cancer Society and CAREX, to take on leadership of Health Canada’s Take Action on Radon Program. Working with stakeholder groups across the country, we were pleased to deliver last year’s successful Radon Action Month campaigns.

Our membership continues to grow, as does the number of C-NRPP certified professionals across Canada. We are encouraged by the commitment of our conference sponsors and exhibitors and I would like to thank them sincerely for their generous financial support, without which our annual conference would not be possible. I would also like to express special thanks to the members of this year’s organizing committee, who worked tirelessly to put together another excellent pre-conference education program and conference agenda, with an outstanding line up of speakers.

Your membership fees and sponsor donations received throughout the year are carefully invested to raise public awareness and education, promote radon advocacy at the federal, provincial and municipal levels of government, and to support other significant radon stakeholder initiatives. We look forward to updating you on these initiatives during the conference.

On behalf of all our members, I would like to thank your Board of Directors for the countless hours they generously give throughout the year to enable CARST to fulfill its goal of preventing radon-induced lung cancer and saving lives. I would also like to take this opportunity to recognize two of our founding board members who are retiring at this year’s AGM after serving the maximum board term of 9 years. Bob Wood; who has previously served as President, and Marcel Brascoupé; who has previously served in roles of Vice President and secretary of the Board, will be sorely missed and we thank you both for your invaluable contributions to making CARST what it is today.

We would also like to acknowledge that as we gather together for this year’s conference in Saskatoon, we are on Treaty 6 Territory and the Homeland of the Métis. We pay our respects to the First Nations and Métis ancestors of this place and reaffirm our relationship with one another.

Please enjoy the conference and I hope you find some time to relax and enjoy Saskatoon!

*Alan J Whitehead*

President

## SATURDAY FIELD TRIP - April 27, 2019

- 8:30 - 4:00 pm **Residential Mitigation Field Trip** - *Colin Dumais*  
**Commercial Mitigation** - VOC Vapour Intrusion - *Darius Mali*  
**Tips on Large Building Measurement** - *Curt LaMontagne, RSIC and SRC*  
 - a tour of Radiation Safety Institute Chamber  
 - Saskatchewan Research Council

## ▶ CE COURSES

### SUNDAY - April 28, 201

	SESSION 1	SESSION 2
8:15 - 10:15 am	Polyurethane Spray foam insulation for Air Barrier Systems and Radon protection. <b>Trainers:</b> <i>Bob Wood and Peter Frenette</i>	Marketing Your Business with Marketing Specialist: Brent Banda of Benda Marketing. <b>Trainer:</b> <i>Brent Banda</i>
10:15 - 10:30 am	<b>Break</b>	
10:30 - 12:30 am	Air pressures, ventilation and its effect on radon (will touch on HRV and Blow Doors). <b>Trainer:</b> <i>Colin Dumais</i>	How to Be Prepared to Deal with Commercial Clients. <b>Trainers:</b> <i>Maureen Wood and Andrew Wood</i>
12:30 - 1:00 pm	<b>Lunch</b>	
1:00 - 2:00 pm	Health and Safety for Mitigation Professionals - What should be in your toolkit. <b>Trainers:</b> <i>Various</i>	Social Media - How, Why and Let's Get Started. <b>Trainer:</b> <i>Erin Curry and Pam Warkentin</i>
2:00 - 2:30 pm		Product Presentation: Airthings
2:30 - 2:45 pm	<b>Break</b>	
2:45 - 3:45 pm	Introduction to Asbestos - What you need to know. <b>Trainer:</b> <i>Scott Cryer</i>	Understanding CARST/C-NRPPs Approach to Radon and Real Estate and Short-Term Testing <b>Trainers:</b> <i>Erin Curry, Pam Warkentin and Jeff LeBlanc</i>
3:45 - 4:15 pm		New Product Presentations: Fantech
4:15 - 4:30 pm		New Product Presentation: Radon Environmental and Airwell

## SUNDAY EVENING MEET AND GREET

- 6:40 pm **Local Greetings**  
 6:50 pm **Greetings from CARST**  
 7:00 pm **Sponsor Greeting**

## ► MAIN CONFERENCE SESSIONS

### MONDAY - April 29, 2019

- 7:30 - 8:30 am**    **Breakfast and Registration**
- 8:30 - 8:35 am**    **Opening of the Conference**  
- Greetings and Welcome from CARST [ **Alan Whitehead, CARST President** ]
- 8:40 - 8:50 am**    **The History of Radon - A Canadian Perspective** [ **Anne-Marie Nicol** ]
- 8:50 - 9:35 am**    **The National Radon Program**  
- A Decade of Radon Reduction Action. [ **Kelley Bush** ]
- 9:35 - 10:05 am**    **Lung Cancer the journey of endurance** [ **Rachael Malmberg** ]
- 10:05 - 10:15 am**    **1st Activity - Olympic Games Activity**
- 10:15 - 10:45 am**    **Break**
- 10:45 - 11:15 am**    **CAREX - Child Care Centres** [ **Sandy Shergil** ]
- 11:15 - 11:45 am**    **Case Study - Child Care Centres** [ **Cody Wright** ]
- 11:45 - 12:00 pm**    **What's on the Horizon**  
- talk about challenges with mitigation re: cost and lack of policy
- 12:00 - 1:15 pm**    **CARST AGM and Lunch**
- 1:15-1:30**    **2nd Activity - Olympic Games**
- 1:30-2:00**    **Let's Focus on the Real Culprit**  
- Radon Decay Products! [ **Dr. Lisa Gregory, PhD** ]
- 2:00-2:30**    **Radon Progeny Dosimetry**  
Using Alpha Track Detector Technology [ **Brian Bjorndal, MSc** ]
- 2:30-2:45**    **What's on the Horizon**
- 2:45-3:00**    **3rd Activity - Olympic Games**
- 3:00-3:30**    **Break**
- 3:30-4:00**    **What's new in the horizon in Europe? The MetroRadon Project**  
[ **José – Luis Gutiérrez-Villanueva** ]
- 4:00-4:30**    **Protection against radon in SK's uranium mines.** [ **Jason Sadowski** ]
- 4:30-5:00**    **3rd Quarter Stretch Tackle Radon Announcement**  
[ **Jill Hubick, Jennifer May and Tod Boss** ]

### MONDAY EVENING OUT

- 6:00-8:00**    **Dinner at Western Development Museum**  
- dinner includes free access to museum  
**Shuttles starting at 5:30**



Castle Butte - Big Muddy Badlands

## ▶ MAIN CONFERENCE SESSIONS:

**TUESDAY** - 30 April 2019

**7:00 - 8:30 am** **Exhibits are open** - Breakfast

**8:30 - 8:45 am** **Contest Draw** - Olympic Games Awards Ceremony

**8:45 - 10:45 am** **Split Sessions:** Policy Discussion  
Overview of Policy Scan in Canada and Europe with Provincial Handouts  
Real Estate Guideline  
Building Codes

**8:45 - 10:45 am** **Split Sessions:** Radon Professional Practical Sessions  
Estimating Mitigations - sharing ideas  
Regional Discoveries  
Qualitative/Quantitative Ideas

**10:45 - 11:15 am** **Break**

**11:15 - 12:00 pm** **Dr. Anderson Tyan** - Respiriologist

**12:00 - 1:15 pm** **Networking Lunch**

**1:15 - 2:00 pm** **Latest Research from Evict Radon** [ *Dr. Aaron Goodarzi* ]

**2:00 - 2:30 pm** **Radon:** Potential Connection to Diseases Other Than Lung Cancer.  
[ *Doug MacLean, Yukon* ] Lung Association

**2:30-3:00** **A Review of Recent Radon Research** [ *Dr. Anne-Marie Nicol, PhD* ]

**3:00 - 3:15 pm** **Break**

**3:15 - 3:35 pm** **Take Action on Radon** - 2019 National Radon Awareness Campaign  
TAOR Team

**3:35 - 3:50** **Evict Radon** - 2019 and on [ *Weston Jacques* ]

**3:50 - 4:30** **What's on the Horizon** - Sharing Ideas and looking forward



# Let the **2019** Winter Games Begin!



## Get Ready for the 3<sup>rd</sup> Annual **Radon Olympics!**

This year's events are as follows:

- Hockey:** Test your skills thanks to **Radonova!** It's Canada's game, with a radon twist!
- Curling:** It may be Saskatchewan's official game, but we bet you've never played it quite like this before! Join us on the "ice" for a mini-bonspiel thanks to **Radelec!**
- Biathlon:** Ok, so there's no skiing, but come take aim at radon thanks to **FanTech!**

*The Radon Olympics are brought to you by Radonova, Radelec, FanTech, and Radon West!*

# ► PRESENTATION ABSTRACTS

**SUNDAY** - April 28, 2019

## **Polyurethane Spray foam insulation for Air Barrier Systems and Radon protection**

*Peter Frenette & Bob Wood*

Polyurethane Spray foam insulation for Air Barrier Systems and Radon protection.

- Requirements of the building code for Air Barrier Systems under slab and Radon protection
- Heatlok Soya spray foam insulation properties and testing
- CCMC evaluation 14073-R of Heatlok Soya spray foam insulation by CUFA and training manual
- Review of architectural details for this application
- Advantages of Heatlok Soya spray foam insulation over other insulation systems
- Demonstration of many residential and commercial projects completed

## **Health & Safety for Mitigation**

**Professionals; What should be in your Toolkit**

As radon professionals, we spend a lot of time explaining the health hazards of radon to our clients and to the public at large. But what about the hazards posed to the radon mitigator? Discover what steps you can and should be taking to protect yourself.

## **Social Media: How, Why, and Let's get Started!**

*Pam Warkentin & Erin Curry*

We all know that social media can be a great business tool, but it can be hard to know where to start! Join us as we walk through some social media basics without getting overwhelmed. Once we've covered the basics, we'll embark on a treasure hunt to help you navigate the social media seas and find useful information to keep yourself up-to-date on the latest industry developments. We'll touch on how you can use social media as a marketing tool as well.

You should come away from this workshop with some basic skills to help you incorporate social media into your day without having it take over your schedule. Bring your computer or device and we will help you with some hands-on tips.

*NOTE: This is meant for basic users, but we will be sharing tips and experiences that may be useful for those with a bit of experience as well.*

Dog sledding, Sundogs Excursions

- Keith Starks

www.tourismsaskatchewan.com



## **Radon, Real-Estate, and Short-Term Testing**

*Pam Warkentin & Erin Curry*

In late 2018, CARST released the Real Estate Guideline concerning testing for radon during a real-estate transaction. This workshop will walk through the Short-Term and Real Estate Guidelines; discussing how to put them into practice and providing some guidance on how to discuss and use them with real estate agents and homeowners in your community. We will also share some of the lessons learned through the two-year process of developing a new paradigm for radon and real estate, and the feedback we continue to gather as we talk with real estate agents across the country.

## **Attracting customers: Marketing your radon mitigation business.**

*Brent Banda*

Learn how to develop an effective marketing and sales process for radon mitigation. The session will examine how to better understand the way customers perceive the value you offer, and how to tailor the marketing and sales process to suit a specific target market.

## ► PRESENTATION ABSTRACTS

### **Air Pressures, Ventilation, and the Effect on Radon**

*Colin Dumais*

We all know that air pressure and ventilation can affect radon infiltration, but what does that mean in the real world? Join Colin Dumais for an in-depth look, including the practical aspects of HRVs and blower doors.

### **How to Be Prepared to Deal with Commercial Clients**

*Maureen and Andrew Wood of Mr. Radon®.*

Entering and succeeding in the commercial radon industry takes patience, the ability to get financing, and the ability to meet tender requirements. This course will give the participant an overview of addressing tenders, bids and contracts. The considerations of estimating, insurance, WSIB, sub-contractors, Ministry of Labour 'Notice of Project', Construction 'Statutory Declaration' Forms, scheduling, workforce, site specific Health and Safety Plans and Operations and Maintenance Manuals will be addressed.

This course will give participants a good basis on which to determine if expanding into the commercial sector is right for them.

*This course is recommended for established radon companies.*

## **MONDAY** - April 29, 2019

### **Case Studies Child Care Centres**

*Cody Wright*

As we advocate for child care centres to test their facilities and reduce radon exposure for our children, an important part of the picture is the installation of mitigation systems. Cody will walk the audience through three mitigation systems; two in residential child care facilities, and one in a community centre. This presentation will address the additional considerations involved when mitigating a child care center.

### **Radon Testing Policy in Child Care Facilities in British Columbia, Yukon and Alberta** – Case Studies to Assess Current Legislation and Practices

*Sandy Shergill*

Radon gas is the leading cause of lung cancer among

non-smokers and is responsible for approximately 16% of lung cancer deaths in Canada. While exposure at home is the most significant source of radon exposure for children and child care workers, exposure within child care facilities can also contribute to the problem. According to a 2011 Government of Canada report, almost half (46%) of parents reported using some type of child care for their children aged 14 years and younger. The same report indicated that a considerable proportion of child care facilities are at ground level or in basements where radon levels tend to be higher. CAREX Canada risk estimates for indoor air carcinogens show that radon gas is the highest priority exposure in Canadian environmental settings. Without a national radon policy or radon testing mandate for child care and school settings, provinces and territories have approached the issue of radon exposure, testing and mitigation in unique ways. This research provides the opportunity to better understand the current policies and practices in place for radon testing in child care facilities; and seeks to understand the key stakeholders responsible for legislation and regulation.

### **The National Radon Program - A Decade of Radon Reduction Action**

*Kelley Bush*

Join Kelley Bush, Manager of Radon Education and Awareness at Health Canada, for an overview of the history, challenges and achievements of the National Radon Program. She'll share the future priorities and focus for the evolution of the program and acceleration of radon reduction action in Canada.

### **Let's Focus on the Real Culprit – Radon Decay Products!**

*Dr. Lisa Gregory, PhD*

Radon-induced lung cancer is the second leading cause of lung cancer in the U.S. with over 10% of cases occurring in never-smokers. The alpha radiation from radon decay products (RDPs) provides over 95% of the dose to the lungs. The U.S. EPA developed the radon action level of 4 pCi/L from an assumed equilibrium factor (EF) of 50%, but maintained the RDP guidance of 0.02 working levels in their protocols through the early 1990s. However, after the privatization of the radon program and due to the ease of measuring radon compared to its progeny, RDP guidance was removed from measurement protocols. Results from our case studies highlight the benefits of determining RDP working levels alongside radon gas measurements. RDP measurements can highlight discrepancies that

## ► PRESENTATION ABSTRACTS

occur when using the assumed EF as actual EFs tend to be significantly lower in buildings with robust HVAC systems. Furthermore, RDP working levels are a true measure of actual exposure with RDP mitigation proving to be a more cost effective solution in certain cases, particularly in locations where standard radon gas mitigation is impractical. Using only radon gas levels as a surrogate measurement for RDP exposure... can be misleading when it comes to assessing actual occupational and residential risk related to radon-induced lung cancers. Reintroducing RDP guidance and providing information related to RDP mitigation methods into radon protocols and the public radon literature is needed in order to make more informed decisions based on actual risk.

### **Radon: A Canadian History**

*Dr. Anne Marie Nicol*

Canada has been involved in Radon's history from the very beginning. Join Dr. Anne-Marie Nicol for a brief history of the gas we all know so well. As we look toward the horizon, it only seems fitting to take a moment to give a nod to the past.

### **Radon Protection in Saskatchewan's Uranium Mines**

*Jason Sadowski*

Canada is the world's second-leading producer of uranium, with most of the reserves located in the Athabasca region of Northern Saskatchewan. So how do Saskatchewan uranium producers protect uranium miners from radon exposure? Join Jason Sadowski to review the code of practice, and how they manage the important work of protecting their workforce from radon.

### **What's new on the horizon in Europe? The MetroRadon Project**

*José – Luis Gutiérrez-Villanueva, Tryggve Rönqvist, Karl Nilsson, Bill Rounds*

*Radonova Laboratories AB, Sweden*

The European Council Directive 2013/59/EURATOM evokes new challenges for the metrology of radon measurements and calibrations in Europe. For the first time, the radon exposure to the public will be part of legal metrology in Europe. The reference level in the Directive is 300 Bq m<sup>-3</sup> and all EU member states must adapt their national legislations bearing this level in mind.

The ongoing MetroRadon project is a 3-year Joint Research Project funded by the European Metrology Programme for Innovation and Research (EMPIR) as part of Horizon 2020. The goal of the project is to develop reliable techniques and methodologies to enable SI traceable radon activity concentration measurements and calibrations at low radon concentrations and will help to establish a basic European metrological infrastructure for radon measurements, enabling sound monitoring of radon and radon protection in Europe.

### **Radon Progeny Dosimetry Using Alpha Track Detector Technology**

*Brian Bjorndal, MSc, PPhys*

*Manager/Scientist*

*National Laboratories*

*Radiation Safety Institute of Canada*

The Radiation Safety Institute of Canada provides the only federally licensed personal alpha dosimetry service with the Canada by the Canadian Nuclear Safety Commission. The Institute has delivered dosimetry services for more than 30 years to the uranium mining industry in Canada and in Australia.

The dosimetry service involves the measurement of worker doses from the inhalation of radon and thoron progeny and the long-lived radionuclides from uranium. The personal alpha dosimeter employed by the Institute utilizes a specialized alpha track detector to measure the alpha energy concentrations from the short-lived decay products of radon-222 and radon-220.

The alpha track detector in our personal alpha dosimeter was also historically used to measure radon in homes in Canada and was an approved device under the United States Environmental Protection Agency when it ran its Radon Proficiency Program some 25 years ago.

In this presentation, I will share the principles of radon progeny dosimetry using alpha track detector technology, as well as our instrument development and quality control testing using the Institute's C-NRPP certified radon chamber.

### **Tackle Radon - Know your Number!**

*Jill Hubick, Jennifer May & Tod Boss*

Radon is the second leading cause of lung cancer and the prairie provinces are hot spots for this deadly gas,





## ► PRESENTATION ABSTRACTS

yet not everyone knows about radon and many have yet to test for it. Learn how we're taking action by teaming up with two rival professional football players to Tackle Radon! It doesn't matter if you wear blue and gold or green and white; when it comes to lung cancer prevention, we're all on the same team. Get a sneak peek into how Adam Bighill, a current Manitoba professional football player; and Andrew Green, a former Saskatchewan football player, are encouraging everyone to know their radon number. This engaging presentation will inspire you to get in the game and join the Tackle Radon team!

**TUESDAY** - April 30, 2019

### **Data analysis from high radon homes** *Lynn Brown*

Over the last 2 years I've estimated the cost of installing ASD mitigation systems in hundreds of high radon homes using Google satellite images, street view, and a few select questions. I believed the presence of a sump pit, major floor cracks, a floor drain without a plumbing trap, or additions with dirt crawlspaces would indicate that there will be high radon levels in the home. This presentation analyses the accuracy of my estimates, and what I've discovered from looking at our data from high radon homes.

### **Radon, Real-Estate, and Short-Term Testing**

*Pam Warkentin & Erin Curry*

In late 2018, CARST released the Real Estate Guideline

concerning testing for radon during a real-estate transaction. This workshop will walk through the Short-Term and Real Estate Guidelines; discussing how to put them into practice and providing some guidance on how to discuss and use them with real estate agents and homeowners in your community. We will also share some of the lessons learned through the two-year process of developing a new paradigm for radon and real estate, and the feedback we continue to gather as we talk with real estate agents across the country.

### **Latest Research from Evict Radon**

*Dr. Aaron Goodarzi & Joshua Taron*

Professors Goodarzi and Taron will outline of Evict Radon's progress in understanding radon exposure within the population of the Canadian Prairies, how understanding the modern built environment is essential for understanding (and reversing) increasing Canadian radon exposure, and the assessment of how short versus long term radon testing effectiveness changes across seasons.

### **Lung Cancer from a Doctor's Perspective**

*Dr. Tyan*

Dr. Tyan is a lung specialist with a clinical focus in the diagnosis, care, and management of patients with lung cancer. Join him for a discussion on the association of lung cancer with radon exposure, other risk factors contributing to the development of lung cancer, the clinical presentation of patients with lung cancer, and current recommendations on the lung cancer screening.



## Sailing on Lake Diefenbaker

Tourism Saskatchewan

- Greg Huszar Photography

## ► PRESENTATION ABSTRACTS

### **Potential Connection to Diseases Other Than Lung Cancer**

*Doug Maclean, Yukon Lung Association*

Review the results of the recent Yukon radon survey, including the reasons for the survey, the analysis performed, and the sometimes surprising results. We will describe how those results led us to review radon research studies from around the world, and what we found. This presentation will include our personal experience, data from our survey including real-life case examples, and proven scientific results to back up our findings.

### **A Review of Recent Canadian Radon Research**

*Dr. Anne Marie Nicol*

Join Dr. Anne Marie Nicol for a review of the most recent developments in Canadian Radon Research.

### **Radon: Connection to Diseases Other Than Lung Cancer**

*Doug MacLean and Angelina Sabo*

This presentation describes the Yukon's recent radon survey, including the reasoning behind the survey, the analysis performed, and the sometimes-surprising

results that led us to review radon research studies from around the world. During this presentation we'll present data from our survey, including real-life case examples and the results of studies that have changed our perspective and approach to radon.

### **Take Action on Radon 2019**

*Presented by the Take Action on Radon Team*

Join the Take Action on Radon Team for a look back at the successes of the past year, and a look forward at what's coming up for 2019!

### **Evict Radon – The Power of Trust:**

*Weston Jacques*

Understanding how to get your audience to trust you is crucial to the success of your organization. However, building the bridge between your audience and your brand is becoming increasingly difficult. Faced with the onslaught of fake news, and irrelevant adverts, consumers are right to feel disengaged and suspicious. Weston Jacques, Senior Communications Strategist behind Evict Radon, is working hard to win over the trust of his audience. Through authentic and transparent content backed up by research, find out how Evict Radon is becoming the "go to" source for information about radon gas and home testing.

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## ► SPEAKER LISTING



**Brent Banda, MBA, ICD.D**

Brent Banda started Banda Marketing Group Inc. in 1997. Located in Saskatoon, the company offers strategic marketing, sales management, and proposal management consulting to owner-managed companies. Most of the company's clients are launching new products or entering new markets.

Brent has 21 years of practical strategic marketing consulting experience for just over 200 clients in a variety of industries. Clients benefit from Brent's strategic marketing mindset, which provides an objective, analytical, and creative-problem solving approach to understanding a business and planning for growth.

Brent also taught as assistant professor at St. Francis Xavier University (Nova Scotia, Canada) in advertising, professional sales, and marketing management.

Brent is an accomplished author, with his work having been published by The Globe and Mail's online newspaper and also Canadian Capital magazine. Brent's book *Pursuing Growth: Practical Marketing Tips for Business Owners* was released in September 2015. Brent is also the editor and publisher of The Business Advisor magazine.

Brent has volunteered considerable time with business and social service organizations having served on a variety of boards including the national board for Canadian Association of Family Enterprise (CAFE), SaskWorks Venture Fund, eHealth Saskatchewan, University of Saskatchewan Senate, North Saskatoon Business Association (NSBA), Provincial Exporters Association, The Saskatoon Club, and Family Service Saskatoon.



**Brian BJORNDAL, MSc, PPhys**

Mr. BJORNDAL brings over 20 years experience in radiation safety and occupational health and safety in industry, academia and research. Before joining the Institute, he held positions as Director, Workplace Safety and Environmental Protection, and Associate-Director Trade Services with the University of Saskatchewan, and Manager Safety and Radiation with Orano Canada. Mr. BJORNDAL managed the Institute's National Laboratories during its formative years and was instrumental in the development and licensing of the Institute's Personal Alpha Dosimetry service with the Canadian Nuclear Safety Commission. As Manager and Scientist for the National Laboratories, Mr. BJORNDAL provides leadership and oversight of the National Laboratories staff and operations.



**Tod Boss**

Tod Boss has been involved in the construction field for the past 25 years, in the home building industry and most currently as a Home Warranty Manager and Inspector in Manitoba. During this time, he has continually advocated for high standards in regard to education, quality of work and both contractor and homeowner satisfaction. Tod is a member of CARST and currently sits on the Radon Stakeholders Committee in Manitoba.

## ► SPEAKER LISTING

In 2012, Tod received his C-NRPP certification and founded RadonProz, a company specializing in Radon Mitigation in Manitoba, Saskatchewan and Ontario. Since this time, Tod has had the opportunity to partner with many entities including Health Canada, Cancer Care and Pinchin Ltd. to help to reduce radon levels in both commercial and residential spaces. Tod continues to actively promote public education surrounding the harmful effects of radon gas to provide companies and families improved health and peace of mind.



**Lynn E. Brown**

As the Operations Manager at Mr. Radon®, Lynn is a C-NRPP certified mitigator and measurement provider. Trained at George Brown College, Lynn is certified in American sign language; she also trained at Humber College and has a diploma as a Developmental Service worker.

Lynn develops Mr. Radon's residential estimates and schedules and manages the field mitigation team. She also manages the post mitigation files and worker radiation field forms post mitigation.



**Kelly Bush**

Kelley Bush has been the Manager of the National Radon Outreach Program since 2008 at Health Canada's Radiation Protection Bureau. Prior to joining Health Canada Kelley worked in the private sector as a marketing and sales management professional. With over 20 years of progressively more senior management and leadership roles she has a strong acumen for converting ideas into plans and ensuring their successful execution. Kelley holds a Bachelor of Commerce with honours in Marketing from Concordia University.

**Scott Cryer** – Bio can be seen in the Board of Director's section.

**Erin Curry** - Bio can be seen in the Administrative Staff section.

**Colin Dumais** – Bio can be seen in the Board of Director's section.



**Peter Frenette**

Peter Frenette is an Architectural Technical Representative for Demilec Canada serving Western Canada. He is a Diesel Electric Engineer and a Marine Engineer. Peter has been in the construction industry for the last 25 years as an owner of an excavation, road building and construction company. He started getting interested in Spray Foam 10 years ago and began using the product in construction. His innovations within the industry lead him to Demilec Canada. He now provides Education programs for architects, engineers and Building officials across Western Canada. A published Author and proud supporter of Children's Hospitals, Peter builds and designs specialty items for children with disabilities. He resides in Comox BC with his wife of 32 years and his two children.

## ► SPEAKER LISTING



**Lisa Gregory, PhD**

Lisa Gregory, PhD, earned her Doctorate in Zoology from the University of Florida in 2002 and has published several peer reviewed papers in the field of stress physiology. Now a professional environmental consultant, Dr. Gregory has overseen multiple teams of scientists, engineers, and technicians and has been responsible for completing over 50 diverse environmental projects, most of which have been at US Military installations.



**Aaron Goodarzi**

Dr. Goodarzi is the Canada Research Chair for Radiation Exposure Disease, and is part of the leadership executive of the University of Calgary's Charbonneau Cancer Institute. He obtained his PhD from University of Calgary in 2005 and trained as a post-doctoral scholar at the Genome Damage and Stability Centre at the University of Sussex (UK) until 2010. In 2011, he opened his own laboratory at the University of Calgary's Cumming School of Medicine. In 2015, he was named one of Calgary's Top 40 Under 40 for achievements in science and education.

In 2016 he was made a "Peak Scholar" by University of Calgary President Elizabeth Cannon for his work in knowledge engagement and innovation in the community with regards to radon gas induced cancer. In 2018, he was selected as a TEDx speaker on how citizen based science can transform research. Dr. Goodarzi is also the founder and leader of Evict Radon, a national non-profit organization and confederation of scholars aimed at enabling research into radon gas exposure and induced lung cancer by encouraging citizens to test for radon and share their findings with researchers.



**José - Luis Gutiérrez Villanueva**

José - Luis Gutiérrez Villanueva is specialist radon measurement advisor at Radonova Laboratories AB (Uppsala, Sweden). He started at Radonova in August 2017 after 15 years as a researcher at the universities of Valladolid and Cantabria (Spain) and Uppsala (Sweden). He presented his PhD thesis in July 2008, entitled "Radon concentrations in air, soil and water in a granitic area: instrumental development and measurements". Dr. Gutiérrez Villanueva is accredited for the position of Associate Professor at Spanish universities. His expertise involves radon gas measurements and natural radioactivity as well as data analysis and statistical techniques applied to the study of natural radiation. He has more than 25 publications in international peer-reviewed...



## ▶ **SPEAKER LISTING**

Canoeing on the Churchill River  
Tourism Saskatchewan  
- Greg Huszar Photography

journals and has participated in many international conferences, workshops and meetings. He has experience on international research projects, and he is currently part of the EMPIR project metroRADON.



**Jill Hubick, BKin, BSN, RN, CRE**

Jill Hubick graduated from the University of Saskatchewan's Second Degree Program with a Bachelor of Science in Nursing. She also has a Bachelor of Science in Kinesiology and received distinction for her double majors in Fitness and Lifestyle and Adapted Physical Activities from The University of Regina. Today Jill is proud to be a Registered Nurse and Certified Respiratory Educator with The Lung Association, Saskatchewan. Jill chairs the Take Action on Radon Saskatchewan Coalition and works to prevent lung cancer related to the deadly gas. Jill is also part of the St. Mary's Education and Wellness Centre's clinician team conducting youth spirometry testing and providing asthma education. She is an advocate for stronger provincial services and resources for lung transplant recipients striving to make patients' journeys an easier one. Jill is also a certified fitness instructor and finds ways to blend her love for health and fitness for many charitable causes. In 2018 she was nominated for a Women of Distinction Award in the health and wellness category and received a Lung Association, Saskatchewan Breathe Impact Award. Jill is passionate about health, wellness and breathing!



**Curt LaMontagne**

Curt LaMontagne is Principal Consultant for C5 PLUS Ltd., focused on helping property and facility management organizations manage their indoor environments.

In 1988, Curt started his environmental career as one of the first US EPA accredited asbestos management planners. As such he was responsible for conducting asbestos assessments for millions of square feet in California schools and other large facilities. He's since managed indoor environmental consulting projects for all levels of business and government in both Canada and the US, shifting more in recent years to a focus on IAQ, radon gas, and indoor environmental quality for large office towers.

First involved with radon testing in 2008, Curt acquired his NRPP accreditation as a measurement and mitigation professional from Rutgers in 2010, then transitioned to the new C-NRPP accreditations in 2013.

An enthusiastic educator, Curt is also a published writer and an experienced public speaker on indoor environmental issues. He's also an accomplished software developer, having written several commercial environmental software packages.

Curt holds a First Class Honours degree in Philosophy from the University of Calgary, and has successfully completed the Graduate Program in Strategic Management offered by the University of California, San Diego.

## ► SPEAKER LISTING



**Weston Jacques**

Weston is a co-founder and the communications strategist behind Evict Radon. He holds a Bachelor of Arts in Communications Studies from the University of Calgary and a Master of Arts in Professional Communication from Royal Roads University. Weston has a wealth of communications experience in non-profit, health awareness, arts, and telecommunications, with specific expertise in building creative awareness campaigns. As a master of both traditional and digital media, his goal is to reach as many people as possible, educate them on the harmful effects of radon gas, and encourage them to join the research study.



**Darius Mali**

Darius Mali is an engineer with Geosyntec Consultants, where he leads field events and manages projects specializing in vapour intrusion site characterization and mitigation system design. Darius has worked with the vapour intrusion team for the past 5 years on projects ranging from traditional residential sampling to DOD facilities with buildings of over 1 million square feet. Darius received a Bachelor of Engineering and a Master of Applied Science degree from the University of Guelph. Darius recently became C-NRPP certified for radon measurement and mitigation. Darius enjoys exploring the outdoors and relaxing with a nice glass of whisky.



**Jennifer May, B.Ed**

Vice-President of Community Engagement - The Lung Association

After completing her Bachelor of Education degree at the University of Saskatchewan in 1997, Jennifer began working for The Lung Association as the Health Education Coordinator. She worked in that position for five years before accepting a position with Health Canada where she worked for seven years in the Tobacco Control Programme in the SK/MB region and then another two years as the Learning Advisor for the Human Resources Department. In March of 2010, Jennifer accepted a position to return to The Lung Association as the Vice-President of Community Engagement. Jennifer's duties are to coordinate and manage health promotion activities, including advocacy initiatives for tobacco control and environmental concerns related to respiratory health. Jennifer is a national spokesperson for many lung related topic areas. As well, she manages the fund development portfolio for The Lung Association.



## ► SPEAKER LISTING



**Todd McAlary**

Todd McAlary is a Practice Leader for Vapor Intrusion Services at Geosyntec Consultants in Toronto, ON. Todd has over 30 years of international consulting experience, focused mostly on chlorinated solvents and vapor intrusion. He measured vapor diffusion coefficients for his Master's research in 1986 and performed vapor intrusion assessments at hundreds of sites beginning in 1992. Since 2001, Todd served as a member of EPA's Expert Panel on Vapor Intrusion, and authored or co-authored over a dozen guidance documents on the topic. Todd earned a Bachelor's degree in Geological Engineering in 1986, Master's degree in Hydrogeology in 1989, a Certificate in University Teaching in 2012 and doctorate in Chemistry in 2014, all from the University of Waterloo. He is licensed as a professional geologist in North Carolina and as a professional engineer in Ontario and British Columbia. He is also an Adjunct Professor at the University of Toronto, and has taught undergraduates part-time for 16 years.



**Doug MacLean**

Doug MacLean was responsible for radon testing for the Yukon government, and continues to be involved in his current capacity as president of the Yukon Lung Association.

**Dr. Anne Marie Nicol** - Bio can be seen in the Board of Director's section.



**Angelina Sabo**

Angelina Sabo has a masters in physics and educated in Environmental Science she volunteers with the Yukon Lung Association and has an interest in radioactivity first with the oil and gas industry and now with radon gas in homes.



**Jason Sadowski**

Jadon Sadowski is a Health Physicist with Cameco Corporation. He holds a BSc in Engineering Physics, as well as a MSc in condensed matter physics, both from the University of Saskatchewan. Jason is a registered C-NRPP professional, a member of the Canadian Radiation Protection Association, the Canadian Association of Physicists, as well as the American Physical Society. He is also a registered Professional Engineer with the Province of Saskatchewan.

## ► SPEAKER LISTING



**Sandy Shergill**

Sandy Shergill is a Master of Science and Public Health candidate at McGill University and has completed a Bachelor of Arts degree in Health Sciences at Simon Fraser University. She is currently working with CAREX Canada with a focus on radon policy development, pertaining to child care facilities across Canada. Sandy has previously completed research regarding radon testing in schools nationally, an analysis of social housing radon policy; and has contributed to the development of radon curriculum offered in trades institutions. Sandy will be completing a practicum placement in Melbourne, Australia this summer focussing on health care accessibility and equity for refugee and immigrant populations.



**Joshua Taron**

Joshua M. Taron is the Associate Dean Research and Innovation and an Associate Professor of architecture at the University of Calgary's School of Architecture, Planning and Landscape (SAPL) where he also co-directs the Laboratory for Integrative Design (LID). His current research focuses on the way in which new modes of automated design, fabrication, and construction can yield new performative effects in the built environment with an emphasis on designing out waste. This work is done in partnership with a variety of disciplines such as computer science, medicine, transportation engineering and city planning. He earned his undergraduate degree in architecture from the University of California, Berkeley and holds a Master of Architecture degree from the Southern California Institute of Architecture (SCI-Arc).



**Dr. Anderson Tyan**

Dr. Tyan is a lung specialist with a clinical focus in the diagnosis, care, and management of patients with lung cancer.

**Pam Warkentin** - Bio can be seen in the Board of Director's section.



**Andrew Wood**

Andrew is the site supervisor of all of Mr. Radon's commercial business. Andrew's trade background as a Red Seal Plumber has given him a strong foundation in the commercial construction industry. With an ease of understanding blueprints, scheduling, dealing with contractors and other trades, Andrew smooths out the wrinkles then gets his hands dirty.

Andrew is a C-NRPP Radon Mitigation Specialist and a Radiation Safety Officer (RSO) and a CUFCA registered and licensed spray foam installer.



The Great Sandlands  
Tourism Saskatchewan  
- Greg Huszar Photography

## ► SPEAKER LISTING

**Bob Wood** - Bio can be seen in the Board of Director's section.



**Maureen Wood**

Maureen is a C-NRPP Certified Radon Mitigator. After 15+ years as the Licensed Operations Supervisor of a Stock and Commodity Brokerage firm Maureen had the experience she needed to start her own company. As owner of Town & Country Home Inspections Inc., Maureen won an Entrepreneur of the Year award. In the decision to add radon testing to her business she immediately discovered there was no one in Ontario offering radon mitigation services. To remedy that, she established Mr. Radon® with her husband Bob. Affectionately known as Mrs. Radon, Maureen, as the Director of Operations, wears many different hats. Regarding the companies' growing commercial clientele, Maureen reviews tender documents and contracts. She assembles all the requirements that are needed to qualify and meet tender specifications. Maureen pays the suppliers, sub-contractors, and employees, invoices Progress Draws against completion, tracks scheduling and prepares Site Specific Health and Safety Plans and Maintenance Manuals.



**Cody Wright**

Cody Wright is a Licensed Home Inspector, a Certified Radon Professional and a WETT Certified Inspector operating in the beautiful Okanagan & Similkameen Valleys. Cody's background comes from residential structural repairs and residential renovations. He is an experienced inspector having performed hundreds of home inspections, he is also the South Okanagan & Similkameen's original Certified Radon Measurement and Mitigation Professional, successfully lowering radon levels in buildings. Cody is also trained and certified to inspect solid fuel burning appliances and chimneys. He is a member of the Home Inspectors Association of BC and a member of the Canadian Association of Radon Scientists and Technologists.

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CARST's 2019 Arthur G. Scott Award for Lifetime Achievement is presented to:

**Councillor**  
**Marianne Wilkinson**



This past October, it was our great pleasure to present the 2019 Arthur G. Scott Achievement Award to Councillor Marianne Wilkinson, of Kanata Ontario. Councillor Wilkinson helped us launch last year's CARST Conference, which took place in her own ward of Kanata North.

Over her many years of public service, Councillor Wilkinson was a shining example of how elected officials can contribute to building radon awareness. Not only did she hold regular radon awareness sessions for the citizens of Kanata North, Councillor Wilkinson also helped to educate the other Ottawa City Councillors about radon and urged them to raise radon awareness as well.

On October 31st, CARST participated in the Take Action on Radon launch event at Ottawa City Hall. Councillor Wilkinson was just weeks away from retirement, and it was a pleasure to mark her exemplary career by presenting her with the award and thanking her for her radon awareness work.

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  - Receive a confirmation that all data has been saved
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- Updated reporting functionality allows customers to include relevant addendums
- Additional status descriptions to track when testing has begun/ended, detectors were received at the lab, and reported
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# 2019 CARST FIELD TRIP

2019 marks the third year for CARST's Conference field trips, and each year has seen a wider range of hands-on offerings. This year there were three different options, each providing up to 8 hours of C-NRPP Radon CE credits!

## DID YOU MISS OUT ON THIS EXCITING EVENT? LOOK FOR ANOTHER ONE IN 2020!

**Option A: Residential Mitigation and More!** Colin Dumais led a group through a range of residential mitigation scenarios, including radon rough-in critique, the pressure field extension design process, HRV sizing and balancing, and a back-drafting test. 8 hours of CE credits, plus lunch and transportation.

**Option B: Commercial Mitigation & VOC Mitigation** Darius Mali led a course that summarized recent research on design methods and performance monitoring for mitigation systems to prevent radon exposure and subsurface vapour intrusion to indoor air for volatile organic compounds. Attendees could see the data collection procedures in a real-time demonstration with class participation and observe the mathematical analysis of the data in an interactive classroom setting. 8 hours of CE credits, plus lunch and transportation.

**Option C: Large Building Measurement and tour of RSIC and SRC** Curt LaMontagne walked through the basics for those getting into large building measurement. Topics included best practices for preparing for the job, tips and tools to help you on site, and questions for those who just aren't sure where to start. Brian Bjorndal provided a tour of the Radiation Safety Institute of Canada's radon chamber, and Vicky Snook gave a tour of the Saskatchewan Research Council's alpha track lab. 4 hours of CE credits, plus transportation.

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## Don't miss this year's Keynote Speaker: **Rachael Malmberg**


Lung Cancer: *The Journey of Endurance*



Rachael Malmberg (née Drazan) is a former collegiate and Olympic-level hockey player. From the eighth grade, Rachael has played with the US women's ice hockey program; competing with the U22 and Senior Women's teams in several Four Nations Cups and World Championships. She has competed all around the world; from the US and Canada to Finland and China.

In April of 2017, at the age of only 31, Rachael was diagnosed with Stage IV Lung Cancer with metastases in the brain and mediastinum lymph nodes. Given her active, healthy lifestyle, the diagnosis was a big surprise. Rachael's search for a cause to her lung cancer led her to have both her current and childhood homes tested for radon. Both homes measured high, which is not uncommon in Minnesota. Now a proud lung cancer survivor, Rachael has devoted herself to driving change and raising radon awareness. Rachael has worked with local media to help create stronger legislation around radon testing within schools to help protect the most vulnerable members of our society: our children. In addition, Rachael has spent time in Washington DC meeting with legislators and asking for increased funding for the National Institute of Health (NIH) to research lung cancer for early detection and to help develop a cure for the deadliest form of cancer. Recently, Minnesota passed bipartisan legislation to require schools to test for radon.

Rachael is married and the mother of a beautiful five-year-old daughter. In her spare time, she enjoys spending her time with family, exercising, coaching soccer and hockey, volunteering within the community, and advocating for lung cancer research.



**INSPIRED**

"On April 21<sup>st</sup>, 2017, I heard the "C" word. I turned to my faith and decided I am on this journey for a reason: to be the light, to fight, to inspire, and to show people you can do anything you believe in. I am **#cancerFIERCE** because I am going to be that 1% that survives lung cancer – the deadliest form of cancer in men and women in the U.S."

Rachael Drazan Malmberg  
Advocate

**#CANCERFIERCE**

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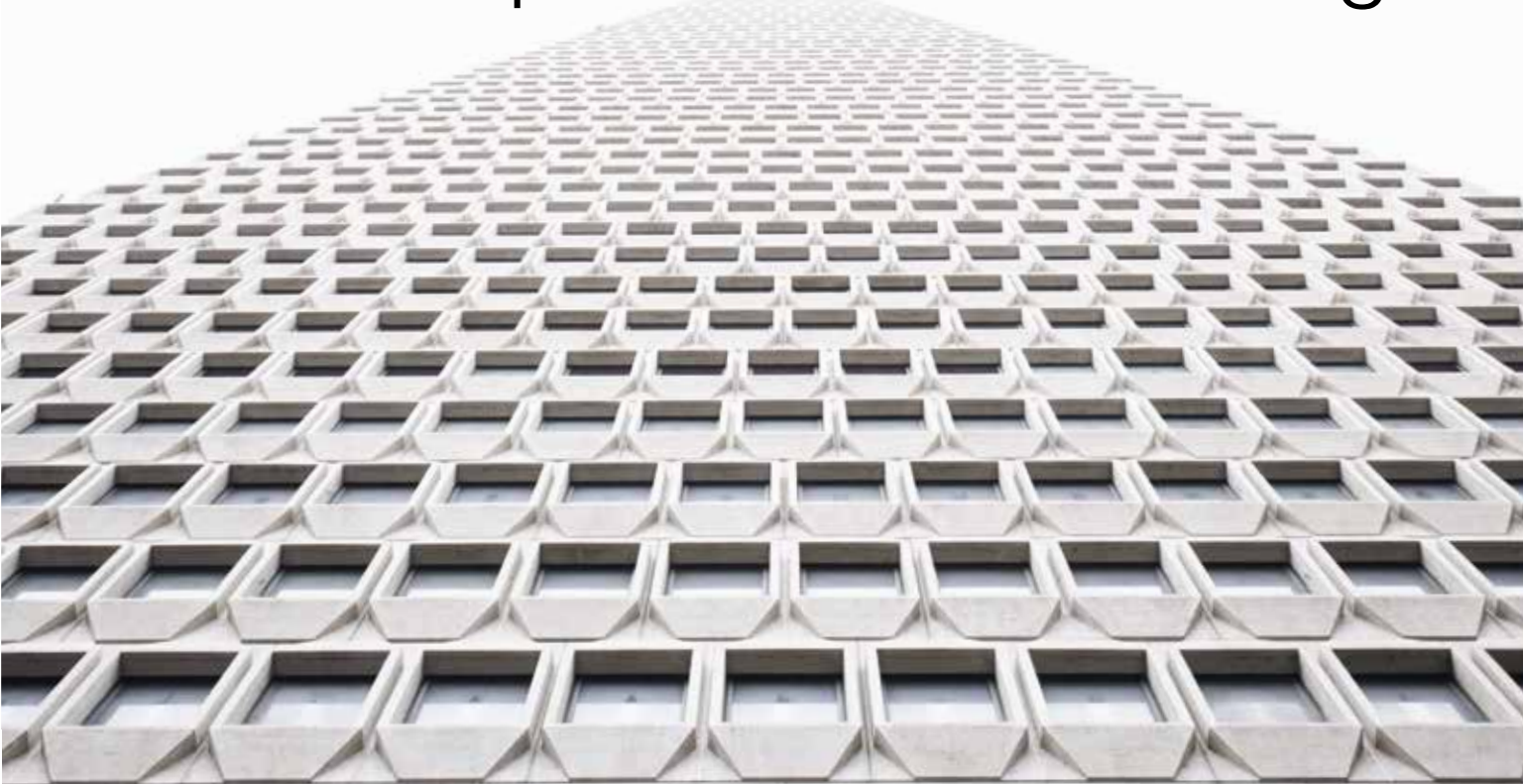


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**David Innes**

Director of Sales, Radon Environmental  
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APRIL 28 - 30

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*Thank you for attending!*



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